

3 Ways of knowing

This chapter explores different approaches to creating knowledge. Research aims to add to knowledge by applying various strategies and methods, but these entail assumptions about what is being investigated and how it can be known. Can we attempt to understand everything by using the same methods of inquiry, or must different kinds of reality be approached in different ways? Is there only one 'way of knowing' or are there several alternative ways? Can any of them guarantee certain knowledge or absolute truth? Is science such a way and, if so, what is science?

These fundamental questions are the province of the branches of philosophy known as ontology, epistemology and the philosophy of science. It is important for research students to have some understanding of the philosophical debates that have surrounded the quest for knowledge. This is not because they need to choose an epistemological position before embarking on a research project. Researchers, as we shall see in the next chapter, tend to be acculturated to the research tradition associated with their discipline or field. They do not so much choose their epistemological position as discover it after the event. But the

Box 3.1 Welcome to the philosophical maze!

Research students and fledgling researchers – and, yes, even more seasoned campaigners – often express bewilderment at the array of methodologies and methods laid out before their gaze. These methodologies and methods are not usually laid out in a highly organised fashion and may appear more as a maze than as pathways to orderly research. There is much talk of their philosophical underpinnings, but how the methodologies and methods relate to more theoretical elements is often left unclear. To add to the confusion, the terminology is far from consistent in research literature and social science texts. One frequently finds the same terms used in a number of different, sometimes even contradictory, ways.

(Crotty, 1998, p. 1)

main benefit of philosophical awareness is that it helps you avoid making over-ambitious claims for your research. Even a casual reading of what the philosophers have to say should lead you to be cautious about claiming to have achieved ‘the truth’, ‘the final answer’ or ‘absolute proof’. Conclusive answers of this kind are not to be expected in management research.

Unfortunately, a good deal of philosophical writing on these matters has done more to confuse the issues than illuminate them for any but professional philosophers. If researchers often display an ambivalent attitude towards such writings, this is understandable, particularly because the methodological implications of different epistemologies are often unclear. However, a broad appreciation of the debates surrounding these difficult problems is vital, even at the risk of becoming bogged down in philosophical quagmires. At the very least, this can help us to get our research work into perspective and ensure that we avoid making unsustainable claims for it, overestimating what research can achieve by way of truth, certainty and universality.

How do you know?

Scientists say more and more about less and less: philosophers say less and less about more and more.

Whatever the specific focus of our research, the general aim is to add to what is known. A successful PhD thesis is, indeed, very likely to be judged according to whether it ‘makes a contribution to knowledge’. If we claim to know something, then we must be prepared to answer the question of how we know it. It seems reasonable, then, to be concerned with the basic issues of how knowledge can be created and of how we can distinguish knowledge from opinion, belief or falsehood. These are philosophical questions.

Philosophy is one of the oldest academic disciplines, perhaps the oldest. The word was invented by the ancient Greeks and comes from the word *philosophia* = love of wisdom. For the Greeks, philosophy was a general term equated with all systematic knowledge, and only much later in Western thought did it become separated and specialized as a branch of the humanities. Philosophy concerns itself with the most basic questions about knowledge, reality and existence. So, for example, the branches of philosophy include ethics (concerned with problems of what is good, right or moral), metaphysics (concerned with problems of existence) and, especially important from our point of view, epistemology or the philosophy of knowledge (concerned with ways of knowing).

Ontology is a central element of metaphysics. The word is derived from the Greek *on* = being. Ontologists are philosophers whose central interest is in what exists. Ontological claims attempt to specify the sorts of entities which exist and which can therefore be known. Some ontologists, for example, have claimed that an ultimate reality exists which we can never fully know because of the limitations of our perceptual equipment. This reality exists but we can have no

complete knowledge of it. Others have argued that some things we commonly believe to exist, such as mental states, do not. On this view, only publicly observable phenomena are to be considered real, and mental states are held not to qualify. Still others have attempted to prove or to disprove the existence of God, without, it must be said, too much success.

Epistemology is the branch of philosophy that asks such questions as How can we know anything with certainty? How is knowledge to be distinguished from belief or opinion? and What methods can yield reliable knowledge? Epistemological theories are philosophers' attempts to provide systematic, rational and coherent answers to such questions. For example, empiricists argue that the only certain knowledge we can have of the world is that based on our sensory observations of it. Rationalists, on the other hand, believe that our senses are unreliable and that true knowledge is acquired through philosophical reasoning.

The chain of being

Ontological and epistemological assumptions are often closely intertwined and for most practical purposes it is difficult to think of them otherwise. But I can illustrate the interrelation between assumptions about being and knowing by reference to a very ancient scheme of thought, the chain of being (Schumacher, 1995).

This ontological scheme proposes that the world contains four distinct but overlapping levels of being: the material, the vegetable, the animal and the human. The material level consists of all inanimate objects: stones, sand, water, and so on. This level of being is dead and is marked out by its lack of the mysterious quality we recognize as life. The vegetable level contains all plants, such as trees and flowers. These entities differ significantly from the material in that they live, grow and die. The animal level consists of entities that are alive but that also possess consciousness, being able to respond to their environments and move within them. The highest level is that of the human. Human beings are material objects comprising atoms and molecules, are alive, and possess consciousness in that they respond to their environment. But humans also possess a further attribute: self-awareness. Humans, uniquely in the world, are aware of their existence and know both that they are alive and that they will die. Humans can reason about their existence and exchange meanings with others through the medium of language whereas animals cannot. Humans can produce art, literature and music; animals, at best, can only grunt and squawk.

These levels are arranged in a hierarchy so that the higher levels of being contain those below. Beings at each higher level possess a greater number of attributes – material existence, life, consciousness, self-awareness – than those below. The levels are thus linked together as a chain. A human has a material body composed of the same sorts of atoms as a stone; is alive just as a tree is; possesses consciousness as a cat or an ape does; but is uniquely distinguished from all other classes of entity by his or her capacity for self-awareness.

Box 3.2 An ontological scheme: the chain of being

Four levels of being:

m = Material = atoms and molecules = existence = m

x = Vegetable = plants = existence + life = $m + x$

y = Animal = dogs, cats, etc. = existence + life + consciousness = $m + x + y$

z = Human = people = existence + life + consciousness + self-awareness =
 $m + x + y + z$

This ontological scheme has several important epistemological implications. Each level of being can be known but only by methods that are appropriate to that level. Most obviously, the ways of knowing the material level cannot be adequate for an understanding of the human level. Indeed, each level of being requires its own way of knowing. We cannot know the inner life of stones or plants because, so far as we know, they do not have any; they lack consciousness and self-awareness. They can be known through observation but not, of course, through questioning. We may, perhaps, glimpse the inner world of animals, for they are closer to us ontologically than plants or stones. But the consciousness of humans is accessible to us by virtue of our shared humanity. We can know others – but only if we know ourselves.

According to this scheme, the methods of the natural sciences, although appropriate to the study of entities at the three lower levels of being, are wholly inappropriate for the study of humans. Inanimate objects lack the capacity for self-determination and are governed by purely external forces. Humans, on the other hand, are self-aware, so their behaviour can never be understood simply as a product of external stimuli.

This does not imply, however, that humans cannot be studied as natural objects. On the contrary, one of the distinguishing ontological features of humans is that they are at one and the same time natural objects and socio-psychological persons. So, for example, if someone jumps off a ladder, their rate of fall will be analysable according to the laws of physics in the same way as that of the fall of a stone. Similarly, the anatomy and physiology of the human body can be investigated in much the same way as those of a fish. The point is that humans possess attributes in addition to those of the stone or the animal: they are simultaneously material entities, composed of atoms and molecules; living entities, capable of growth and of reproducing; conscious entities, able to respond to their circumstances; and self-aware entities who are able to reflect on and theorize about their own existence and actions. Humans can thus be known in more ways than a stone or a fish can. For this reason, knowledge of human beings is one of the most complex forms of knowledge to which we can aspire.

The chain of being is not, of course, the only ontological scheme possible. For example, in much contemporary popular thought it has become fashionable to treat humans as if they are ‘naked apes’, simply a ‘higher’ form of animal. This way of thinking is evident in fields such as sociobiology and evolutionary psychology as well as in the approach to knowledge called behaviourism. In the terms of the chain of being, this denies or diminishes the significance of the difference between humans and animals, treating them as if they occupied the same level of being rather than two distinct levels. It also implies that humans and animals can and should be studied from the same methodological frame of reference. Alternative schemes thus propose different pathways to knowledge.

Royce (1964), for example, identifies four ‘paths to knowledge’ or ‘ways of knowing’: rationalism, empiricism, intuitionism and authoritarianism. Each of these ways entails a procedure for attaining knowledge and specifies the criteria by which its attainment can be judged:

- *Rationalism* is the way of knowing by means of thinking and reasoning. It assumes that nothing can be true if it is illogical. This way of knowing figures prominently in mathematics and philosophy.
- *Empiricism* is the way of knowing reliant upon sensory perception. It assumes that if something is accurately perceived, it is true. Empiricism plays a key role in science, where observing the world is a central task.
- *Intuitionism* is the way of knowing based on immediate or obvious ‘awareness’ that perhaps arises from unconscious processes. It assumes that if this awareness yields insight, then it is true. Artistic knowledge is based heavily on intuitionism, as is the personal knowledge gained from contemplation or meditation.
- *Authoritarianism* is the way of knowing based on authority. Something is true because an authority says it is true. In some religions, for example, revealed truth is derived from divine authority.

In general, Royce argues, our efforts to know involve all four of these ways, but specialized areas tend to draw heavily on one or two of them. For example, philosophical inquiry usually adopts the rationalist way of knowing, and attempts to establish its truths through the deployment of arguments and counter-arguments. Physical scientists, on the other hand, base their knowledge claims on carefully controlled and recorded empirical observations that are logically linked to explanatory theories. Each of the paths to knowledge is valid but limited to the particular aspects of the world to which it is suited. Meditation, for example, is a valid way of knowing our inner selves but a poor way of knowing the outside world. If you want to know about that, it is probably best to go and observe it. As with the chain of being, for practical purposes it is important to follow the appropriate path.

Problems arise when the proponents of an epistemology claim that it is the *only* epistemology. The effect is to ignore those phenomena that cannot be known by following that path. ‘We are embroiled’, says Royce, ‘in the following paradox: if we insist on developing a reality image which is made up of only

certain knowledge, we emerge with a very restricted and dehumanised world-view' (1964, p. 4). To understand the world in all its manifestations it is necessary to adopt several ways of knowing. Even so, the dominant approach to knowing in many fields remains that of science.

The epistemology of science

Human beings have been in the business of knowing ever since *Homo sapiens*, the wise or reasoning human, first emerged from the swamps some one and a half million years ago. Yet it was not until a few hundred years BC that the quest for knowledge became established as a distinct activity by the ancient Greeks. Even then, this quest for truth was for the most part dependent on reasoning and argument, exemplified by the Socratic dialogue. Reasoning alone, it was believed, could lead to genuine knowledge.

In Europe it was not until the sixteenth century that this rationalist approach to knowledge was supplanted by empiricism. This approach required investigators to study the world around them and not simply speculate about it. From the pioneering work of people such as Galileo, with his experiments on the motion of falling bodies, reputedly carried out from the Leaning Tower of Pisa, something known as the scientific method emerged, an event which has been heralded as one of the greatest achievements of humankind.

The development of scientific method was, however, more than simply the creation of a new set of procedures for creating sound knowledge. Scientific method entailed reasoning but allied with systematic empirical observation and experimentation. It also entailed a significant shift of attitude. While scientific method ruled some things in, it also ruled some things out. The Aristotelian conception of knowledge based on speculation and authority was rejected in favour of the idea that knowledge should be based on the facts of experience.

Scientific method arose in the context of investigation of the physical world. Some of its earliest achievements were in the realm of astronomy. It was only much later, in the nineteenth century, that the possibility of the scientific study of human beings was seriously advocated. So successful had the natural sciences been that it seemed possible that equally spectacular successes could be achieved by the application of scientific method to the human realm. The work of Charles Darwin (1809–82) on evolution had a decisive impact. Human beings were henceforth to be understood not as unique inhabitants of the planet Earth made in the image of a supernatural god, but as a species of animal sharing a common ancestry with the apes. Humans, it was proposed, should be studied in much the same way as the other entities in nature. From these beginnings emerged what we now know as the social sciences.

Scientific methods

Closely related to broad questions of epistemology are those associated with the philosophy of science. The aim of this branch of philosophy has been to provide a rational account of how science works and, sometimes, to provide prescriptions

indicating how it ought to work. Much attention has been given to the workings of the natural or physical sciences, such as physics, chemistry and biology. Another important theme has been the vexed question of whether the social sciences can or could work in the same way. This issue remains very much a matter of controversy.

Scientific knowledge is held to be 'real' knowledge because of the methods used to generate it. According to Behling (1991), the natural science model has the following characteristics:

- 1 It prescribes publicly specified procedures – which rules out, for example, revelation in dreams as a source of knowledge.
- 2 It prescribes precise definitions of terms and concepts – so that there is no ambiguity over what is being asserted.
- 3 It prescribes objective methods of data collection – data must be observable by anyone and not distorted by the personal beliefs, attitudes or values of the observer.
- 4 The research must be replicable – it must be possible for the research to be repeated by other investigators.
- 5 Research must be systematic and cumulative – the aim is to produce generalizable knowledge.
- 6 The purpose is to yield explanations, understanding and predictions – rather than simply descriptions of particulars.

Also closely associated with this model are the ideas that research should be quantitative, based on careful and precise measurements; that experimental methods are the ideal form of investigation; and that all sciences share the same fundamental method.

Whatever the merits of this view, it does have one serious limitation if it is taken to define all high-quality knowledge: some accepted forms of knowledge do not conform to these specifications. Mathematics, for example, seems problematic, for it is difficult to say what counts as 'data' to a mathematician. Mathematics does not appear to be an empirical science, for the ontological status of numbers has proved highly problematic. But that surely does not mean that there is no such thing as mathematical knowledge. Similarly, historians clearly cannot carry out experiments to test their explanations of historical events. Does this mean that there can be no historical knowledge? Historians themselves have been much troubled by the nature of historical knowledge, but that does not stop them from writing history. In short, the idea that there is 'one best way' to create knowledge that is applicable to all fields of inquiry seems questionable. An alternative way of thinking about what we can know is shown in Figure 3.1. On this view, not every way of knowing is necessarily scientific, and 'unscientific' ways of knowing are not necessarily nonsense.

Science: not so much a method, more a state of mind?

The defining characteristics of science as a set of techniques or methods have proved hard to identify with any certainty. As Sayer (1992, p. 7) says, 'There is

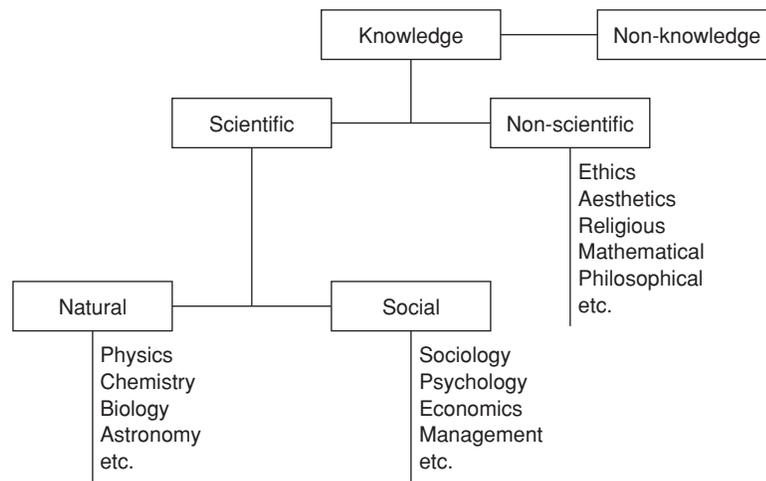


Figure 3.1 A typology of knowledge.

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.’ Perhaps what scientists have in common, then, is not a method for carrying out research but an outlook or, as Merton (1973) called it, an ethos. The scientific ethos is a set of attitudes and values that underpin scientific inquiry and that inform scientists’ attitudes to the investigative process. It defines what it is permissible and right for scientists to do as well as what is forbidden and wrong, and it forms a key part of the institutional environment of the scientific community.

Merton identified four ‘institutional imperatives’ as comprising the ethos of science. They have become known by the acronym CUDOS:

- *Communism*. Science is a collective and collaborative enterprise and the findings of science are public property. They are not the private possession of the scientist and they must be communicated openly to all.
- *Universalism*. Scientific findings are impersonal and are accepted on the basis of observational evidence and their consistency with existing knowledge rather than because of the status or other personal attributes of the scientist making them.
- *Disinterestedness*. Science is concerned with advancing knowledge irrespective of the gains or losses that might accrue to scientists.
- *Organized scepticism*. Everything is open to questioning, investigation and critical scrutiny and there are no sacred or untouchable subjects that are to be excluded in principle from study.

To the extent that management researchers subscribe to this ethos they may, on this view, be considered to be members of the scientific community. But even

that still leaves a lot of room for differences of outlook and belief about proper ways of producing knowledge. Science may be informed by a common ethos but that still leaves room for many different ways of doing science. Even self-professed scientists may differ greatly in their epistemological orientations.

Epistemological orientations

Two major epistemological orientations have dominated debate in the social sciences: positivism and constructionism. Although there are several variants within each orientation, we will outline the main ideas associated with each position. The precise nature of these orientations and the extent to which they overlap or are quite distinct are questions that continue to be much discussed.

The key difference in these views arises from their different conceptions of human beings and how their behaviour can be understood. These conceptions reflect different ontological assumptions about the nature of the world. Positivists argue that people and things are sufficiently similar for them both to be studied in the same way. They argue for the unity of science, claiming that there is but one path to a scientific understanding of the world. Constructionists, in contrast, argue that while positivism may be an appropriate epistemology for the natural world, it is inadequate for the understanding of the human world. For the study of humans as social beings it is necessary to adopt a non-positivist orientation to investigation.

Positivism

The term ‘positivism’ was coined by the nineteenth-century French philosopher and sociologist Auguste Comte (1798–1857). To English readers the word might seem to denote an attitude, of being positive or affirmative rather than negative and sceptical. But in French, *positif/positive* means ‘real’ or ‘actual’. Comte intended positivism to refer to an approach to knowledge which restricts itself

Box 3.3 What is positivism?

An approach in the philosophy of science, positivism is characterized mainly by an insistence that science can deal only with observable entities known directly to experience and is opposed to metaphysical speculation without concrete evidence. The positivist aims to construct general laws or theories which express relationships between phenomena. Observation and experiment will then show that the phenomena are or are not related in the predicted way; explanation of phenomena consists in showing that they are instances of the general laws or regularities.

(Abercrombie *et al.*, 2000, p. 269)

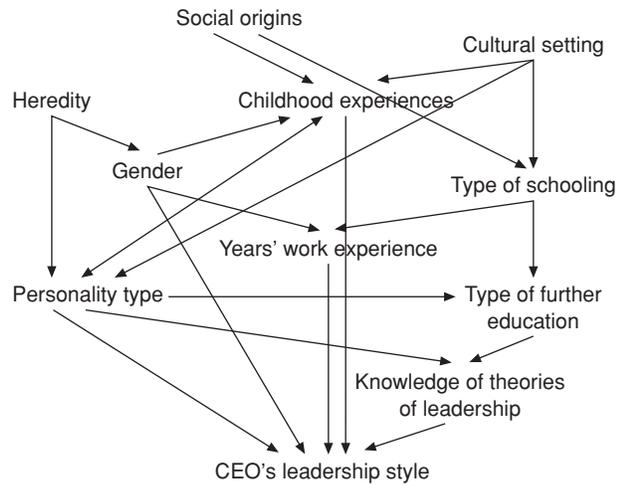


Figure 3.2 Hypothetical variable net.

to observable facts and their relationships and which excludes reference to non-observable entities such as 'gods', 'essences', 'first causes' or 'ultimate ends'. Hence positivism is to be equated with knowledge of the observable.

Positivism assumes that humans are natural objects, like stones or fishes. As such, they have an existence and possess properties that exist independently of any observer. Knowledge of objects can be obtained by observations that are expressed as descriptions. Descriptions are valid to the extent that they depict the properties the object actually has and exclude any elements that cannot be verified by multiple observers. Objective description is therefore an essential requirement of any genuine science: the world must be depicted as it is. Moreover, causal relationships between objects are to be identified in the same way, by careful observation of the conjunction of events over time.

The world assumed by positivism can be thought of as a set of interacting variables. A variable is anything that can be considered as varying. The underlying image is of the universe as a great machine whose workings are to be unravelled by careful measurement of the variables which comprise it and the identification of relations between the variables. The whole world is thus to be thought of as a gigantic variable net of the kind depicted in Figure 3.2.

Identifying relationships between variables is achieved by experimental research designs, which enable some variables to be isolated and their interactions observed, and/or by correlational methods that permit statistical associations to be uncovered. In this way the behaviour of the net, or those parts of it which have been selected for study, can be explained, predicted and perhaps understood. Positivist inquiry thus proceeds by means of variable analysis.

In the social sciences, positivism is closely associated with a theoretical orientation known as behaviourism. In its extreme form, behaviourism refuses

to acknowledge the existence of mental states, which are held to be non-observable. Behaviourism therefore limits itself to observations of behaviour and seeks to identify regularities, which are to be explained largely in relation to the impact of external stimuli. In effect, human beings are treated as objects akin to chemicals or animals that react in various ways according to the stimuli to which they are exposed. Behaviourism has been an important influence on the discipline of psychology, although its former dominance has now been challenged by cognitive psychology, which does admit mental or cognitive states to its ontological ground. However, it has a much broader application. Any epistemology that seeks to explain human behaviour purely in terms of reactions to external forces can be considered behaviourist in spirit.

Constructionism

Unlike positivism, constructionism (or constructivism) assumes that humans are different in kind from other entities in the universe. Most specifically, humans are self-aware and endow the world they live in with meanings. In itself this world is meaningless (Spinelli, 1989). People *construct* meaning and social reality (Berger and Luckmann, 1967). Their behaviour cannot be understood unless the observer understands those meanings, and such meanings have to be interpreted according to the contexts in which they occur. Furthermore, researchers themselves are engaged in processes of construction: they do not passively record and describe what they observe but interpret the world in the act of observing it.

Box 3.4 What is constructionism?

Constructivist, constructivism, interpretivist, and interpretivism are terms that routinely appear in the lexicon of social science methodologists and philosophers. . . . The world of lived reality and situation-specific meanings that constitute the general object of investigation is thought to be constructed by social actors. That is, particular actors, in particular places, at particular times, fashion meaning out of events and phenomena through prolonged, complex, processes of social interaction involving history, language and action.

(Schwandt, 1994, p. 118)

Human beings live in a meaningful world and they share this meaningfulness with their fellows as members of a culture. What constructionism requires for the understanding of human behaviour is cultural analysis, the investigation of human meanings. This cannot be achieved by the same methods as are used to study non-humans; distinctive methods are required and are indeed made possible because of specifically human attributes. In particular, because of the uniquely human capacity to communicate meanings, observation of behaviour is

insufficient for understanding and predicting it. Participation in social life in different social settings, the acquisition of the language used there, the questioning of social actors, and the interpretation of documents written by them are among the key ways in which human behaviour can be better understood.

Constructionism is associated with a number of related epistemological frameworks including phenomenology, interpretivism and philosophical hermeneutics. It also has its counterpart to behaviourism in the theoretical orientation called symbolic interactionism. Developed from the work of G.H. Mead (1863–1931), symbolic interactionism depicts human social life as a complex of interactions mediated by symbolic exchanges. Through the medium of language, humans are able to represent the world to themselves and others, to imaginatively reconstruct the past and to preconstruct the future. Human behaviour is purposeful: people direct their own behaviour according to the meanings it has for them and the intentions and plans they create. To try to understand and predict their behaviour as if they were billiard balls driven by external forces is therefore completely mistaken.

Although positivism and constructionism are not the only epistemologies that underpin social research, they do represent the two dominant approaches. Table 3.1 gives a summary of the main differences between them in simplified form. Despite these differences, in practice there can be a degree of crossover. For example, variable analysts do sometimes take account of the actor's perspective and cultural analysts do sometimes use quantitative methods. Similarly, a piece of research inspired by positivism may use participant observation, and some constructionist research may aim to generalize. In short, it is by no means clear that these approaches are mutually exclusive. Rickman (1990), for example, has attempted to reconcile these epistemologies. He argues that, given the duality of humans as both physical entities and socio-psychological persons, both positivistic and interpretative, constructionist approaches are necessary for the study of the human world.

Nonetheless, this major division in research thinking has given rise to some passionate debates and controversies between those who identify strongly, even dogmatically, with their chosen view. Positivists have sometimes seen cultural analysis as:

- unscientific or pre-scientific;
- a prelude to the development of quantified hypotheses, which are the basis for 'real' research;
- subjective and unreliable;
- unable to cope with macro-phenomena such as social structures, economies, markets and organizations;
- failing to produce substantial knowledge.

Constructionists, on the other hand, have sometimes seen variable analysis as:

- unscientific or scientific, inappropriately borrowing the methods of the natural sciences;

Table 3.1 Positivism and constructionism: the great divide in social research.

<i>Epistemology/theory of knowledge</i>	<i>Positivism</i>	<i>Constructionism</i>
<i>Preferred conceptions of:</i>		
The human world	Set of natural objects	Set of human meanings
Analytical approach	Variable analysis	Cultural analysis
Theory of human behaviour/action	Behaviourism	Symbolic interactionism
Relation between structure and action	Explain actions in terms of structures	Explain structures in terms of actions
Knowledge	General, nomothetic, universal	Particular, ideographic, contextual
Data	Given, found	Constructed
Method of securing data	Data collection via observation	Data construction via interpretation
Description	Quantitative measurements	Qualitative descriptions
Explanation	Statistical relations	Narrative accounts
Causal emphasis	External to internal	Internal to external
Prediction	Based on statistical forecasts	Based on understanding of typical behaviour in typical situations
<i>Preferred research approach:</i>		
Research strategies	Experiment, quasi-experiment, survey	Case study, ethnography, action research
Research methods	Self-completion questionnaire, structured interview, structured observation, psychological tests	Unstructured interview, participant observation, personal documents (diaries, letters, etc.)
Analytical method	Multivariate statistical analysis	Hermeneutics
<i>Methodological problems</i>	Internal validity, contextualization	Generalization, replication
<i>Symbol/image</i>	Hard, science, physics, variable net	Soft, humanities, anthropology, cultures

- divorced from the real world;
- unable to cope with the ambiguity and complexity of human behaviour;
- reifying phenomena by treating 'macro-phenomena' as if they were things rather than meanings;
- failing to produce substantial knowledge.

Both positions have themselves been attacked from other epistemological perspectives. As Remenyi *et al.* (1998, p. 35) say, once researchers have taken up an epistemological position, 'it is not uncommon for there to be a fervent adherence to the approach chosen, often leading to acrimonious debate'.

Before moving on, we will briefly consider two further epistemological orientations, realism and post-structuralism. Both are relative newcomers to the field of management and neither has so far been as influential – as guides to research practice – as positivism and constructionism, though for different reasons. In the case of realism this is partly because its most significant implications impinge on the structure of theorizing rather than on the nature of research methods. For post-structuralism it is because it radically undercuts conventional conceptions of research so as to make the whole enterprise seem either impossible, absurd or both!

Realism

The philosophical perspective known as realism is associated with the work of the philosopher Bhaskar (1989) and has been given prominence within social science by Sayer (1992, 2000). Like positivism, realism assumes that there is an outside world that exists independent of our knowledge of it. However, unlike positivism, it does not assume that this world can be known directly without any interpretation on the knower's part. In that, it shares with constructionism the idea that the world is not inherently meaningful but is made meaningful by our interpretations of it. Where realism parts company with both positivism and constructionism is over the matter of causes and explanations. Whereas positivism assumes that explanations must be based on observable regularities, realists seek to explain what can be observed in terms of underlying structural mechanisms. 'On this view then, a causal claim is not about a regularity between separate things or events but about what an object is like and what it can do and only derivatively what it *will* do in any particular situation' (Sayer, 1992, p. 105). What is observed is an outcome of the interaction of the 'causal powers' of the object, which it possesses necessarily in the light of what it is, with the conditions in which the object is situated.

Realism is seen by some as a bridge which links alternative philosophical schemes. For example, social entities, such as organizations, are seen as meanings but also as structures of meaning that cannot be wished away. Social reality thus has a recalcitrant quality similar to that of the natural world even though it is created through the meaningful actions of individuals.

The implications of realism for an understanding of management have been discussed by Tsoukas (2000). He presents a 'metatheory' of management which

is derived from the application of realist epistemology. Using this framework he is able to integrate previous perspectives on management, so illustrating the claim that realism can bring together important aspects of epistemologies that are seemingly mutually exclusive.

One difficulty with the contemporary state of realism in management studies is that relatively little guidance is given on the implications of this epistemology for the conduct of research. Does realism imply distinctive research methods and, if so, what are they? But this may not matter too much in practice, for some of its leading exponents believe that much management research has been tacitly informed by philosophical realism whether researchers are aware of it or not. They also claim that in some areas it has already become the orthodox approach (Ackroyd and Fleetwood, 2000).

Post-structuralism

Post-structuralism originated as a movement within literary criticism but has since been influential in the broader realm of cultural and social studies. It is closely associated with the work of Derrida (1976). It draws attention to the importance of language in the production of knowledge and questions the assumption that words can represent things in any stable or fixed fashion. Texts, which include not only written documents but any form of symbolic representation, including social life itself, have no definite nor immutable meanings. Indeed, some post-structuralists have claimed that ‘there is nothing outside the text’: all texts are ultimately self-referring, just as a dictionary defines the meaning of a word solely by reference to other words in the same dictionary.

On this view, structures, the orderly configurations of experience, are not fixed and awaiting discovery, as positivism assumes. Rather, they are a product of language: organizations, for example, are considered as texts and accordingly can be read or interpreted in many ways:

From the poststructuralist point of view, what readings reveal are potentially infinite, and potentially infinitely varied, orderings, sense-makings, of the experienced world of organization. Readings may be utterly different, may contradict each other, but none has a right to be considered more correct than any other and none may be considered, *a priori*, inappropriate – a manager, for example, does not have an intrinsically ‘better’ view of the organization than a worker. For Poststructuralists, it is the explanation itself that creates order, gives structure to experience. Structure is the meaning given to experience. Structure is immanent in the subject not in the object, in the observer not in the observed.

(Jackson and Carter, 2000, pp. 42–3)

Since order is seen to be not ‘out there’ independent of the observer, the idea of research as discovering or revealing order is replaced by that of research as a means of creating it. Similarly, data are to be thought of not as simply existing

and awaiting collection but as being manufactured by the researcher (Farran, 1990). In general, taken-for-granted terms such as 'empirical', 'facts', 'data' and 'reality' are seen to be meaningful only in relation to particular epistemologies, and their meanings are contestable (Scheurich, 1997). In short, post-structuralism throws into doubt the very existence of a stable and knowable world that is amenable to investigation by conventional means.

Epistemological orientations in management research

Management research has been strongly influenced by positivist assumptions. In part this is a historical legacy because the systematic study of management and organizations has developed in a context in which positivism dominated the social sciences. But it is also because of the vocational nature of the field. Positivism holds out the prospect of knowledge that can be used to control human affairs and so appeals to practical managers and those who teach them. Its association with science and quantification also gives positivism the smack of no-nonsense utilitarianism. In short, positivism has seemed rather businesslike.

This positivist consensus has, however, been fragmented in recent years as the field has been opened up to the influence of alternative epistemologies. This reflects both philosophical and methodological developments in the social sciences and the expansion of management education. Growth in the number of courses and of institutions providing them has brought an increasing number of scholars trained in the basic social science disciplines into the arena of management studies. Epistemological variety has increased, perhaps as part of a general 'crisis' in management knowledge (Thomas, 2003a).

Box 3.5 The epistemological paradox of management research

Probably the most striking feature on which there is consensus within the discipline is that management research operates no single agreed ontological or epistemological paradigm.

(Tranfield and Starkey, 1998, p. 345)

Today, although the influence of positivism is still strongly felt, no one theory of knowledge is dominant in management research. While the finance subject area, for example, continues to be strongly wedded to positivism, research in organizational behaviour is being undertaken by researchers of many different epistemological persuasions.

Keeping philosophy in its place

On the face of it, the relevance of epistemology to researchers seems clear. All claims to knowledge are based on assumptions about what the world is like and

how knowledge about it can be acquired. As there is no one universally accepted scientific method, it is necessary to choose methods of investigation from those that are available. Faced with the necessity of choice, we need to be able to justify these methodological decisions both to ourselves and to the critic who challenges us with the question: How do you know?

How far it is possible to do this by reference to philosophy is unclear. One difficulty, already mentioned at the start of this chapter, is that the epistemological arguments are themselves often confused and inconclusive. This is not necessarily the fault of philosophers, for the issues are complex and arguments deployed to deal with them can be abstruse. A further problem is that epistemologies are not self-contained and distinct but tend to overlap and interpenetrate. As Sayer (1992, p. 5) points out, particular philosophies ‘involve loose bundles of arguments weaving tortuously across wider fields of philosophical discourse’.

These difficulties place limits upon the extent to which it is possible to provide coherent and convincing philosophical justifications for methodological decisions. Empirical research, it would seem, floats on a sea of epistemological uncertainty. This does not appear to trouble too many natural scientists, for they pursue their research successfully without much if any reference to philosophy. This is perhaps not surprising because, according to at least one epistemologist, ‘philosophy or methodology of science is of no help to scientists’ (Chalmers, 1982, p. 169).

Social scientists have been much more self-conscious than natural scientists about their knowledge claims and methods, perhaps rightly so. But there is a risk of becoming overly sensitive to epistemological issues. I once heard of a student whose philosophical investigations led him to believe that he did not exist! Worries about epistemological respectability can seriously undermine confidence in the possibility of undertaking worthwhile empirical research, particularly on the part of novice researchers. Most epistemological issues are open to further debate. Such inconclusiveness can induce an uncomfortable sense of exposure because one’s research seems to be standing on insecure foundations. It may well be that it is, but if so, it will be no different from anyone else’s.

Box 3.6 Can you afford to be philosophical?

I once suggested to my PhD supervisor that life for researchers would be much simpler if we had a Phone-a-Philosopher service. Instead of having to wade through reams of heavy philosophical writings, many of them contradictory, we would simply call Phone-a-Philosopher and ask for the latest answer to such questions as ‘Is it possible to derive “ought” from “is”?’ ‘Is the existence of other minds amenable to proof?’ and ‘What is the meaning of life?’ It seemed like a good idea but my supervisor pointed out a snag: the phone bills would be astronomical!

It is tempting to believe that because no research method can guarantee the production of sound knowledge we must stop doing research and wait until the philosophers have discovered the Road to Truth. Unfortunately, that may mean waiting a very long time indeed (see Box 3.6). Some aspiring researchers may even be tempted to give up the idea of conducting empirical research altogether – and become full-time epistemologists!

In general it would seem that although, from a philosophical point of view, the unexamined life is not worth living, research, like life itself, stubbornly goes on regardless.

Activity 3.1 The plane in the jungle

Once upon a time, a team of Western anthropologists set out to visit a tribe in a remote jungle. They travelled by plane but unfortunately it ran out of fuel en route and they all bailed out. The plane flew on and eventually landed more or less intact in the jungle. Before long, members of the local tribe discovered the plane in the undergrowth. Never having seen such an object before, they reasoned that it was a bird god and set about worshipping it.

How would (a) a positivist, and (b) a constructionist set about 1) describing, and 2) explaining, the behaviour of the tribe?

Key points

- 1 All research proceeds on the basis of fundamental assumptions about the nature of its subject matter and the ways in which it can be known.
- 2 These assumptions have been grouped together by philosophers into epistemologies or theories of knowledge.
- 3 Two of the most influential epistemologies are positivism and constructionism, and these can be linked broadly to different styles of research.
- 4 Different epistemologies are not necessarily exclusively related to distinct research methodologies.
- 5 Over-concern with epistemological issues can lead to withdrawal from empirical research in favour of philosophy.

Key reading

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