1.3
EPISTEMOLOGY

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Chapter summary

- Theories of knowledge are relevant to the study of religion
- There are different kinds of knowledge production and validation
- Frequent terms of suspicion: positivism, reductionism and relativism
- Generalizations are compared and tested on the basis of theory
- Kinds and levels of explanation and interpretation are interdependent
- There are three directions of reasoning
- Models and concepts make unobservables objective
- Virtues are both epistemic and methodological

Introduction: Epistemological topics for the study of religion

'Philosophy of science is about as useful to scientists as ornithology is to birds.'

This quip suggests that the philosophy of science and its components, such as epistemological issues, are quite useless to scholars 'in the field'. There is no doubt, however, that a theoretically more robust study of religion would have to give serious consideration to a number of philosophical issues. For instance: Is the study of religion closer to literature than to science? What are the characteristics of all those 'objects' that are considered relevant to the study of 'things religious'? How does one define, describe, analyze or explain those objects? Scholars of religion must not necessarily become philosophers of science, but they ought to see if they could solve some of the problems in the study of religion by looking towards the philosophy of science and epistemology in general, because 'Epistemology is concerned with the foundations of science' (Quine 1969: 69). Thus it is also concerned with the foundations of the study of religion.

Most of the topics of epistemology are as relevant for the study of religion as they would be in any other academic field. However, some topics deserve more specific discussion, as they are important to scientific practices in the study of religion. Probably the most salient issue is the status of religious discourse in relation to the discourses applied in the science of religion or, simply put, the questions of 'who is right?' and 'what is true?' At the outset we
must simply say that religious and scientific claims to validity are of radically different orders. Religious claims with reference to transcendent truths or agents are impossible to validate scientifically, and most religious discourse is impervious to the data, explanations and interpretations of the sciences. This being said, it is equally evident that the subject matters of the study of religion can in fact be studied as human behaviors, ideas and institutions, and in that respect there seem to be no particular problems concerning truth claims. In this respect, the science of religion belongs squarely with the human and social sciences and it basically faces the same problems. Because of its academic history and its global, cross-cultural ambitions, however, there are some points that deserve mention in relation to epistemology in general. Among these are: the question of the nature of data; the modes of inferential reasoning; the consequences of relativism; reasons of argumentation and justification; the question of ‘epistemic virtues’; and the problem of ‘knowledge of unobservables’.

Epistemology—the basics

Epistemology is the theory of knowledge, what it consists of, how we get it and how we may defend and justify our knowledge. Traditional epistemology includes a number of key questions: (1) What is knowledge? (2) What kinds of knowledge are there? (3) What are the sources of knowledge? (4) What is the structure of our body of knowledge? (5) What are the limits of what can be known? (6) What are the devices by which we gain knowledge? (7) How is knowledge related to belief and justification? (8) How ought we proceed in order to acquire knowledge? Two related questions along similar lines are: What is this thing called science? and Why do some human activities count as science and others not? (Chalmers 1999). Among the key epistemological problems are also: kinds of beliefs, modalities of truth, means of justification, regress (‘where does our asking end?’), scepticism and ontology. However, before treating some of these in more detail below there are some ‘-isms’ that need to be taken into account.  

The main approaches in epistemology are (normally) divided into: (1) Empiricism, (2) Rationalism and (3) Constructivism. The first view, empiricism, is the standard idea that most of us have as a ‘default’ psychological mechanism: the foundations of our knowledge of the world are derived from experience, through sensations on which we base beliefs, pronounce statements and thereby arrive at (some kind of) knowledge. To the empiricist the means for building knowledge proceeds by induction and the criterion of validity is provided by reference (e.g. Chalmers 1999: 1–21). The categories by which we understand the world are largely shaped by the way the world is. As simple as it seems and as effortlessly as it works in our daily life, most philosophers agree that this is a dubious solution, because the move from one step to the next is mostly inexplicable. The empiricist view is closely linked to various forms of realism. The current dominant view is that there is a world ‘out there’, and although we may not ever know it in its entirety or on its own terms, we may at least gather knowledge of it in ‘critical, indirect realism’: The world exists and we know it indirectly as mediated by theory and as a result of critical scrutiny (e.g. Churchland 1979).

In the second ‘-ism’, rationalism, the categories by which we interpret the world are considered innate, stable and not derived directly from experience. Contrariwise, our experience and knowledge are shaped by cognitive mechanisms. This stance has certain merits because there is no doubt that our cognitive machinery processes whatever sensations and perceptions we might have, but it also easily leads to scepticism, for how can we then know how the world ‘really is’? We may believe all kinds of things about the world that may be
completely wrong (i.e. the impression that things just have colours). However, how things appear in our impressions are, of course, interesting subject matters to scholars of religion who study (among other things) religious thoughts and convictions.

The third ‘-ism’, constructivism, is by now a well-known position in the human and social sciences (it is scarce in the realm of the natural sciences, though not in the philosophy and sociology of science). This view holds that social conditions and forces are responsible for our knowledge and knowledge-forming processes. Such social epistemology is less concerned with the traditional quest for certainty and justification, and it is therefore more concerned with the coherence of beliefs. It is focused less on reference and more on inter-subjectivity and pragmatic viability. However, in the radically social perspective, any belief that is institutionalized in a community may then count as knowledge in its own contexts and provide its own justification. As scholars of religion know, this may easily lead to relativism and (again) to scepticism, because how are true beliefs to be distinguished from false, and what are the criteria for truth and falsehood? The social epistemology and the social construction of knowledge paradigm gained momentum in the mid-20th century. There are various strands between the radical ‘social construction of reality’ and the weaker ‘construction of social reality’ which more modestly claims that the human representations of reality are socially constructed (Engler 2004). It makes sense to say that ‘gender is a social construction’ in so far as the representations that different cultures hold of gender are different, but to claim that biological gender did not exist before it was socially constructed is nonsense. However, social facts are not just social—they are also facts and so objects of study for the human and social sciences. Characteristic of social constructionist epistemology is the rejection of the importance of ‘foundations’: there are ‘no givens’, and no ‘single reference’ for truth. Instead, coherence between beliefs, theories and what we may currently consider best evidence for our claims is all that is left from the classical epistemological toolbox.

The regress problem lives on in all three ‘-isms’, for where does our asking end? It can go on into infinity: in empiricism with ever smaller or bigger entities and in rationalism with global brain functions or transmitter substances. In constructivism the ‘buck stops’ with coherence or fashion and that is equally dissatisfying. The regress problem remains a stubborn one. A skilful suggestion for a solution can be found in Susan Haack’s ‘compromise’, which she labelled ‘Foundherentism’ as a providential terminological blend of ‘foundation’ and ‘coherence’ (Haack 1993). Just as in a crossword puzzle, where the fit of a word should be both horizontal and vertical, what we count as our best knowledge should fit with both available evidence and the theories we currently hold to be valid. With evidence and justification being infinite and theories being provisional, this is probably as good as it gets (Laudan 1996; Putnam 1990).

Two related ‘-isms’ have circulated time and again in discussions about the study of religion, namely positivism and reductionism. Positivism developed as the key philosophy of scientific progress in the 19th century. The basic principle is that science should be concerned with issues of which we can have positive and reliable knowledge and so metaphysical speculation should be avoided. This is basically a very sound drive towards objectivity and neutrality. Not least, the study of religion has benefited from positivistic attitudes in research. Then again, even positivists have opinions and biases and they also subscribe to theories even if they are not aware of it. During the latter half of the 20th century, positivist thought came into disrepute, and ‘positivist’ and ‘positivism’ became pejorative terms for scholarship that is not theoretically aware of its own presuppositions. The ideal in current scholarship is then a drive to include the premises for research and so extend the reach of objectivity to scientific practice itself (e.g. Chalmers 1999: 113–23).
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‘Reduction’, ‘reductionism’ and ‘reductionist’ are also regularly found as depreciatory terms in the study of religion, most often applied to those (opponents) who ‘reduce’ religion to ‘something else’ (e.g. politics, economy or cognition) and so miss the presumably essential religious qualities of religion. This is evidently a complicated issue, so suffice it here to say that such use of the term ‘reduction’ as a term of abuse is flawed. The term ‘reduction’ has several meanings but in science it primarily means a change of theory or of level and so produces a ‘new picture of things’ (Jensen 2003b: 134–39). Reductionism plays a role as soon as one says ‘in other words [. . .]’, because then a different explanatory framework is engaged along with related interpretations and explanations. If the study of religion were to totally avoid reduction, in this sense, the only task left would be to repeat what the believers think, say and do. In some circumstances that might be a noble undertaking, but science it is not. Briefly, there is no way to avoid reduction as long as theory is involved, so the duty of the scholar is to find the most appropriate kinds and ways of ‘reducing’.

A curious phenomenon has appeared among the human and social sciences over the past decades, and it has not contributed to their authority or influence in the academic world in general. It is commonly known as ‘postmodernism’. It reflects what Paul Boghossian terms the ‘fear of knowledge’, that is, the misunderstanding and misuse of ‘constructivism’ that end in social epistemology and the doctrine of ‘equal validity’ (Boghossian 2006: 1–5). In its most radical forms social epistemology makes it impossible to decide on the validity and soundness of propositions: Whatever is considered true by whomever and by whatever standards is then true. This is relativism in the extreme. It is difficult not to go along with Boghossian’s critique for although we may agree that our current knowledge, be it scientific or common sense, is historically contingent and provisional—this does not entitle us to claim whatever we want and then demand to be taken seriously. There are indispensable standards of objectivity and reasonability that are the basis for the formation of all human social behavior (e.g. Rescher 1997).

What sciences are there?

Most of the discussions in epistemology and the philosophy of science have focused on the conditions and problems for the natural sciences in their pursuit of reliable knowledge, foundations and justifications. Knowledge formation in the human and social sciences have not been considered to the same extent, and these fields have not been considered by some to be scientific at all. The history of the study of religion amply demonstrates how even erudite scholars have used their academic positions and influence to produce what was ultimately religious apologetics more than scholarly knowledge. However, this does not imply that it is in principle impossible to have a reasoned science of religion, as reasoned as any science about any other kind of human practice (Jensen 2003b). One would think that it should be easier to study ‘things human’, because we know from our own thought and practice what it means to be human. It has, however, long been proven invalid to ground scholarly practice in subjective, first-person introspection. Even the most introspectionist person needs language and concepts to think about her introspections and so the subjective, the intersubjective and the objective are linked and deeply interdependent (Davidson 2001).

In the study of religion scholars possess an immense array of products of human minds and practices as their data. These products are created by humans and they feed back on humans in cultures, societies and histories. If this seems to imply some measure of idealism and circularity, then such are the conditions for the human and social sciences as hermeneutics teaches us. Humans act for reasons, willingly or unwillingly, consciously or subconsciously, individually or collectively and so reasons can be causes and this makes for the interesting fact that
humans are both driven by causes (as biological organisms) and reasons—as enкультурated agents. Of course, this also opens the door for political, ideological, religious or economic influences and considerations when we turn to actual scientific practice, for scientists are also human beings. Scientific pursuits do not unfold in a void or proceed from nowhere. For instance, studies of religion have been under the influence of a very powerful model of religion derived from Western Christianity that is used even by non-Western scholars. Such issues are not just politically and philosophically trivial for they point to the need for reflexivity and scrutiny of our tacit knowledge and unquestioned cultural cosmology when we consider ‘how ought we to proceed in order to acquire knowledge.’ Theoretical reflexivity and scrutiny are among the most important epistemic tools in the human and social sciences. Hence, the need for historical and theoretical awareness is obvious.

**Generalizations—testing theory by theory . . .**

A generalizing science study takes concepts, models, hypotheses and definitions as its theoretical objects, and this holds for the study of religion as well. Theory is the necessary condition for there being any knowledge at all. Briefly stated, a fundamental difference between the natural sciences on the one hand and the human and social sciences on the other is that the natural sciences are nomothetic (‘law positing’), because they search for general natural laws, whereas the human and social sciences tend to be more idiographic (‘single description’) because they often describe, analyze and explain singular phenomena or cases. Some social sciences (e.g. economics) occupy a middle ground in their search for generalities in human behavior. Obviously, there are many ‘border-crossing’ cases: cognitive linguistics is much more nomothetic, whereas numismatics in ancient history is likely to be idiographic. Also, there is a difference in the position of generalizations: in the natural sciences generalizations are (of course) made by scientists but the important question is how they can be tested and what the results are; whereas in the human and social sciences the relations between generalizations and data are more circular and the important issue is what the generalizations yield in epistemic terms. That is: how good are they? They are tested more for their utility than for their truth-properties. This may be explained in the following way: in a generalizing science of religion, theories are tested not simply in relation to objects; they are tested in relation to other theories. So the process is, ultimately, one of the falsification of theory by theory. For instance, there is no possibility of taking one of the theories of, say, Ernst Cassirer, Victor Turner or Dan Sperber on symbols and compare it to a non-theoretical model of symbols ‘as such’. The question of what constitutes the units of comparison and generalization cannot be settled simply by reference to evidential data. This feature is called the ‘under-determination of theory by evidence’. Theories are not given by facts, but facts are produced relative to theories. The philosophy of the natural sciences has shown that inductivism is logically flawed because the theory-dependence of observation means that the idea of verifi cation with reference to ‘un-interpreted’ empirical evidence is impossible (Everitt and Fisher 1995: 164–78; Chalmers 1999: 13–21). Theories and evidence (data) are mutually constitutive. Generalizations are the results of theoretical reflections on what is considered to count as evidence within a given theoretical definition-space. Consequently, there is no generalization or testing of hypotheses without comparative work.

**Kinds and levels of explanation**

When introducing the complex topic of explanation it should be noted from the outset that there are obviously different kinds of explanations that operate on different levels. There is no
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fixed consensus on the issue. At most, there are a few prevalent conventions among philosophers of science concerning types and functions of explanations. The six most general are listed here on a scale from the nomothetic and causal to the idiosyncratic and contextual:

- ‘Covering law’ explanations concern the discovery of general laws: An effect is explained when its cause(s) can be subsumed under a ‘covering law’. This type is also called deductive-nomological explanation as it specifies a logical relationship between that to be explained (the ‘explanandum’) and the conditions that do the explaining (the ‘explanans’). Thus, something can be said to be explained if it can be demonstrably deduced as a necessary consequence of a general law (Greek: ‘nomos’) and a number of initial conditions. A covering law model usefully covers events in the physical world such as explaining the boiling point of water. The problem is, obviously, how to use this type of explanation in the social and human sciences. What place, if any, could it have in the science of religion? Well, explanations of this kind might provide some understanding of the biological foundations for the human abilities to have religion.

- ‘Causal’ explanations are closely linked to deductive-nomological explanations and they have often been considered identical. The problem seems to be that although the recurrence of given phenomena in a theory of regularities can be considered a criterion of cause and effect relations, it has become increasingly difficult to specify what actually constitutes a ‘cause’. Cause is a highly metaphysical concept the reference of which is epistemologically unclear. There are causal explanations in religions, such as ‘God created the world in six days’, but this kind of explanation falls outside the scope covered by scientific theory. However, causal explanations in the cognitive science of religion would explain why humans have specific kinds of religious beliefs and representations and what are their causes.

- ‘Statistical’ explanations in which the general covering law is substituted by statistical frequency (sometimes called ‘inductive-statistical’ explanations). This kind of explanation is common in the social sciences and in the study of religion where it supports statements like ‘Muslims do not eat pork because it is forbidden to them’. Thus, this type of explanation has some predictive force because it covers what generally seems to be the case. Although philosophically and logically dubious, there is enough common sense and pragmatic reason for using this type of explanation. In fact, humans do it all the time.

- ‘Dispositional’ explanations refer to dispositions, for example of grass to grow. When transposed to the realm of the social and the cultural they may be seen as ‘intentional’ or ‘purposive’ explanations of motives and reasons (i.e. the bases of common sense social inferences). It has been debated in philosophical logic whether reasons can be causes, but reasons are what render many human actions understandable. ‘Dispositional’ explanations are found, for instance, in dream analysis in psychology, in astrological discourse and in religious systems that contain ideas of cosmic regularity or of human nature (e.g. ‘providence’ or ‘karma’). Dispositional explanations seem to have deep roots in human cognition because they are linked to evolved templates about intentions of animate beings and intuitive goal-structure perception. That is: we easily grasp what ordinary actions are about. Humans also seem to have strong dispositions to meaning- and world-making that are at the roots of religion.

- ‘Contextual’ or positional explanations. This type of explanation (of ‘making clear’) is important and widespread in the human and social sciences. It also covers descriptive explanations, e.g. ethnographic descriptions of how things are. It further emphasizes the understanding of subject matters in contexts such as, for instance, semantic structures,
narrative logic, or in history and society. Instead of focusing on causes of events or purposes of actions, such explanations may refer to underlying structures and mechanisms at various theoretical levels (as in a language grammar, in psychoanalytic dream analysis or in structuralist analyses of myth). Contextual explanations explain the role, place or the meaning of something in a context, and mostly at the same level (and so they are not reductions to lower levels). The *explanandum* may be the rules of chess or the syntax of a language, and such other instances where it is uncommon to ask for the causes, origins or purposes of such rules but rather of how they ‘hang together’. An example could be the dietary purity rules in many religious traditions. Here, the explanatory process consists in placing the unknown in a context of things known, and this is an important heuristic practice in the study of religion. In the explanatory process, scholars search for those elements that fit into the narrative logic through which it is possible to (re-)produce a meaningful account of events. The ‘parable’ or ‘story’ perspective is justified as an explanatory strategy when scholars explain human actions, that is, as (mostly) purposeful and intentional. In consequence, the more complex forms of human behavior may require both causal explanations of generative and selective mechanisms as well as structural explanations of functions and structures and these are different kinds of explanation.

- Functional explanations are a subset of positional explanations that abound in the study of religion, culture and society. They focus on the functional properties of entities, say, religious phenomena, in their contexts. Examples from the realm of religion could be the social functions of divination and oracles in political processes in ancient society. Functional explanations of (items of) religion often give attention to the role religion may play on the collective or individual levels, such as explaining the cosmos, maintaining social order or providing individual coping strategies. There is a caveat concerning functional explanations because they often convey the impression that the outcome or the effect of the function was originally the cause of it and so state that religions exist in order to fulfil the needs for individual psychological coping or societal stability. In such cases the functional explanation slides into a teleological explanation, such as if one were to say that rainclouds exist for the purpose of making plants grow. Functional explanations may often be revealing, but the cause-effect direction should be closely and critically monitored.

The more rewarding results in the human and social sciences will often come from combinations that provide as comprehensive accounts as possible of the phenomena under scrutiny. In the natural sciences, in contrast, the explanatory goal generally is to find the variables that explain the cause-effect relations (i.e. temperature and air pressure for the boiling point of water). It is a wider and more general view of inter-theoretic and interdisciplinary scientific work that scientists both need and should respect in order to obtain ‘consilience’ between sciences and also appreciate their respective epistemic goals.

### Interpretation and explanation

The distinction between explanation and interpretation (as heuristic and epistemic strategies) has traditionally been seen as simultaneously representing differences between natural sciences that explain objects and humanities that ‘understand’ subjects. The debates have been long and complex, but it now appears to be a matter more of definitions (or convictions) than of substance. Interpretations and explanations are mutually compatible activities. Scientists in the ‘hard’ sciences obviously seek to explain ‘the world’, but they also interpret evidence, validations and hypotheses. Likewise, interpretation commonly includes a measure of
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A lexical definition of ‘explanation’ will typically understand explanation as ‘to make plain or clear’. When looking at such human products as cultures, languages and religions it soon becomes obvious that they are semantic and semiotic compositions, and as such they are ‘game-like’, with rules and constraints for combinations and use. In order to explain and interpret a game, to make it ‘plain and clear’, one will most likely begin by explaining the rules. Why should the same not hold for the explanation, interpretation and understanding of religion and religious phenomena? How does one understand Karma, Puja, the Hajj, Zande witchcraft and Christian Baptism if not as part and parcel of social and cultural systems? In 1945 Lévi-Strauss explained the symbolic nature of kinship-systems in this telling passage:

Because they are symbolic systems, kinship systems offer the anthropologist a rich field, where his efforts can almost [. . .] converge with those of the most highly developed of the social sciences, namely, linguistics [. . .] we must never lose sight of the fact that, in both anthropological and linguistic research, we are dealing strictly with symbolism. And although it may be legitimate or even inevitable to fall back upon a naturalistic interpretation in order to understand symbolic thinking, once the latter is given, the nature of the explanation must change as radically as the newly appeared phenomenon differs from those which have preceded and prepared it.

(Lévi-Strauss 1968: 51)

So, if someone asked me to explain some point of French grammar, I would explain how the system is laid out structurally, how it functions in terms of grammar, syntax and pragmatics. On a textual analogy, the explanatory character of interpretation may be further extended as suitable for the analysis of human actions and institutions.

Data and interpretation: induction, abduction and deduction

As already noted, data are theory dependent. Data are produced and ‘sifted’ from the streams of experience by means of theories, concepts and models. Human life is in a flux and we are unable to perceive or understand it ‘as such’. Events and actions are the stuff that human social and cultural life is ‘made of’ and in order to be able to represent the ‘chunks’ and patterns of events and actions we must be able to parse long streams of experience into sequences and represent packages of actions as meaningful, coherent and instrumental—or, in other cases, not so. Scientific analysis in the human and social sciences is a higher-order ‘event representation’ classification method where various kinds of behavior are seen as ‘counting as’ certain kinds of activity. Anything from sensible activities such as cooking, weddings and football to, at the other end of the scale, madness are what they are because there is social and cultural consensus as to what they ‘count as’. Money is a prime example of this ‘status function’ mechanism that is the source of all social construction (e.g. Searle 2010). The science of religion can testify that all societies have norms, modes and schemata for behavior in mind, body and society.

In epistemological terms there would be no possibility for seeing what ‘counts as what’ in a scientific perspective if there were no concepts, models, schemata or theories, for ‘[. . .] scientific knowledge does not automatically arise as we observe our surroundings’ (Audi 2003: 260). This is why former positivist ideals of induction have proven unfruitful: facts do not exist ‘as such’ and they cannot provide the concepts, models and theories that constitute
knowledge and science as epistemic projects. The other classical mode of inference is **deduction**, which is indispensable in the natural sciences as a predictive tool, but has a troubled reputation in the science of religion because of its predominance in normative issues in theology and philosophy. Many scholars in studies of particular religions have been quite ‘positivistic’ as a result of their suspicions of these two disciplines. Theology and philosophy were considered to hold preconceived notions and biases that would distort interpretations and explanations of religions and cultures.

The third mode of inference is **abduction**, which is less known. It is often simply referred to as ‘inference to the best guess’. The process involved is one of making inferences and best guesses on the basis of what is known, what we may predict and what fits our models and theories best. In the human and social sciences nomothetic theories and covering-law explanations are rare, whereas probabilistic hypotheses and theories abound. Epistemic probability is related to the ‘best guess’ practice of abductive reasoning and so it is often of a creative nature. This we can use predictively in the science of religion, for although the number of actual variables may be daunting, we can still make guesses as to whether Jews would likely eat pork or Hindus beef (very simple examples), and we can explain the situational logic of behaviors and agents in relation to religious belief and action patterns, where and when coherence permits heuristic inferences from specific cases (‘Oh—so this is why they do it!’).

**Conceptual models**

Abductive reasoning is thus also closely linked to the formation and use of the models that are used in the interpretation of data, such as whether a string of events is better classified as, for instance, divination or sacrifice. Models come in many forms and there is a proliferation of types of models in the literatures related to this subject. Models can be more or less heuristic, diagrammatic and predictive, but they are all related to theory, theory building and theory application. In many sciences, including the study of religion, models are used for the testing of hypotheses. However, in the study of religion models are more often used to conceptualize and construct theoretical objects from the mass of evidential data. Models and the theories associated with them determine whether a set of actions counts as, for instance, a votive offering or a curative rite. Some models are analytic because they are true by definition, such as when ‘axis mundi’ is defined as the symbolic centre of a religious world. Other models are synthetic because they can be tested against evidence, be criticized and modified, and so yield confirmation as heuristic and epistemic devices. In addition, models may also be considered performative in the sense that they create the conditions under which the object becomes visible to scholars as, for instance, shamanism or cosmography. A large part of the research and debate in the science of religion has been devoted to the development and refinement of models. Some models have become obsolete, such as ‘fetischism’, ‘pre-animism’ or ‘dynamism’. When an aggregate of models is assembled in the light of a theory, e.g. structuralism, a more complete paradigm emerges, one that may be likened to a conceptual scheme or a theoretical framework that opens up new modes of description, analysis and understanding in a disciplinary matrix. One may recall the discussions between Claude Lévi-Strauss and his opponents in the 1950s and 1960s in order to witness the changes brought about by a new theoretical paradigm. However, the world itself does not change. As Thomas Kuhn says about two scientists (one before and one after a paradigm shift): ‘Both are looking at the world, and what they look at has not changed’; and so ‘[. . .] a scientist after a revolution is still looking at the same world’ (Kuhn 1996: 150, 129).
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Epistemic virtues—a useful catalogue

There are many ways of looking at the world, and so philosopher John Dupré suggests focusing on what he terms ‘epistemic virtues’ and disregarding the ideal of scientific unity, with physics serving as the ‘mother’ of science. According to Dupré, the discrimination between science and not-science through one single criterion (e.g. falsification) for what constitutes ‘genuine scientific merit’ seems to be un-resolvable (Dupré 1993: 221–23). Other criteria for characterizing science could be, e.g. coherent relations between theory and empirical data, that science is cooperative and cumulative, and the quest for general laws and principles. In the context of the present volume I am inclined to add that a scientific finding is a finding that was established on the basis of methods acknowledged as scientific. However, there are no comprehensive correlations that cover all sciences. As a solution Dupré offers a ‘pluralistic epistemology’ of ‘promiscuous realism’. This is not methodological anarchy, and the proposal may well be constructive in the study of religion, for as Dupré explains the notion of ‘pluralistic epistemology’:

Science, construed simply as the set of knowledge-claiming practices that are accorded that title, is a mixed bag. The role of theory, evidence, and institutional norms will vary greatly from one area of science to the next. My suggestion that science should be seen as a family resemblance concept seems to imply not merely that no strong version of scientific unity of the kind advocated by classical reductionists can be sustained, but that there can be no possible answer to the demarcation problem [i.e.: the distinction between science and non-science].

(Dupré 1993: 243)

Nevertheless, we do have principles for assessing the superiority of some claims over others, e.g. evolutionary theory versus creationism. Normative epistemological standards are available and they do not in fact look that much different from established practices; so Dupré suggests a ‘virtue epistemology’ consisting of:

sensitivity to empirical fact, plausible background assumptions, coherence with other things we know, exposure to criticism from the widest variety of sources, and no doubt others. Some of the things we call ‘science’ have many such virtues, others very few [. . .] Many works of philosophy or literary criticism, even, will be more closely connected to empirical fact, coherent with other things we know, and exposed to criticism from different sources than large parts of, say, macroeconomics or theoretical ecology.

(Dupré 1993: 242–43)

With Dupré, we may then consider the demarcation problem to be in some sense solved. With the ‘wider’ concept of science also comes the possibility for a theoretically and methodologically sound science of religion—keeping in mind that ‘religion’ is not a thing, of course. There is no reason to imitate outdated scientistic conceptions of science. Not all that looks, or used to look, like science is science. Now, what are the implications of this tempered view of scientific rigour when it comes to methods and methodology? Briefly stated, the methodological consequences must be that methods and research procedures must also be virtuous, in the sense that objectivity, impartiality, honesty, reflexivity and self-criticism will be the foundations on which to build. Just imagine holding the opposite view. Thus, knowing
epistemic virtues in theory ought to lead to practicing methodological virtues and so a methodologically well-reflected and honest investigation should be a display of ‘virtue epistemology’. This may be easier said than done, but such notions ought to be the guiding motives and representations in research.

Knowledge of unobservables and the functions of concepts

A traditional problem in epistemology concerns knowledge of matters that are ‘unobservable’. Historically, some important matters have been unobservable and ill understood until the right tools and theories were developed. Gravity is an example: already in antiquity vendors used scales to weigh their goods, but until the principles and concepts of gravity were discovered and ‘invented’, gravity remained ‘unobservable’. Thus, empirical observation and theoretical knowledge go hand in hand. Electricity and nuclear radiation are other matters that come to mind. Inventions of instruments that amplify our cognitive and epistemic powers are important too: telescopes, fMRI scanners working at molecular levels and so forth. 17

Religious traditions abound with claims about, e.g. agents and actions that are ‘invisible’, ‘hidden’, ‘transcendent’ and so unobservable, 18 but in that sense epistemology has nothing more to say than that some people hold such ideas, which are then no longer unobservable as soon as they become topics in language and symbolic systems and so emerge as social facts. Unobservable are also the properties ascribed to objects, persons and actions for the questions of ‘what counts as’, e.g. a taboo in ritual practice, a touchdown in football or a well-performed baptism of a child. These matters are unobservable for they depend on their interpretation to become what they are intended to be. ‘Thick description’ of intentions and meanings is the way to describe such actions. Many of the most important matters in human life are unobservable, and so the concerns about acquiring knowledge of the unobservable and knowing ‘what counts as what’ are central in the human and social sciences. The ‘unseen’ must be translated into matters that are epistemically accessible. Translations for the purpose of ‘epistemic emergence’ revolve around concepts, their use and their meaning in forms of language as, for instance, when we understand a ritual performance because we learn about taboos, purity and the role of the ancestors as guardians of morality. Without those concepts we would not understand anything.

Concepts are used to ‘translate’ observed actions, texts read, etc., into scholarly, conceptual meta-languages. These are as accessible as are natural languages although they often may require extensive training, say in philosophical logic or in molecular genetics. Human knowledge of all kinds is expanded by mediations between such ‘languages’. In the ‘translation’ process ‘raw data’ become not only scientific but also social facts and ‘cultural posits’ (Quine 1969: 13–15; Jensen 2003a: 319–51). Scholarly concepts are constructed for the purposes of translation into theoretical languages where words may acquire different meanings. If my teaching is successful, my students will come to think differently of, say, ‘taboo’ as an element of theoretical discourse and not only of colloquial speech, because the theoretical concept of ‘taboo’ comes with different theories and conceptual ramifications. Concepts enable us to see things, to talk about them, to make theories about them, even if the ‘things’ do not really exist. Conversely, unobservable ‘things’, such as ideas, beliefs and convictions, come to life by being translated into perceptible forms. Consider a procession of Buddhist monks, an Ndembu healing ritual, a Roman-Catholic mass, or any other religious phenomenon. If not for the observable actions, the concepts involved would truly be abstract; and if not for the semantics of the concepts, these observed actions would be senseless. Mutual theoretical dependence and interpretational scope are the key.
1.3 Epistemology

Concluding remarks

So, here is a ‘no problem’ solution to many epistemological concerns: one no longer needs to be a physicist or a philosopher to know what science is, for scientific virtues are in principle quite easy to understand and use. They are extensions and continuations of the endowed human faculties that have evolved so that we would not walk into trees in the jungle. When we add to that the obligations of social life and the normativity of language use, we see the contours of scientific practice as similar to human practice in general. The same standards hold in the practice of science, and that is why I think we should prefer the ‘virtues’ scenario instead of adhering to a quest for a set of strict rules. Anyone can follow strict rules, but it is much more challenging to remain rational when the rules run out. There is a solution to that as well, for as the philosopher Hilary Putnam once said: ‘[. . .] we have an underived, a primitive obligation of some kind to be reasonable, not a “moral obligation” or an “ethical obligation”, to be sure, but nevertheless a very real obligation to be reasonable’ (Putnam 1987: 84, original emphasis). That is very good mind-set with which to begin the journey.

Notes

2 I omit here any discussion about ‘What is this thing called religion?’
3 See Jensen 2003a. The strong view is so counter-intuitive that it seems attractive to some, as e.g. the ‘Sokal affair’ (in 1996) demonstrated (Lease 2003).
4 French ‘sciences humaines’ or German ‘Kulturwissenschaften’ may sound awkward to Anglophone ears, but these designations do make good sense.
5 See e.g. Laudan 1996: 29–73, for a more technical discussion.
6 See Chapter 1.2 on comparison in this volume. In a different context I have argued that there are (probably) only four ‘kinds’ of comparison in the human and social sciences: comparisons of form, function, structure and (semantic) meaning (Jensen 2008, 2003b: 440).
7 See e.g. Polkinghorne (1988). Other human doings can be explained as events, that is, when they are the effects of, e.g. biological functions and causes (e.g. blood pressure, metabolism etc.).
8 Examples of comprehensive and complex accounts that cover vast reductive spans are Craver 2007 and Thagard 2010.
10 In its milder forms, inductivism has played a considerable role in the study of religion, simply because the early scholars in the field wanted to see what the texts or the believers ‘really said’, against the biased representations given by colonialists and religious missionaries. This ‘mild inductivism’ displays epistemic virtue, in anything from therapy to text readings. On the problem of induction, see Everitt and Fisher (1995: 145–63).
11 Most general works on epistemology contain a section on deduction, see e.g. Chalmers (1999: 8–10) for a very brief introduction and Audi (2003: 165–77) for a technical discussion.
12 Ironically, those same ‘positivists’ have since come under attack from postmodernist, feminist and post-colonialist critics for being biased. Such criticisms demonstrate a basic drive towards epistemic vigilance and justification: ‘trying to get it as right as we can’.
13 The philosopher Charles S. Peirce, who was the creator of the term, said that to abduce a hypothetical explanation a from an observed surprising circumstance b is to infer that a may be true because then b would be a matter of course.
14 Concerning models in general, Frigg and Hartmann present a long list: ‘Probing models, phenomenological models, computational models, developmental models, explanatory models, impoverished models, testing models, idealized models, theoretical models, scale models, heuristic models, caricature models, didactic models, fantasy models, toy models, imaginary models, mathematical models, substitute models, iconic models, analogue models, and instrumental models are but some of the notions that are used to categorize models [. . .] While at first glance this abundance is overwhelming, it can quickly be brought under control by recognizing that these notions pertain to different problems that arise in connection with models. For example, models raise
questions in semantics (what is the representational function that models perform?), ontology (what kind of things are models?), epistemology (how do we learn with models?), and, of course, in philosophy of science (how do models relate to theory?; what are the implications of a model based approach to science for the debates over scientific realism, reductionism, explanation and laws of nature?)’ (Frigg and Hartmann 2006: 1). Hodges (2009) is a more technical survey. On models in direct relation to the study of religion, see e.g. Jensen 2009.

15 As Dupré says, ‘Certainly I can see no possible reason why commitment to many overlapping kinds of things should threaten the reality of any of them. A certain entity might be a real whale, a real mammal, a real top predator in the food chain, and even a real fish’ (Dupré 1993: 262). ‘Promiscuous realism’ does not, however, comprise religious or fictitious ontologies and so Dupré’s taxonomy of sea mammals does not include mermaids.

16 One example of scientistic strategy for the recognition of academic or scientific status is quantification: ‘That this aspect of scientism—perhaps we should call it “mathematicism”—is a sociologically significant contributor to scientific prestige seems hard to dispute. It is again perhaps best illustrated by the preeminent influence of economics, with its characteristic appeal to abstruse mathematical models of little empirical worth, among the social sciences’ (Dupré 1993: 223).

17 The so-called ‘E-meters’ used in Scientology most likely are instruments of a different kind.

18 Notice that as such (unobservable, etc.) these ‘phenomena’ are also beyond the bounds of public control and reason, and so they are means by which power relations can be produced and upheld.

References


1.3 Epistemology


Further reading


Difficult reading made easy; a good entry into epistemology.


A highly recommended introduction to classical and modern problems in the philosophy of science.


Specifically on epistemology and still accessible for the uninitiated.


Highly recommended as an updating addition to Chalmers 1999.

Key concepts

Abduction: reasoning upon prior knowledge to the ‘best bet’.

Deduction: logical inference or reasoning where conclusion is based on fixed premises.

Empiricism: the theory that knowledge is produced from experience and the use of the senses.

Epistemic virtue: good conduct in the pursuit of knowledge.

Epistemology: the theory of knowledge in philosophy.

Explanation: disclosing how matters are causally connected or ‘making things clear’.

Generalization: typical aspects of a group of ‘things’, e.g. rituals as behavior.

Induction: reasoning that proceeds from empirical premises to conclusions.

Interpretation: eliciting meanings and semantic values, e.g. from texts.

Model: a representation of one structure in relation to an analogous one: e.g. sound as waves.

Rationalism: the theory that reason as such can provide true knowledge.