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Epistemology is the branch of philosophy that studies the possibility of knowledge. In this chapter we show how understanding epistemology is essential for understanding the different ways in which knowledge is developed in organization studies. For that purpose, we begin by introducing philosophical foundations of epistemology and explain why and how knowledge is defined as ‘justified true belief’. We then go on to analyse the assumptions on which different epistemic systems within organization studies are based. Following this analysis, we build on constructivist philosophy to address the incommensurability of different epistemic systems.

**Philosophical foundations**

Following Plato’s writings in the *Theaetetus*, philosophers traditionally defined knowledge as ‘justified true belief’ (Plato, 369 BC/2014). Beliefs we have may concern phenomena that are commonly encountered in everyday life. To demonstrate the difference between mere beliefs and ‘knowledge’ about something, it is necessary to define how a belief is transformed into knowledge. As we will see, different philosophical positions provide different answers to why and how beliefs need to be true and justified in order to be called knowledge (Moser, 2005).

**Truth and justification**

Truth is the property a belief needs to fulfil in order to be called a true belief. For defining when a belief can be called a true belief we need to know what truth is – which is answered differently depending on one’s philosophical position. Justification, as an additional property a belief needs to fulfil in order to be called knowledge, becomes relevant in different ways, also
depending on one’s philosophical position. The key distinction is that some philosophers see
justification as a property of a belief that exists independently of truth; that is, justification
transforms beliefs, which are true already, into knowledge. Other philosophers see justification
as constitutive for both truth and knowledge; that is, justification transforms a belief into both
true belief and knowledge. To explain those differences in more detail we now introduce three
common theories of truth and their relation to justification in epistemological inquiry:
correspondence theory, coherence theory, and consensus theory (for a more details overview
on different relations between truth, justification, and knowledge see Audi 2010).

We first turn to a case where truth and justification of a belief jointly but independently of
each other form knowledge. Correspondence theory of truth (e.g. Moore, 1953; Russell, 1912) defines
a belief as being true when it corresponds to the phenomenon to which it pertains. Correspond-
ence theory relies on a realist ontological assumption – the phenomenon that a belief mirrors
exists as a separate entity in an external world, which is independent of its observer (for a more
detailed explanation of ontology see the preceding chapter). It follows that, by comparing a
belief with the objectively and independently existing phenomenon to which it corresponds,
it is possible to define whether that belief is true or not. From an epistemological perspective,
in this context it is possible that one accidentally holds a true belief, for example out of a lucky
guess (e.g. Steup, 2014). This suggests that it is not sufficient for a true belief to mirror a
phenomenon correctly in order to be defined as knowledge. In order to be recognized as
knowledge, a true belief has to fulfil a second condition – it needs to be justified. Justification
describes what legitimate ways are available to generate knowledge. When guessing becomes
eliminated as a legitimate way, a lucky guess remains a belief that is indeed true but cannot be
called knowledge. Consequently, when following a correspondence theory of truth, justification
becomes constitutive for knowledge, but not for the truth of a belief.

There are also cases in which truth and justification of a belief can be seen as interdependent
and justification as constitutive both for truth of a belief and knowledge. For example, coherence
theory of truth (e.g. Blanshard, 1939; Young, 2001) does not define correspondence of a belief
to an objectively given and independently existing phenomenon as constitutive for truth. Instead,
a belief about a phenomenon can be called a true belief when it is part of a system of true
beliefs that is in itself coherent from a logical perspective. This definition of ‘true belief’ does
not require the comparison of a belief with a phenomenon as an objectively and independently
existing entity in an external world but rests on how beliefs interrelate. From an epistemological
perspective, defining appropriate relationships between beliefs (in the case of coherence theory
it is coherence) can be seen as a part of the context in which a belief is generated, and therefore
as a form of justification. This means that, if one seeks to define what knowledge is out of
a coherence theorist’s view, a fully justified belief is always true and a true belief is automatic-
ally justified. Justification appears not only to be constitutive for knowledge, but on a more
fundamental level constitutive for truth as well.

Consensus theorists (e.g. Habermas, 1984) also view justification as constitutive for both
knowledge and truth. Like coherence theorists, they do not espouse the ontological idea of truth
as a matter of correspondence with objectively and independently existing phenomena. Instead
they define a belief as being true when all people that are affected by it agree that this belief is
ture. But, as Habermas (1989) puts it, consensus that accidentally exists between people without
them having engaged in a discourse before cannot be called truth. Only following predefined
rules of a discourse as the appropriate process for generating belief to reach or discover consensus
is constitutive for calling the agreed upon belief a true belief. The discourse can be seen as the
context in which a belief is generated and therefore as a source of justification that turns accidental
agreement into truth or creates agreement and therefore truth where disagreement had existed before. And precisely because this true belief is justified through the discourse it can not only be called true but at the same time knowledge. Consequently, here as well justification is constitutive for knowledge and truth alike (for Habermas’ most recent ideas on the relation between truth and justification, see Habermas, 2003). The difference between coherence theorists and consensus theorists of truth lies in the form of justification they emphasize – while coherence theorists draw upon the logical relationship between beliefs, consensus theorists define a procedure, namely social interaction in a discourse, as a source of justification.

In the following we will elaborate in more detail on various forms of justification. We discuss different sources of justification and different relationships that can arise between beliefs to put the findings from above into a broader epistemological perspective.

**Sources of justification**

**Evidentialists** (e.g. Conee and Feldman, 1985) state that any form of perceptual, introspective, memorial, or intuitional experience that is in support of a person’s belief counts as evidence for this belief being true and therefore as a source of justification. All this evidence stems from cognitive processes *internal* to a person and, according to evidentialists, does not require any additional source of validation. Note that ‘evidence’ here is not to be confused with ‘external evidence’; that is, the sort of evidence or data that is collected for the purpose of assessing whether a belief is or is not true. For the evidentialist, such data is an external source of information that triggers an internal cognitive process in the person who holds a belief, while evidence is the result or experience that is produced by this internal process.

**Reliabilists** (e.g. Goldman, 1967) would not necessarily oppose evidentialism, but consider it incomplete. In their view, experiences that are internal to a person can only be seen as valid justifications for true beliefs if this internal source of justification is a reliable source. One must be sure that the cognitive processes that make those experiences salient work reliably and therefore do not deceive a person in her perception. Since the internal cognitive processes of a person are the ones that need to be evaluated as reliable, the evaluating authority cannot be the person herself. To justify a true belief, an *external* source of justification needs to ensure that a person’s cognitive processes are applied correctly and work reliably so that the observer holds a true belief for the right reasons, not just as a result of good luck. Note that, when two individuals independently from each other form identical beliefs about the same phenomenon, in a reliabilist’s understanding neither observer can be treated as the external source of justification for the other observer’s belief. They are indeed two observers externally to each other, but they both form a belief with reference to the phenomenon they form beliefs about. What is needed according to epistemological reliabilists is an external source of justification that would assure the reliability of the cognitive processes of both observers, independent of any findings regarding the phenomenon under observation.

What both evidentialists and reliabilists have in common is that justification of a belief is established with reference to the individual holding that belief and the internal cognitive processes of this individual. **Social epistemology** (e.g. Goldman, 1999; Kitcher, 1993) takes an alternative approach. Whether somebody’s internal cognitive processes work reliably or not becomes a minor question when social interaction is the main device to transcend subjectivity in beliefs. As mentioned before, consensus theorists define conditions under which a discourse can produce agreement between numerous individuals that can legitimately represent truth, for example the conditions of Habermas’ ideal speech situation (Habermas, 1984, 2003). Those conditions focus on regulating the interaction between all who participate in a discourse about
truth. It follows that not only the construction of a belief over reality and the construction of reality itself become closely intertwined if not the same (Habermas and Luhmann, 1971), but also the source of justification. When following the rules that define and guide participation in social interaction, any belief that is established as a true belief in this social interaction is justified by adherence to those rules. Since truth is constructed in social interaction and agreement defines that truth, everybody who holds the same true belief and has participated in its construction process can be considered to hold this true belief with justified reason. It follows that justification no longer exists with reference to an isolated individual holding that belief (as it is the case for evidentialists and reliabilists), but is established with reference to the social, meaning the interaction between several individuals during the process of belief formation and defence.

Relationships between beliefs

Regardless of whether justification refers to the individual that holds a belief or to the interaction between several individuals that hold the same belief, justifying a belief requires that one examines how perception forms this belief and how various interrelated beliefs are connected in a logical way.

Foundationalists (e.g. Descartes, 1637[2004]) claim that, since a belief might be justified by another belief which, in turn, is justified by another belief as well, one needs to have a set of ‘basic beliefs’ that are considered as being true without the requirement of any additional justification. Basic beliefs therefore do not need to refer to another belief to be justified. Without such basic beliefs, epistemology would be trapped in infinite regress.

Coherentists (e.g. BonJour, 1985, Lewis, 1946), on the other hand, avoid the problem of infinite regress by stating that beliefs do not need to form a chain of hierarchical reference points, but that all beliefs regarding a phenomenon qualify as justified as long as they collectively represent a coherent picture of this phenomenon and do not contain any contradictions. This view enables them to not only escape the problem of infinite regress, but also the tricky question of what exactly is it that defines a basic belief as basic and in itself justified.

Knowledge and values

The emergence of social epistemology as a relatively new branch of philosophy has broadened the range of answers to various epistemological questions and, on a more fundamental level, the range of questions one needs to ask. Especially in the context of the social sciences, social epistemology provides grounds for asking whether knowledge has to be value-free, meaning that one should only develop descriptive knowledge about the state of the world, or whether knowledge is value-laden, meaning that one can also develop normative knowledge in order to critique and change the world. This question illustrates a dispute between two positions that fundamentally differ in their view about the validity of value judgements in scientific inquiry (Adorno et al., 1976).

The positivist view (Albert, 1988; Popper, 1959) endorses a value free thesis for science and argues that claims on how the world should be are based on subjective values that cannot be generalized nor justified. Therefore, science should stick to descriptive truth claims about what the world is and refrain from making value judgements. The critical view (Habermas, 1971; Horkheimer and Adorno, 1972), on the other hand, states that for social scientists, knowledge is always value laden and interest prone. Adherents of the critical view argue that knowledge formation needs to aim at improving the social world for its inhabitants. Therefore social scientists must not refrain from ethical considerations and value judgements in their inquiry.
Three epistemological questions for organization studies

In the following sections, we will apply the epistemological views we have introduced above to the field of organization studies. In this context we define an epistemic system as a system that combines different elements of epistemological enquiry – sources of justifications, relationships between beliefs, and the relationships between knowledge and values – in a specific way in order to describe how knowledge can be generated. We will distinguish six epistemic systems that lead to different ways of explaining organizational phenomena (Scherer, 2003) and explore the assumptions on which they are based. Following the discussion of epistemological inquiry above, the analysis is structured along the following three questions:

1 What is the source of justification?
Relating to the discussion above, sources of justification can be established with reference to the individual or with reference to the social. ‘Individual’ means that individual experience (following either evidentialism or reliabilism) is a sufficient source of justification. ‘Social’ means that any source of justification with reference to the individual is not sufficient and that social epistemology instead defines social interaction as the source of justification.

2 What is the relationship between different beliefs?
Epistemic Systems in organization studies are mapped according to the two options discussed above: coherentism and foundationalism.

3 Is knowledge value-free or value-laden?
It is discussed whether an epistemic system in organization studies endorses a positivist or a critical view.

Epistemological controversies in organization studies

Organization studies comprise competing epistemic systems, each of which seeks to explain differently how knowledge can be developed. Based on Scherer’s analysis (2003) of different ‘modes of explanation’ in organization studies, we distinguish between six epistemic systems (for related systematizations, see Astley and Van de Ven, 1983; Burrell and Morgan, 1979). We discuss each in turn.

The so-called subject–object model was the dominant epistemic system in organization studies up to the 1980s and remains popular to this day (Donaldson 1996a, 1996b). This epistemic system assumes that ‘objects’ such as corporate behaviour or organizational structures exist independently of the ‘subjects’ who do the research. This means that the structures of reality – such as the relation between a multinational corporation and its stakeholders – exist independently of researchers and that researchers can uncover these structures through systematic observation (Scherer, 2003). Approaches such as contingency theory (Donaldson, 1996b) or population ecology (Hannan and Freeman, 1977) rely on this epistemic system.

Interpretivism has become popular since the 1980s. This system departs from the subject–object model in that it assumes that social phenomena cannot be investigated from outside through the methods that are usually applied in the natural sciences and that the observation of phenomena cannot be detached from the cognizing subject (Scherer, 2003). Interpretivism tries to understand how individuals make sense of the world (Evered and Louis, 1981), for example, by studying how managers or other stakeholders interpret their organizations or the environment (Isabella, 1990). In this system, a phenomenon does not exist independently of the cognizing mind that observes it, but is socially constructed through processes of interpretation.

Critical theory builds on interpretivism, but takes into account that knowledge is not objective and value-free and that it always serves the interests of particular individuals or groups (Scherer,
Critical theory questions the status quo of the social world and the prevalent distribution of power as well as conditions of domination and suppression (Habermas, 1971; Steffy and Grimes, 1986). Critical theory does not limit its scope to describing the world but aims to reform and change social conditions. Critical management scholars have drawn on insights gained from critical theory to scrutinize topics such as leadership (Alvesson and Spicer, 2011) or corporate social responsibility (Scherer and Palazzo, 2007).

Postmodernism, in line with interpretivism and critical theory, argues that knowledge is historically and culturally contingent because it always depends on paradigmatic assumptions (Calás and Smircich, 1999). However, while interpretivism and critical theory assume that one could (at least in principle) come to a shared understanding with others, postmodernism regards consensus as a sign that some societal groups have imposed their interpretations on other societal groups (Scherer, 2003). Furthermore, postmodernism suggests that the dominance of any view cannot be justified and argues that the pluralism of values, interpretations, and lifestyles must be protected rather than overcome. This epistememic system has also influenced many critical management scholars (Jones, 2009).

Functionalism assumes that individual behaviour cannot fully explain ‘social facts’, such as institutions or social or institutional change (Luhmann, 1995). Instead, functionalism conceives of social phenomena as preconditions of social systems and investigates how these phenomena contribute to social order (Scherer, 2003). Functionalism can be applied both on the organizational and on the societal level and played a major role as an epistemic system in organization studies (Ashby, 1956) and social theory (Parsons, 1977) in the 1950s, 1960s and 1970s. It continues to play a role in some debates, such as that on equifinality in organizational or institutional design (Gresov and Drazin, 1997).

Finally, rational choice theory tries to explain macro-level outcomes, such as organizational or societal structures, through micro-level causes – that is, through the preferences and behaviour of individuals (Barney and Hesterley, 1996). With transaction cost economics (Williamson, 1981) and related theories, this epistemic system has also gained some influence in organization studies over the last decades (Scherer, 2003).

What is the source of justification?

Some epistemic systems assume that justification depends primarily on the observation of phenomena and on logical thinking. The subject–object-model, interpretivism, functionalism, and rational choice theory all subscribe to this idea. According to these systems, the cognitive processes of individuals constitute the source of justification. While social interaction helps sort out errors made by individual researchers, such interaction is not the primary source of justification (on why interpretivist approaches are ultimately monologic, see Steffy and Grimes, 1986).

Other epistemic systems – namely, critical theory and postmodernism – see justification as an inherently social activity and assume that social interaction is the primary source of justification. In the context of organization theory, assuming that social interaction is the source of justification raises the question of whose interests are served through scientific inquiry (Habermas, 1971) – for example, one may ask whether research primarily serves managers or non-managerial employees (Willmott, 2003). While postmodernism argues that research will always serve powerful actors, critical theory upholds the possibility of a rational discourse about how research may serve the different groups that constitute society (Scherer, 2009). Table 2.1 summarizes the epistemological assumptions of the epistemic systems we have examined so far.
<table>
<thead>
<tr>
<th>Epistemic system</th>
<th>What is the source of justification?</th>
<th>What is the relationship between different beliefs?</th>
<th>Is knowledge value-free or value-laden?</th>
</tr>
</thead>
<tbody>
<tr>
<td>The subject–object</td>
<td>... the observations of individual researchers are the primary source of justification for beliefs about cause-and-effect relationships (individualistic approach to justification)</td>
<td>... organization theorists should build on fundamental empirical insights (foundationalism); however, other theorists dismiss the idea of ‘basic beliefs’ as epistemologically flawed (coherentism)</td>
<td>... organizational researchers can identify cause-and-effect relationships that do not depend on values and interests (value-free knowledge)</td>
</tr>
<tr>
<td>Interpretivism</td>
<td>... the interpretations of individual researchers are the primary source of justification for beliefs about social phenomena (individualistic approach to justification)</td>
<td>... beliefs about social reality become justified insofar as they are coherent with other beliefs (coherentism)</td>
<td>... organizational researchers can describe people’s subjective sensemaking processes independently of values and interests (value-free knowledge)</td>
</tr>
<tr>
<td>Critical theory</td>
<td>... social interaction is the primary source of justification and that researchers should critically reflect on these interactions (social approach to justification)</td>
<td>... beliefs become justified insofar as they are coherent with other descriptive and normative beliefs (coherentism)</td>
<td>... all knowledge production is part of broader societal processes and thus always shaped by values and interests (value-laden knowledge)</td>
</tr>
<tr>
<td>Postmodernism</td>
<td>... social interaction is the primary source of justification, and that research will serve the most powerful social groups (social approach to justification)</td>
<td>... beliefs become justified through coherence, but complete coherence between all beliefs is neither possible nor desirable (coherentism)</td>
<td>... powerful social groups tend to influence the production of knowledge and thus shape knowledge through their values and interests (value-laden knowledge)</td>
</tr>
<tr>
<td>Functionalism</td>
<td>... the observations of individual researchers are the primary source of justification for beliefs about systemic relationships (individualistic approach to justification)</td>
<td>... there are certain fundamental laws about social systems that should serve as the foundation of organizational research (foundationalism)</td>
<td>... organizational researchers can describe the fundamental laws that govern social systems independently of values and interests (value-free knowledge)</td>
</tr>
<tr>
<td>Rational choice theory</td>
<td>... the logical thinking of individual researchers is the primary source of justification for beliefs about the rational behaviour of actors (individualistic approach to justification)</td>
<td>... there are certain fundamental insights about rational human behaviour that should serve as the foundation of organization studies (foundationalism)</td>
<td>... organizational researchers can develop general principles of human behaviour (e.g. utility maximization) that do not depend on specific values and interests (value-free knowledge)</td>
</tr>
</tbody>
</table>
Epistemological assumptions about the source of justification are closely connected to some heated controversies in organization studies. For instance, the degree of reflexivity that organizational scholars should develop with regard to their research has often been the subject of vigorous debate (Alvesson et al. 2008; Chia 1996). Reflexivity explores ‘the situated nature of knowledge; the institutional, social and political processes whereby research is conducted and knowledge is produced; the dubious position of the researcher; and the constructive effects of language’ (Alvesson et al. 2008: 480). Reflexivity thus focuses primarily on the social dimension of research: how definitions, methods, and other conventions emerge, whom they serve, and what alternatives might exist. Epistemic systems such as the subject–object model or rational choice theory, which assume that social interaction plays a marginal role in research, see little need for reflexivity. According to these systems, researchers should spend little time on reflecting on social interaction and focus instead on extending their observations and improving the logical stringency of their theories.

By contrast, reflexivity is crucial for epistemic systems that see social interaction as the primary source of justification, such as critical theory or postmodernism. Indeed, Fournier and Grey (2000) see reflexivity as a defining characteristic of critical management studies (see also Alvesson et al., 2009). Epistemological assumptions thus shape how different epistemic systems engage in research.

What is the relationship between different beliefs?

The epistemological question of how different beliefs interrelate is also pertinent in the context of organization studies. Functionalism and rational choice theory take a foundationalist perspective and presuppose the existence of ‘basic beliefs’ that are true without additional justification. For functionalism, the fundamental laws of social systems are ‘basic beliefs’; for rational choice theory, aspects of rational human behaviour, such as rationality, self-interest, and opportunism, are the starting point of research (Abell, 2000). Some of the proponents of the subject–object model also subscribe to this two-tiered system of beliefs (Donaldson, 1996a, 1996b).

By contrast, interpretivism, critical theory, and postmodernism tend to subscribe to coherentism rather than foundationalism. These epistemic systems do not privilege some beliefs over others as ‘basic’ but tend to see coherence as the only option left to justify beliefs. Some of the advocates of the subject–object model (Popper, 1959) also dismiss the idea of ‘basic beliefs’ as epistemologically flawed.

The epistemological question of how different beliefs interrelate has implications for the controversy about whether organization studies should build on a limited set of core propositions or not. Pfeffer (1993) has argued that focusing on a limited number of core ideas would allow organization studies to imitate the success model of economics and the natural sciences (see also McKinley, 2007). Pfeffer’s ideas (1993) are likely to appeal particularly to researchers who take a foundationalist epistemological stance and support the idea of ‘basic beliefs’. For example, Donaldson (1996a: 12) has argued that the fundamental principle of contingency theory – namely, that organizational performance requires a fit between contingency factors and structure – should be seen as the ‘hard core’ of organization theory and that all scholarly investigations should be based on this principle. Donaldson (1988) has claimed that the empirical evidence for the validity of this principle is stronger than for any other comparable idea within organization studies (see Scherer and Dowling, 1995).

Epistemic systems that side with coherentism reject such claims as dogmatic. They point out that empirical testing can never prove that some beliefs are more basic than others, because
empirical testing always depends on assumptions that serve specific interests (Scherer and Dowling, 1995). Furthermore, critical researchers warn that reducing organization studies to a limited set of core propositions would ‘naturalize’ (Alvesson et al., 2009: 9) these propositions, while rendering invisible other aspects of social reality. Postmodernism goes furthest in its critique of foundationalism in that it views core propositions as a sign of domination, which is contrary to the pluralism that this perspective espouses (Calás and Smircich, 1999).

**Is knowledge value-free or value-laden?**

With regard to the question of whether values shape knowledge, some epistemic systems – namely, the subject–object model, interpretivism, functionalism, and rational choice theory – assume that research is, at its core, value-free. The proponents of value-free research, however, acknowledge two intersections between research and values. More specifically, they accept that values and interests influence the topics that researchers investigate (Bacharach, 1989) and that third parties will use the knowledge that researchers produce as an instrument in order to advance their values and interests (Weber, 1949). The idea of value-free research can therefore only mean that research has a value-free core, which is situated after researchers have chosen research topics and before they produced results. Accordingly, when researchers try to explain or understand phenomena, such as the relation between corporate social performance and financial performance (Orlitzky et al., 2003) or sensemaking in groups (Maitlis, 2005), the proponents of value-free research assume that these investigations are not shaped by values and interests.

Other epistemic systems – namely, critical theory and postmodernism – deconstruct the idea of a value-free core in two respects. First, critics posit that values and interests do not merely shape the ‘topics’ of research but every aspect of research, including how to select cases, collect and analyse data, or determine significance levels (Connell and Nord, 1996; Ezzamel and Willmott, 2014). The entanglement with values therefore does not end once researchers have selected a topic, but continues throughout the research process. Second, critics point out that research does not merely describe phenomena (Cabantous and Gond, 2011), but may shape phenomena by influencing institutional designs, social norms, and language (Ferraro et al., 2005). The performative entanglement of research with its ‘objects’ confronts researchers with the ‘ethical consequences of theory’ (Ferraro et al., 2009: 673) and undermines the idea that research has a value-free core. However, whereas critical theory posits that discarding value-free research makes possible a rational discourse about values and interests (Habermas, 2003), postmodernism assumes that powerful groups will always distort research in self-interested ways.

The epistemological stance of researchers on whether beliefs are value-free or value-laden has important implications for the controversy about how organization theory can best serve the various social groups that constitute society (Tsui, 2013; Walsh et al., 2003). If research has a value-free core, serving society should not affect core research activities, which in that case would remain focused on cause-and-effect relationships (subject–object model), subjective viewpoints (interpretivism), social laws (functionalism), or individual behaviour (rational choice theory). Instead, from the ‘value-free’ viewpoint, serving society implies that researchers must pick research questions that are of high societal importance; doing otherwise would ‘suggest a lack of concern by management scholars for the relevance of our work for the larger society’ (Tsui, 2013: 167). In terms of output, organization scholars would have to think about whether the knowledge they produce is useful for resolving societal problems, and ‘do a better job of connecting our research to the world around us’ (DeNisi, 2010: 196).

Assuming that research has no value-free core makes serving society a more intricate endeavour. Researchers would then have to reflect on what values they adopt and whom
(i.e. which societal groups) these values serve throughout the research process, not merely at its beginning and end (Ezzamel and Willmott, 2014). In this view, reflecting on values is as important for researchers as mastering research methods and acquiring knowledge of existing theories, if their aim is to serve society with its different societal groups (Connell and Nord, 1996).

Epistemic pluralism and incommensurability

As we have seen, there are several epistemic systems that shape the views of researchers on how knowledge about organizational phenomena can be developed. If there are no criteria for comparing and assessing the different epistemic systems, then these systems will be regarded as incommensurable and the epistemic pluralism will become problematic (Kuhn, 1962; Rorty, 1979; Scherer, 1998). Incommensurability means that (1) epistemic systems are radically different with respect to how they guide researchers, (2) epistemic systems conflict with each other, which makes it necessary to decide which is superior, and (3) there is no objective criterion by which to decide which of the alternatives to choose (Luke, 1992; Scherer, 1998; Scherer and Steinmann, 1999).

The epistemic systems described in the preceding section are often considered to be isolated from each other (e.g. Burrell and Morgan, 1979). For example, proponents of the interpretive approach see their epistemic system as fundamentally incommensurable with the epistemic system that underlies the subject–object model (Evered and Louis, 1981). Indeed, instead of seeking commonalities between various epistemic systems, many organization scholars focus on the differences. This allows them to distance themselves more easily from alternative ways of doing research and developing knowledge (Jackson and Carter, 1991). As a consequence, epistemological and ideological categories can become performative as researchers take up such categories to create labels for schools, form their identities as researchers, establish research programs, journals, and divisions at academic conferences. This has given rise to pluralism and fragmentation in organization studies.

Here, we wish to put into perspective the trenches that exist between different systems and that many organization theorists seem to defend (see, e.g. Burrell and Morgan, 1979; Jackson and Carter, 1991; Van Maanen, 1995). There are several potential answers to the question of whether organization studies can develop and defend knowledge as ‘justified true belief’ and, if so, in what way. Much controversy surrounds the implications of this pluralism (Scherer, 1998; Scherer and Steinmann 1999). Some scholars argue in favour of pluralism with the aim of protecting intellectual freedom (Burrell and Morgan, 1979; Van Maanen, 1995); others, however, view pluralism as fragmentation and advocate unity and the integration of different positions within the subject–object model (Pfeffer, 1993). A further group of scholars wish to combine alternative epistemic views in order to develop ‘more comprehensive’ explanations (Gioia and Pitre, 1990); finally, some scholars think that ‘anything goes’ (Feyerabend, 1975). While proponents of these perspectives argue that a comparison or justification across epistemic systems is not possible, they often maintain that theories need to stick to the rules within their epistemic perspective (Burrell and Morgan, 1979). This view implies that researchers should stay within the silos of their epistemic systems, which in turn allows isolation and fragmentation to prevail (see Shepherd and Challenger, 2013).

If we conceive of knowledge as justified true belief but we maintain that it is not possible to agree on a universally accepted justification, then the whole endeavour of knowledge creation seems to be at stake. We therefore build upon the social epistemology mentioned in the first section and consider an epistemological perspective that could provide a possible way out of the problem of incommensurability: constructive philosophy (Butts and Brown, 1989; Kamlah
and Lorenzen, 1984; Lorenzen, 1987; Mittelstrass, 1985; Scherer and Dowling, 1995; Scherer and Steinmann, 1999). We will show that incommensurability is far from inevitable. Furthermore, we will explain that the deconstruction of the boundaries that are often assumed to exist between different epistemic systems is not merely a theoretical endeavour but can help establish common ground among these systems.

**Constructive philosophy**

Constructive philosophy, which contributes to social epistemology, builds upon the linguistic and the pragmatic turn in modern philosophy. The *linguistic turn in philosophy* (Rorty, 1992) yielded the insight that philosophical analysis has to be framed in terms of the analysis of language use. The philosopher Ludwig Wittgenstein has argued that any reference to the world has to be made with the help of language and that nothing can be conceived outside language. This is expressed in Wittgenstein’s famous quote: ‘The limits of my language mean the limits of my world’ (Wittgenstein, 1922: 5.6). The *pragmatic turn in philosophy* (Bernstein, 2010), by contrast, emphasizes the role of ‘praxis’ and maintains that actions are embedded in natural or social contexts, in which an actor’s experiences are controlled by actual deeds and their accomplishments. The pragmatic turn can be seen as a complement to the linguistic turn insofar that language use is not entirely detached from the world but can be controlled by practical action when individuals ‘cope’ with the world. According to the pragmatic turn, whether a proposition is true is not defined solely in the realm of language and discourse, but verified or disconfirmed when subjects cope with each other in the social world or with objects in the natural world (Habermas, 2003). These ideas will help us demonstrate how the problem of incommensurability can be avoided.

Constructive philosophy questions the established wisdom about the relationship between theory and practice. Normally, practice is conceived of as the application of implicit or explicit theories. Consequently, when asked to justify a theory, one has to refer to other theories, which again need to be justified with the help of other theories and so on. The impending infinite regress can only be avoided if the attempt to justify a theory is given up at some point in a dogmatic way or if one refers to theories whose justifications have already been questioned, which, however, would result in a vicious circle. As a result of this trilemma (infinite regress, dogmatism, vicious circle), critical rationalists suggest that, instead of attempting to justify knowledge claims, one should try to test and possibly falsify theories (Albert, 1988; Popper, 1959). Theories that pass the empirical test are not justified as such but at least corroborated, which can be considered a reduced form of justification (see critically Mittelstrass, 1985). However, if we maintain the scientific claim to provide knowledge as justified true belief, we must not abandon the quest for justification. And if we want to avoid the problem of incommensurability, we cannot build on theory as the starting point for justification but have to develop an alternative.

In order to address the epistemological question of how knowledge is possible, constructive philosophy develops a distinct understanding of the relationship between theory and practice (Butts and Brown, 1989; Kamlah and Lorenzen 1984; Lorenzen 1987) that rests on the distinction between *poiesis, praxis, and theoria*, which was originally proposed by Aristotle (350 BC(2010]). Practice is conceived of as the way in which people engage with the natural world (*poiesis*) and the social world (*praxis*) when they cope with the world without conscious reflection (*theoria*). Consequently, practice is considered the starting point of theory building and serves as both the reason and the methodological underpinning of theory (Lueken, 1992; Scherer and Dowling, 1995). In order to find a ‘methodical beginning of thought’ (Lorenzen, 1987: 6), the proponents of constructive philosophy
are concerned to show how the concepts of science result initially from activity involved in daily practical behaviour. All theoretical concepts are grounded in distinctions made, practical orientations taken, in what Husserl in his later writings called the Lebenswelt, the pre-reflexive, pre-scientific, pre-philosophical world that nevertheless guides scientific and philosophical reflection. It is the familiar world in which we all live, a world taken for granted...a world that is pragmatically a priori. The model of creation of theoretical concepts is thus human purposive action. (Butts and Brown, 1989: xvi)

Constructive philosophy distinguishes three realms of practice to explore the relationship between theory and practice: pre-theoretical practice, theoretical practice and theory-supported practice (Lueken, 1992; Scherer and Dowling, 1995). We will discuss each in turn.

People engage in pre-theoretical practice in the course of their everyday life, when they act without consciously applying theories. They simply have the know-how that enables them to cope with immediate technical or political problems by using practices, recipes or rules of thumb, all of which are acquired through processes of socialization. People know how something works and know that it works, but they do not know why it works. This means that they have beliefs about how to act successfully in the world, but they cannot immediately justify why they are likely to be successful. Consequently, they do not have knowledge but merely know-how. For most activities, this is sufficient. However, in general, practice is a sequence of success and failure, so people tend to partly succeed and partly fail in their lives. In that respect, practice can serve as the starting point of theory building: it motivates individuals to engage in theoretical reflection (in cases when people do not succeed with their practices), and serves as the methodical beginning of theory building (in cases when people can build on practices that routinely work).

By contrast, people engage in theoretical practice when they consider validity claims and develop knowledge, i.e. justified true belief. Usually, they do so because they see their actions fail or foresee that they are likely to fail and thus realize that their know-how is not sufficient. While at the stage of pre-theoretical practice people are completely embedded in a situation and simply act without further reflection, at the stage of theoretical practice they reflect upon their actions and action plans and assess validity claims in order to understand a situation better, to consider what they should do, and to increase the likelihood of success. To engage in theoretical practice, people seek to distance themselves from what was self-evident at the stage of pre-theoretical practice, in order to reflect on a situation, ‘objectively’ determine what is the case, and consciously decide what should be done and why. To do so, they have to form justified true beliefs – in other words, to acquire ‘knowledge’ about a problem, their own plans, the contingencies of a situation, and possibly about the plans of anyone else who may influence the success or failure of their actions. The transfer from pre-theoretical to theoretical practice takes place when people try to improve their actions by considering validity claims: in everyday life, in business, in science, and everywhere else.

Whenever people consciously apply knowledge developed through theoretical practice in order to solve particular problems, they engage in theory-supported practice. As long as people consciously apply knowledge, they remain in theory-supported practice. However, if the actions they perform to solve particular problems become routinized and are performed without special attention or reflection, then the previously theory-supported actions will become part of pre-theoretical practice, until new problems emerge and the process of reflection starts again. In this way the loop can be closed. Thus, the dynamics of the advancement of knowledge can be understood as a spiral that reaches ever higher levels of insight over time (for a critical discussion on the evolution of knowledge, see Kuhn, 1962).
Based on this understanding of how theory and practice are related, constructivist philosophy suggests a way of justifying theories without becoming entangled with the trilemma of infinite regress, dogmatism or vicious circle. In our context, this means that science can be founded in the pre-theoretical skills that are necessary for successful human action (Mittelstrass, 1985). While according to constructive philosophy the justification of a theory cannot be derived from other theories, theories can become justified through their embeddedness in action; i.e. in practice.

Addressing incommensurability

As mentioned above, incommensurability can be understood as a conflict between the proponents of different perspectives that arises when an objective criterion for assessing these perspectives and deciding which one is valid is not available (Lueken, 1992; Scherer and Dowling, 1995). Such conflicts may also result from radical differences between epistemic systems that make it impossible to agree on how beliefs can be justified and how their truth can be checked. For scholars who represent incommensurable epistemic systems and engage in dialogue it is not just a matter of disagreeing on various propositions, it may even prove difficult to understand one another. In other words it is hard for them to agree not only on basic concepts, methods and research goals, but also on how truth is defined, on what can be regarded as justification, and on what kind of arguments are allowed in the exchange of views.

However, the conflict that is inherent in incommensurable epistemic systems requires that their representatives make certain decisions somehow. This is because they all need to be able to defend their positions not only within their epistemic system but also when confronted with adherents of other epistemic systems. Otherwise, their knowledge claims cannot count as (universally) justified true beliefs. In cases of incommensurability this is difficult, if not impossible, as the proponents of different systems have different ideas on what constitutes a convincing argument. With that in mind, we will now explore the arguments that the proponents of incommensurable positions put forward in an ‘argumentation situation’ (for the following, see Scherer and Dowling, 1995).

An argumentation situation between incommensurable epistemic positions starts with a controversy: a knowledge claim that a proponent of one system makes is questioned, either because an opponent does not understand or does not accept the claim. In the following, we will refer to these interlocutors as ‘proponent’ and ‘opponent’. If the interlocutors attempt to explore together whether the claim is justified or not, they engage in a game of reasoning (Toulmin, 1958): the proponent puts forward a claim, to which the opponent forwards an objection, to which the proponent responds by defending the claim on the basis of reasons that support it. In order to do so, the proponent must present assertions that are eventually accepted or further questioned, and so on. Further down, we will argue that besides logical reasoning there is also practical reasoning and that the game of reasoning can develop in two different directions. Both points are important in the context of discussing ways of resolving the incommensurability problem.

When the opponent accepts reason B for a claim A that the proponent has made, this means that the opponent has accepted proposition A, as well as proposition B and thus also (implicitly or explicitly) accepted $B \rightarrow A$, i.e. that A follows from B, which is a proposition concerning the relationship between B and A. The proposition $B \rightarrow A$ can be but is not necessarily a logical rule: it can also be a practical rule for a pragmatic relationship between actions B and A (Lueken, 1992). A ‘pragmatic relationship’ describes a systematic connection between distinct actions and implies that this connection is guided by the results that the actors want to achieve. This alludes to the ideas that derive from the pragmatic turn in philosophy that we discussed earlier. For
example, to create a painted wooden sculpture, one has to carve the figure first and paint the sculpture later. There is no rule of logic that prescribes this particular order of carving and painting; rather, the rule that needs to be followed so that the result is a painted sculpture is practical.

Going back to our argumentation situation, if the opponent accepts reason B for claim A, the controversy is resolved (at least for the time being). If reason B is not accepted, however, then the opponent objects either to proposition B or to the relationship between B and A and the game of reasoning continues. This is likely in the case of incommensurable positions. The reasoning game can take different directions (Gethmann, 1979; Lueken, 1992). A game of reasoning is reductive when the interlocutors engage in a sequence of reasons, objections to those reasons, reasons for the objections, and so on, until the interlocutors reach common ground and thus consensus. A game of reasoning is productive when each proposition builds on what has already been accepted by both interlocutors. In the latter case, the dynamic of the reasoning game is directed towards the proposition that was originally questioned. In the case of reductive reasoning, however, the interlocutors may actually move farther away from the original proposition. Thus, the advantage of productive reasoning is that the participants in a discussion take steps in a common direction, starting from a commonly accepted point.

The adherents of incommensurable positions normally do not know in advance that their positions are incommensurable. They only realize that when they actually engage in dialogue that progresses in a reductive direction and they discover that they cannot find any points, or reasons, that they commonly agree upon (Lueken, 1991). In that case, a productive direction of the reasoning game seems also impossible in the absence of a common starting point – that is, a commonly accepted proposition. The constructivist approach has developed a remedy for such situations: the interlocutors can create a common starting point through joint effort (for the following, see Lueken, 1992; Scherer and Dowling, 1995). When the game of reasoning does not lead to mutually accepted justifications, the interlocutors must postpone demanding justifications from each other; ‘they must act, without raising demands of legitimacy for these actions’ (Lueken, 1992: 282–3; translation by the authors). Instead, they must ‘enter a kind of mutual field research, an open exchange released from the pressure of reasoning, rules, validity questions and performed to understand the alien [epistemic system] by participation or to create a new one commonly’ (Lueken, 1991: 249).

This means that the interlocutors must postpone reflecting on the validity of the claims that are made, in contrast to the course that theoretical practice demands, and enter together the arena of pre-theoretical practice in order to mutually learn and understand the know-how that derives from the epistemic system that each represents. This can be accomplished by engaging jointly in a practice that is unfamiliar to them and learning how it works through participation in routines, rituals, and recipes. The participants in pre-theoretical practice become (at least) partly socialized and learn, both consciously and unconsciously, how the concrete practice that they engage in works. As mentioned earlier, pre-theoretical practice is characterized by actions that do not lead to theoretical reflection. Such reflection is not necessary as long as the actions that are carried out in the context of pre-theoretical practice achieve their pragmatic goals by actualizing the available know-how. What is required of the interlocutors is the willingness to enter each other’s world without asking ‘why’ at each step, but instead by learning what works and realizing that it works without knowing why. How far opposed interlocutors can engage in pre-theoretical practice in this manner is not foreseeable in advance (Scherer and Dowling, 1995).

Through practice and joint action, a mutual understanding among the interlocutors can be created: they mutually learn to understand each other’s epistemic system and how each works in practice (Hartman, 1988: 165ff.). When the interlocutors embrace and thus learn to understand, at least in part, each other’s epistemic system, they may be led to reflect on their
my own epistemic system in a new way so that their perception of the differences between them may change. These learning processes may produce a new, shared epistemic system that may serve as the basis for further games of reasoning in theoretical practice. This may ultimately lead not only to understanding of but also to agreement on concepts, theories and justifications. In the context of organization studies, recent mixed-methods research can represent an example of this approach (Tashakkori and Teddlie, 2010).

The proposed approach does not represent a formal or theoretical solution to the problem of incommensurable epistemic systems. Although success is not guaranteed, there is potential for pragmatically resolving the problem of incommensurability. It represents a remedy that the proponents of incommensurable epistemic systems can make use of when a controversy arises. Several works on theory pluralism in the social sciences have sought the common ground but could not resolve the problem of incommensurability (for an overview, see Scherer and Dowling 1995; Shepherd and Challenger 2013). In contrast, constructive philosophy argues that the search for communalities is in vain since, as a matter of principle, a common ground does not exist in situations of incommensurable positions. However, the proponents of incommensurable positions can create a common ground jointly through their actions by engaging in pre-theoretical practice and establishing common understandings, routines, and measures of conflict resolution. Generally speaking, this approach can help moderate and may even reverse the performative effects that the strong emphasis on differences in epistemic systems has had on the fragmentation of the field. In organization studies, reversing the effects of fragmentation and establishing common ground between epistemologically different streams of thought could help reconcile apparently incompatible ideas and thus yield new theoretical and empirical insights.

It is important to stress, however, that it is not possible to impose a solution to the problem of incommensurability from outside; only the participants in the epistemological debate can determine whether to tackle the problem and, if so, how to tackle it. The proponents of incommensurable positions must be willing to open their own epistemic systems to change and to learn from each other if they wish to resolve the controversies that spring from incommensurability.

Summary

In this chapter we have introduced the foundations of epistemology in order to analyse how different epistemic systems in organization studies relate to each other. In our application of epistemological distinctions to those different systems we have shown that they sometimes have more in common than proponents of incommensurability may claim in order to deliberately distinguish their own system from other ways of doing research. Taking this as a starting point, we suggest constructive philosophy as a way to construct common grounds in those aspects where different epistemic systems still appear to be incommensurable. In our pragmatic approach towards finding common grounds the responsibility for succeeding in this endeavour does not lie with the philosopher who seeks to logically dissolve incommensurability, but with organization scholars in their everyday research practice. If they succeed in the establishment of common grounds beyond currently perpetuated trenches, organization studies may flourish in the future not only because new answers can be found to already existing questions, but the range of questions we can ask may broaden as well.

References (key texts in bold)


