

Epistemology and Philosophy of the Social Sciences



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Are social sciences *real sciences*? What defines and warrants their *scientific status*? What are the *categories* structuring those disciplines, and where do they come from? Should they be based in the methodology of the “hard” sciences, like physics, or should they be autonomously grounded?

In this course, we will philosophically investigate the specificity of the social sciences with respect to the natural sciences. In order to do so, we will centrally discuss the question of whether the divide (or lack thereof) between the two is methodological, concerning the scientific methods deployed in each case.

Answering this question requires interrogating how knowledge is produced and the conditions under which it can be legitimized. By using Hume’s classical epistemological investigation of the validity of inductive inferences as a starting point, we will explore a spectrum of issues (and stances that can be taken in response to them) in contemporary philosophy of science — from the question of “real” versus “constructed” empirical knowledge and the status of “fact” and “causality” to the possibility of prediction. Particular attention will be granted both to the historical and political dimensions of scientific practices and theories.

Learning objectives

- Understand **philosophical notions** that bear relevance to social scientific inquiry, such as objectivity, historicity, realism, constructivism and probability.
- Develop an ability to identify **epistemological issues**, such as the problem of induction, that affect all disciplines of the social sciences.
- Start thinking critically about how **scientific knowledge** is produced and accumulated, and how one might contribute to it in the future.

Synopsis

Part 1 of the course (Sessions 1–6) focuses on the philosophy of the natural sciences as well as on issues of general epistemology, such as the definitions of scientific and empirical knowledge, scientific theories and causal laws. In this first part of the course, we will discuss the drift towards unification of the sciences (*methodological monism*) in both the neopositivist movement of the first half of the twentieth century and its later critics.

Part 2 of the course (Sessions 7–12) focuses on the philosophy of the social sciences and the ways the organization of these fields can be seen as underpinned by a “disunification drift” exemplified by the existence of specific *social kinds*, as fundamentally distinct from *natural* ones. Moving from this background, we will conclude by discussing both the political presuppositions and implications of science.

Assessments

The course is made of lectures and tutorials, plus two 2-hour exams, one mid-term and one final (30% and 40% of the overall grade, respectively).

The mid-term exam will focus primarily on the epistemological concepts and arguments discussed in the lectures and readings of the first part of the course (Sessions 1–6), while the final exam will cover the entire course (Sessions 1–12).

The tutorials will also include short quizzes on the main approaches and concepts of the course (accounting in total for 30% of the overall grade).

Readings

From both a consumer’s and producer’s perspective, social science is first and foremost a text-based enterprise—working with original texts is therefore of the essence. Some of the writings by social scientists and philosophers of science are difficult to get, but it is imperative that you become acquainted with them. To that effect, a reader with all the texts discussed during lectures and tutorials will be distributed early in the semester.

It is, of course, still helpful to also read handbooks on the side. Apart from the specific chapters assigned as required readings, the handbooks on the next page are optional readings for this purpose. The handbooks differ on specific questions, and none of them provides a completely objective introduction or overview, but all are useful complements to the course material.

Handbooks

Chalmers, A. 2013. *What is This Thing Called Science?* 4th ed., St Lucia, University of Queensland Press.

Chapters 4–10 of the book (pp. 38–148) cover induction (Vienna Circle), falsification (Popper), paradigms (Kuhn), research programmes (Lakatos) and methodological anarchism (Feyerabend).

Chapoulie, J.-M. 2017. “Les sciences sociales et le modèle des sciences de la nature”, in: *Enquête sur la connaissance du monde social. Anthropologie, histoire, sociologie, France-Etats-Unis, 1950-2000*, Rennes, Presses Universitaires de Rennes.

The entire book is relevant, but Chapter 2 (pp. 51–85) in particular provides a very good, well-illustrated overview of the debate about the respective methods of the natural and the social sciences.

Godfrey-Smith, P. 2003. *Theory and Reality: An Introduction to the Philosophy of Science*, Chicago, University of Chicago Press.

Chapters 2–6 (pp. 19–101) span over a good range of the authors and problems covered in the first part of the course, while later chapters cover recent debates.

Michel, J. 2018. *La fabrique des sciences sociales. D'Auguste Comte à Michel Foucault*, Paris, Presses Universitaires de France.

A short book that shows how philosophy inspired the early development of the social sciences in France. The first three chapters (pp. 21–81), on how positivism, hermeneutics and phenomenology influenced French (and German) sociology, are particularly relevant for the first part of the course.

Rheinberger, H. J. 2010. *On Historicizing Epistemology*, Stanford, Stanford University Press.

This short book provides an accessible overview of the history of the philosophy of science, considered in its relation to the history of science, from the end of the nineteenth century to the end of the twentieth century. Chapters 3–6 (pp. 35–87) are relevant for the second part of the course.

Websites

Useful websites for this course are the [Internet Encyclopedia of Philosophy](http://iep.utm.edu) (iep.utm.edu) and the [Stanford Encyclopedia of Philosophy](http://plato.stanford.edu) (plato.stanford.edu).

Entries on similar topics are available in **Lecourt, D.** (ed.). 2006. *Dictionnaire d'histoire et philosophie des sciences*, Paris, Presses Universitaires de France.

Course structure and required readings

All readings listed below are *compulsory* unless otherwise noted. Both the lectures and the tutorials will assume that you have **read the texts in advance** of the lecture or tutorial session to which they are assigned.

French versions of some of the readings (Canguilhem and Foucault) will be distributed in digital format as a complement to the English versions found in the reader.

Lecture 1 **What (Good) is Epistemology?**

Sankey, H. 2008. "Scientific Method," in S. Psillos and M. Curd (eds), *The Routledge Companion to the Philosophy of Science*, London and New York, Routledge, pp. 248–58.

Lecture 2 **The Problem of Induction**

Russell, B. 1912. "On Induction," in *The Problems of Philosophy*, London and Edinburgh, Williams and Norgate, ch. 6, pp. 93–108.

Lecture 3 **Facts, Causality and Explanation**

Hempel, C.G. 1942. "The Function of General Laws in History," *Journal of Philosophy*, 39(2): 35–48.

Tutorial 1 Sankey (2008) + Russell (1912) + Hempel (1942)

Lecture 4 **Physicalism and the Unity of Science**

Neurath, O. 1983 [1931]. "Sociology in the Framework of Physicalism," in *Philosophical Papers. 1913-1946*, Dordrecht, D. Reidel, pp. 58–90 [focus on pp. 68–78].

Tutorial 2 Neurath (1931)

Lecture 5 **Establishing Theories and Testing Hypotheses**

Popper, K.R. 2002 [1935]. "A Survey of some Fundamental Problems," in *The Logic of Scientific Discovery*, London and New York, Routledge, pp. 3–26.

Tutorial 3 Popper (1935)

Lecture 6 **Historicizing Epistemology**

Kuhn, T.S. 2012 [1962]. "Introduction: A Role for History," in *The Structure of Scientific Revolutions*, 4th ed., Chicago and London, Chicago University Press, pp. 1–9.

Bird, A. (2008). "The Historical Turn in the Philosophy of Science," in S. Psillos and M. Curd (eds), *The Routledge Companion to the Philosophy of Science*, London and New York, Routledge, pp. 67–77.

Tutorial 4

Kuhn (1962) + Bird (2008)

— **Midterm exam** on 'Part 1' of the course —

Lecture 7 **Understanding and Interpreting the Social World**

Schütz, A. 1954. "Concept and Theory Formation in the Social Sciences," *Journal of Philosophy*, 51(9): 257–73.

Tutorial 5

Schütz (1954)

Lecture 8 **Natural Life and Social Life**

Canguilhem, C. 1991 [1966]. "Norm and Average" and "From the Social to the Vital," in *The Normal and the Pathological*, New York, Zone Books, pp. 151–80 [focus on pp. 151–72] and pp. 237–56 [focus on pp. 250–56].

Tutorial 6

Canguilhem (1966)

Lecture 9 **Natural Kinds and Human Kinds**

Hacking, I. 1995. "The Looping Effects on Human Kinds," in D. Sperber, D. Premack and A. J. Premack (eds), *Causal Cognition. A Multidisciplinary Approach*, Oxford, Clarendon Press, pp. 351–83 [focus on pp. 362–70].

Tutorial 7

Hacking (1995)

Lecture 10 **Science Wars: Constructivism vs. Realism**

Latour, B. and Woolgar, S. 1986. "Facts and Artefacts," in *Laboratory Life. The Social Construction of Scientific Facts*, Princeton, Princeton University Press, pp. 174–84.

Tutorial 8

Latour and Woolgar (1986)

Lecture 11 **Politics of Truth**

Foucault, M. 1972 [1971]. "The Discourse on Language," in *The Archaeology of Knowledge*, New York, Pantheon Books, pp. 215–37 [focus on pp. 216–20].

Lecture 12 **From Unity to Plurality**

Chang, H. 2012. "Pluralism in Science a Call to Action," in *Is Water H₂O?* Boston Studies in the Philosophy of Science 293, New York, Springer, pp. 253–301 [focus on pp. 258–68].

– **Final exam** on the entire course –

Appendix. Selected German, Greek and Latin words

Terms are German unless noted otherwise. Some words for which the English translation is obvious, like *Naturalismus* or *Physikalismus*, have been omitted. Many thanks to Janis Grzybowski for proofreading.

IMPORTANT – This appendix is provided for teaching purposes only, not as exam material. Some of its terms might get mentioned in the lectures, readings or tutorials, but there is no need to revise this list before exams, or to use it in exam answers, or even to read it in full.

Aufbau – structure, also sometimes translated as ‘construction’ (or in French as *constitution*), as in Rudolf Carnap’s book *Der logische Aufbau der Welt* (*The Logical Structure of the World*), published in 1928.

Cogito (Latin) – ‘I think,’ as in René Descartes’ *cogito ergo sum* (‘I think, therefore I am’).

De revolutionibus orbium coelestium (Latin) – *On the Revolutions of the Celestial Spheres*, the title of Nicolaus Copernicus’ book on astronomy, published in 1543.

Entwicklung – evolution, as in *Entwicklungsgeschichte*, ‘evolutionary history.’

Erkenntnis – a form of intellectual inquiry, of intellectual discovery. See also *Wissen*.

Erlebnis – experience.

Erklären/Verstehen – the name of a philosophical controversy, involving Karl-Otto Apel and others, about whether science should try to *explain* (*erklären*; *Erklärung*: explanation) or to *understand* (*verstehen*) reality.

Geist – spirit or mind, as in *Zeitgeist*, the ‘spirit of the times’ (an expression most famously used by G. W. F. Hegel), or *Geisteswissenschaft*, ‘science of the spirit, of the mind,’ which was sometimes translated as ‘human science,’ as in Wilhelm Dilthey’s *Einleitung in die Geisteswissenschaften* (*Introduction to the Human Sciences*). See also *Methodenstreit*.

Geschichte – history.

Historikerstreit – literally, a ‘quarrel of historians’ (about the Holocaust) that occurred in West Germany in the late 1980s, following the publication of various texts by German historian Ernst Nolte.

Kulturwissenschaft – ‘science of culture,’ often used to mean ‘human sciences,’ and often used in opposition to *Naturwissenschaft*, the ‘science of nature.’ See *Methodenstreit*.

Lebenswelt – the ‘life-world,’ a phenomenological notion by Edmund Husserl.

Logik der Forschung (1935) – Karl Popper’s original title for *The Logic of Scientific Discovery* (published in English under that – different – title in 1959). *Forschung* means ‘research.’

Methodenstreit – literally, a ‘quarrel about method[s]’ that occurred in late 19th century Europe, during which German philosophers opposed positivists like Auguste Comte and John Stuart Mill by claiming that human society required studying its ‘spirit’ (*Geist*), ideas (*Ideen*) and culture (*Kultur*).

Modus ponens – a valid rule of logical inference that proceeds by affirming the antecedent ('if P, then Q; P; therefore, Q'). *Ponens* means to affirm. The logical fallacy associated with *modus ponens* is affirming the consequent ('Q; therefore, P').

Modus tollens (Latin) – a valid rule of logical inference that proceeds by denying the consequent ('if P, then Q; not Q; therefore, not P'). *Tollens* means to deny. The logical fallacy associated with *modus tollens* is denying the antecedent ('not P; therefore, not Q').

Novum Organum (Latin) – a treatise by Francis Bacon, the full title of which is *Novum Organum Scientiarum* ('the new instrument of science'), which was published in 1620, and which is titled in reference to Aristotle's *Organon*.

Organon (Greek) – instrument or organ, the title given to Aristotle's works on logic by his followers, and of which copies started circulating around 50 BC.

Principia Mathematica (Latin) – a book by Bertrand Russell and Alfred Whitehead on the foundations of mathematics, first published between 1910 and 1913.

Tractatus logico-philosophicus (Latin) – a book by Ludwig Wittgenstein, written in 1918, published in German as *Logisch-Philosophische Abhandlung* in 1921, and then published in English under its Latin title in 1922. *Tractatus* and *Abhandlung* both mean 'treatise' (in French: *traité*). Not to be confused with Baruch Spinoza's *Tractatus Theologico-Politicus*.

Wertfreiheit – literally 'value-freedom.' See *Wert*.

Wissen – knowledge (French: *connaissance*, or more ambiguously, *savoir*).

Wissenschaft – science (in French: *science*, or more specifically, *connaissance scientifique*).

Verstehen – to understand, as in Max Weber's *Verstehende Soziologie*, 'interpretative sociology' (in French: *sociologie compréhensive* or *sociologie interprétative*), a sociological approach that Weber developed by drawing on the work of his academic friends Wilhelm Dilthey and Georg Simmel. See also *Erklärung/Verstehen* and *Methodenstreit*.

Weltanschauung – worldview (literally: 'a view of the world'), a concept often used with reference to its meaning in the works of Immanuel Kant and G. W. F. Hegel.

Wert – value(s), as in Max Weber's *Wertfreiheit* – 'value-freedom', initially translated in English as 'axiological neutrality' (French: *neutralité axiologique*, or in simpler and equivalent terms, *non-imposition des valeurs*), or in Heinrich Rickert's *Wertbeziehung* – 'value-relevance,' meaning 'the relevance of values [to understand human society].'¹

Wissenschaftliche Weltauffassung. Der Wiener Kreis – *The Scientific Conception of the World. The Vienna Circle*, the manifesto by the group of the same name, which was signed by Hans Hahn, Otto Neurath and Rudolf Carnap, and published in 1928. The first part of the title is sometimes translated as *Viewing the World Scientifically*.

Wiener Kreis – The Vienna Circle. See *Wissenschaftliche Weltauffassung. Der Wiener Kreis*.

¹ Another very interesting use of *Wert* appears in Reininger's "Unser Weltbild ist immer zugleich ein Wertbild" – "our image of the the world is always a display of values as well." The quote shows up at p. 117 of the 1966 edition of George Canguilhem's *Le normal et le pathologique (The Normal and the Pathological)*: "notre image du monde est toujours aussi un tableau de valeurs."