

Philosophy of Science Reading List

16 October 2026

Week 1: Induction (14 & 17 Sep)

Hume, *An Enquiry Concerning Human Understanding* (1748), sec. IV parts I–II, sec. V parts I–II

Lipton, *Inference to the Best Explanation* (1991), ch. 1 “Induction”

Goodman, “The New Riddle of Induction” (1955)

Further:

- Bacciagaluppi, “Lecture 1 - Slides (Induction 1)” (2026)
- Bacciagaluppi, “Lecture 1 - Notes (Induction 1)” (2026)
- “3.3 The Problem of Induction” (2009)

Week 2: Induction 2 (21 & 24 Sep)

Gillies, “Machine Learning in the Turing Tradition” (1996), ch. 2, parts 1–2

Ratti, “MACHINE LEARNING AND THE ETHICS OF INDUCTION” (2025)

Pietsch, “Variational Induction” (2022)

Further:

- Mill, *A System Of Logic, Ratiocinative And Inductive (Vol. 1 of 2)* (2008)
- Mackie, “Causes and Conditions” (1965)

Week 3: Logical positivism and observation (28 Sep & 1 Oct)

Carnap, “The Elimination of Metaphysics Through Logical Analysis of Language” (1959)

Schlick, “Chapter 1 Positivism and Realism”

Hanson, “Observation” (1958)

Week 4: Kuhn and Quine (5 & 8 Oct)

Kuhn, “The Nature and Necessity of Scientific Revolutions” (1970)

Kuhn, “Objectivity, Value Judgment, and Theory Choice” (1977)

Quine, “Main Trends in Recent Philosophy: Two Dogmas of Empiricism” (1951)

Further:

- White, “The Analytic and the Synthetic: An Untenable Dualism” (1950)
- Quine, *From a Logical Point of View* (1963)
- Swerdlow, “An Essay on Thomas Kuhn's First Scientific Revolution, “The Copernican Revolution””
- Tipler & Bollinger, “Ptolemy versus Copernicus” (2015)
- Taschetto, “Rewriting the Quantum “Revolution” (2025)

Week 5: French epistemology (12 & 15 Oct)

Brenner, “Epistemology Historicized: The French Tradition” (2014)

Chimisso, “From Phenomenology to Phenomenotechnique: The Role of Early Twentieth-Century Physics in Gaston Bachelard’s Philosophy” (2008)

Canguilhem, “The Living and Its Milieu” (2001)

Further:

- Bachelard, “L’activité rationaliste de la physique contemporaine” (1951)

Week 6: Experiments outside the lab (19 & 22 Oct)

Morgan, "Nature's Experiments and Natural Experiments in the Social Sciences" (2013)

Boumans, "Shaping the Phenomena: Introduction"

Cartwright, "Will Your Policy Work? Experiments versus Models" (2018)

Week 7: Social and feminist epistemology (26 & 29 Oct)

Andersen, "Collaboration, Interdisciplinarity, and the Epistemology of Contemporary Science" (2016)

Wylie, "Feminist Philosophy of Science: Standpoint Matters" (2012)

Rolin, "Values in Science: The Case of Scientific Collaboration" (2015)

Week 8: Experiments and models (2 & 5 Nov)

Pickering, "Against Putting the Phenomena First: The Discovery of the Weak Neutral Current" (1984)

Hacking, "Experimentation and Scientific Realism" (1982)

Morrison, "Models as Autonomous Agents" (1999)