

730 Philosophy 225 Sect 01 Introduction to Philosophy of Science

Instructor: Sidney Felder, e-mail: sf30@panix.com

Rutgers The State University of New Jersey, Fall 2021. Tu & Th 3:00-4:20

Weeks 1, 2, 3	Some Views of the Character of Science:
T. H. Huxley	The Method of Scientific Investigation
Ernst Mach	The Economical Nature of Physics
C.S. Peirce	The Fixation of Belief
—	How to Make Our Ideas Clear
Weeks 3, 4, 5, 6, 7	Evidence, Theory, and Reality
David Hume	<i>An Enquiry Concerning Human Understanding</i> (Sections IV-VII)
Nelson Goodman	The New Riddle of Induction (in <i>Fact, Fiction and Forecast</i>)
Karl Popper	Science: Conjectures and Refutations
Carl Hempel	Studies in the Logic of Confirmation
Henri Poincaré	Space and Geometry (in <i>Science and Hypothesis</i>)
Pierre Duhem	Physical Theory and Experiment (in <i>The Aim and Structure of Physical Theory</i>)
Moritz Schlick	Positivism and Realism
Weeks 8, 9, 10, 11, 12	Generalizations, Laws, and Probabilities
Henri Poincaré	Chance (in <i>Science and Method</i>)
J. M. Keynes	<i>A Treatise on Probability</i> (Chapters XXIV, XXV, XXVI)
Frank Ramsey	Law and Causality
David Lewis	Counterfactual Dependence and Time's Arrow
Bertrand Russell	On the Notion of Cause
Kurt Gödel	A Remark about the Relationship between Relativity Theory and Idealistic Philosophy
Weeks 13, 14	Explanation and The Unity of Science
Jerry Fodor	Special Sciences (or: The Disunity of Science as a Working Hypothesis)
David Albert	Physics and Chance (in <i>After Physics</i>)

There will be a take-home exam, to be submitted by e-mail either in PDF or text format before the end of the Final Exam Period. Final grade will be determined by quality of both written work and class participation.