

The interpretation of physical theories

John Dougherty

SoSe 25

Meeting:	Tuesdays, 14:00–16:00 (c.t.) Edmund-Rumpler-Str. 9, Room A 011
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Description

Are scientific theories attempts to describe the structure of the world, or are they merely tools for predicting and controlling the behavior of the observable? Do the postulated entities of science like electrons, forces, and black holes really exist? Is science getting closer to the truth over time, or is just changing? These are longstanding questions in the philosophy of science. In this course, we will discuss the debate over these questions as it has played out over the last 100 years.

Materials

The syllabus and list of readings for this course are available on LSF, along with the required readings.

Assessment

The evaluation for this course will be by means of a term paper (ca. 10–12 pages) submitted at the end of the semester. If you would like to submit a term paper, you must register through LSF during the registration period (30.06.–11.07.) and submit it to me by email by the term paper deadline (19.09.). Please note that extensions of this deadline are not up to me; if you need an extension, please contact Fabian Widerna (f.Widerna@lmu.de) at the Prüfungsamt für Geistes- und Sozialwissenschaften (PAGS).

Before the registration period, I will distribute a list of suggested questions and grading criteria. You may write your paper on topic not on that list; if you do, then I recommend speaking to me before writing the paper, so that I can advise on the topic and scope of your planned alternative.

Resources

Questions about the administration of philosophy teaching at LMU should be directed to Thomas Wyrwich (thomas.wyrwich@lrz.uni-muenchen.de). The Erasmus coordinator for philosophy at LMU is Peter Adamson (office.peter.adamson@lrz.uni-muenchen.de). The list of women's representatives (Frauenbeauftragte) for the Philosophy Faculty can be found on the Faculty's webpage (www.philosophie.uni-muenchen.de/fakultaet/frauenbeauftragte/index.html); the representative for the MCMP is Vanessa Carr. Issues regarding the economic, social, and cultural aspects of student life—including studying with a child or studying with a disability—are the responsibility of the Munich Student Union (<https://www.studentenwerk-muenchen.de>).

Schedule and readings

22.04. HOLIDAY

29.04. Introduction

06.05. Grover Maxwell (1962), The ontological status of theoretical entities

13.05. Bas van Fraassen (1980), Arguments concerning scientific realism

20.05. Nancy Cartwright (1983), When explanation leads to inference

27.05. Larry Laudan (1981), A confutation of convergent realism

03.06. John Worrall (1989), Structural realism: the best of both worlds?

10.04. HOLIDAY

17.06. Arthur Fine (1986), The natural ontological attitude

24.06. Janet A. Kourany (2000), A successor to the realism/antirealism question

01.07. Dana Tulodziecki (2013), Underdetermination, methodological practices, and realism

08.07. Heather Douglas (2012), The value of cognitive values

15.07. Helen E. Longino (1990), Values and objectivity

22.07. Yafeng Shan (2018), A new functional approach to scientific progress