

Epistemology and Philosophy of Science – Module 2: Scientific Explanations

Instructor: Dr. Andrea Oldofredi (Lancog, CFUL)

October 16, 2025

In order to schedule a meeting with me please write an email at:

Email Address: aoldofredi@letras.ulisboa.pt

Handout for Wednesday October 22

Seminar 1, Part I: 17:00–18:30

- Announcements
- Brief introduction to the syntactic view of scientific theories.
Optional Reading: Section 2 of Rasmus Grønfeldt Winther, “The Structure of Scientific Theories” in *The Stanford Encyclopedia of Philosophy*. Link [here](#).
- **Essay 1 (mandatory):** *Rudolf Carnap, “The Value of Laws: Explanation and Prediction”*. I will comment in detail on Carnap’s paper, explaining the main concepts of scientific law mentioned by the author, and their relations with scientific explanations.
- **Essay 2 (mandatory):** *Carl G. Hempel, “Two Basic Types of Scientific Explanation”*. I will introduce the two main models of scientific explanation provided by Hempel. We will study the main differences between deductive and statistical explanations.

NB: The students are required to read Carnap and Hempel essays by October 22. Both papers are included in Martin Curd, J.A. Cover *Philosophy of Science. The Central Issues*, 1998, W.W. Norton and Company, pages 678–694.

Coffee Break: 18:30–19:00

Seminar 1, Part II: 19:00–20:00

- General discussion led by the teaching assistant Luca Caiti: in the final part of each seminar you will discuss the essays explained in class in order to develop analytic and reasoning skills.