

Epistemology and Philosophy of Science – Module 2: Scientific Explanations

Instructor: Andrea Oldofredi (Lancog, CFUL)

October 23, 2024

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

Email Address: aoldofredi@letras.ulisboa.pt

Handout for Tuesday October 29

Seminar 2, Part I: 14:00–15:20

- General discussion on Carnap and Hempel ideas concerning the symmetry between explanation and prediction.
- Introduction of some major objections against Hempel's models of explanation.
- Illustration of Railton's model of scientific explanation.

Optional Reading: "Commentary" in Curd, Cover, *Philosophy of Science. The Central Issues*, pages 790–799,

- **Essay 1:** *Paolo Mancosu, "Mathematical Explanation"*. I will comment in detail on Mancosu article, explaining the main concepts of mentioned by the author, and their relations with mathematical explanations.

NB: The students are required to read Mancosu's essay by Tuesday October 29. This article can be found at this webpage of the [Stanford Encyclopedia of Philosophy](#).

Coffee Break: 15:20–15:40

Seminar 2, Part II: 15:40–17:00

- **Essay 2:** *Alan Baker, “Are there Genuine Mathematical Explanations of Physical Phenomena?”. *Mind*, 114: 223–238*

NB: This reading is also required before the seminar.

- General discussion on the possibility of mathematical explanations.