Philosophy of Science: Paper Three

Requirements
You are to submit one 6–8 page research paper on Thursday 10 December, addressing one and only one of the questions listed below. A printed copy of the paper must be submitted in class.

Guidelines
Essay guidelines are available here: http://goo.gl/jrx25

Questions

Note: You may write on a different question, but only if you have received approval.

• Explain and evaluate the thesis that Cartwright (1994) calls fundamentalism, addressing the following question:
  – Sklar (2003) distinguishes two arguments for fundamentalism. One argument concerns what things are made of. Another argument concerns the way in which fundamental and non-fundamental theories relate to one another. Explain and evaluate these arguments.

• Explain and evaluate the regularity and best-system theories of laws of nature, addressing the following questions (Bird 1998):
  – How does the best-system theory improve on the basic regularity theory?
  – How does the best-system theory allow for uninstantiated laws?

• Explain and evaluate the “Mirror Argument” (Beebee 2000), addressing the following questions:
  – What is the target of the argument?
  – Explain and evaluate the modal principle on which the argument depends.
• Explain and evaluate the Deductive-Nomological theory of scientific explanation defended by Hempel (1965). Discuss at least one of the following problems with the theory:
  – Explanatory asymmetry.
  – Explanatory relevance.

• Woodward (2003) argues that many theories of scientific explanation, including the Deductive-Nomological theory defended by Hempel (1965), are committed to a thesis he calls “the hidden structure strategy”. Explain the Deductive-Nomological theory, explain why it is committed to the hidden structure strategy, and explain and evaluate Woodward’s argument against the hidden structure strategy.

• Lewis (1986) defends a theory of scientific explanation according to which to explain is to provide information about causal history. Explain and evaluate this theory, considering at least one of the following questions:
  – Does more information about causal history always entail better explanation?
  – How does the theory defended by Lewis improve on the Deductive-Nomological theory defended by Hempel (1965)?

• Sober (1983) argues that equilibrium explanation provides a counterexample to causal theories of explanation. Explain and evaluate his argument, considering the following questions:
  – Are equilibrium explanations non-causal?
  – Do equilibrium explanations show that Lewis (1986) is wrong to claim that, other things being equal, more causal information always entails better explanation?
References


