

PHILOSOPHY OF SCIENCE PAPER TOPICS II

Due Date November 10th, 9.30 AM. Late papers will be penalized one grade increment (e.g., from an A- to a B+, or from a B to a B-), for every day or part thereof that they are late. Equipment failure (computers, printers, brains, etc.) will not be accepted as an excuse for lateness.

Length Eight to ten pages

Formatting Left and right margins should be at least 1.5 inches wide. Use either one-and-a-half or double spacing. No tiny font sizes, please. (Times at 12 pt or Palatino at 11 pt are about the right size.) It is fine to use double-sided printing.

Plagiarism All work submitted for this class should be your own. Any words quoted from other sources should be attributed explicitly to those sources. If you are unsure whether your use of someone else's work is legitimate, please ask me. The penalties for plagiarism include failing the class and worse.

Reading As with the first paper, it is not necessary to do additional reading; depending on the question, however, it might be a good idea. Start with Godfrey-Smith's suggestions for further reading (at the end of each chapter). The online Stanford Encyclopedia of Philosophy (plato.stanford.edu) is, though a work in progress, also very useful.

Topics Answer one of the following questions. As a very rough guideline, you should spend about half your time presenting the relevant material and about half your time in critique, that is, evaluating both sides of whatever question is on the table.

1. Can a principled distinction be drawn between what's observable and what's not? If so, does the distinction have any methodological significance? (You could write your whole paper on the first part of the question. Or you could treat it fairly quickly and devote almost all of the paper to the second part of the question. Or you could give equal time to each.)

2. Why on earth would you want to be a constructive empiricist? (In the course of answering this question, explain the view and give arguments for and against it.)
3. What is the pessimistic mega-induction (sometimes called the pessimistic meta-induction)? To what extent does it militate against our believing our best scientific theories? Is there a compromise position a realist can take, acknowledging that some things our theories say about the unobservable world shouldn't be taken too seriously, while maintaining that others should?
4. What is a law of nature? Discuss two possible answers to this question; evaluate the merits of each.
5. Explain how Lewis's theory of causation works. Present a problem for the theory. Can the problem be resolved?
6. What is right and wrong about Hempel's deductive-nomological theory of explanation? (If you like, you can focus entirely on the wrongs. But don't forget to explain clearly how the theory works.)
7. What is the unification account of explanation? Can it handle the case of the flagpole and shadow?
8. Give an argument in favor of the causal account of explanation. Then give an argument against the causal account. Critically discuss one of these arguments. (So: present two arguments, then pick one of the two and discuss whether or not it works.)