

Phil. 125: Philosophy of Science
Second Assignment (Paper Version)

Instructions

The paper (6–10 pages long) is due Wed., Dec. 6 in my office (Cowell Annex A-106) by 5:00pm. Note that there is also a take home exam version of this assignment, which you may choose to do instead of this one.

You should use some material from the second part of the course—i.e., Popper and/or Kuhn, and possibly also one or more of Popper’s critics (Neurath, Putnam, Lakatos). Most if not all of the topics will also allow you to bring in material from the first part (e.g. you could write on Carnap vs. Popper, or Quine vs. Popper).

The first three suggested topics below are new; the others are modified versions of topics from the first paper

The below topics are suggestions. If you want to write on another topic, feel free to do so. It might be a good idea, however, in that case, to check with me first.

Note that the topics tend to have many sub-questions. You need not (and probably should not) try to answer all of them. (You *certainly* should not just answer them one after another in order—that would make a bad paper.) I put them there to suggest various directions for thinking about the topic, and in particular to head off superficial or excessively simple ways of thinking about it.

The main focus of the paper should be, one way or another, on texts we’ve read for this class, though you’re welcome to use other material also if it seems useful/relevant. If you do use outside sources, it should go without saying that you must cite them, and provide enough bibliographical information that I can figure out what they are. (For sources from the recommended or required reading, title and page number should be sufficient.)

I recommend an attempt to interpret (understand/explain/make sense of) the views of the authors we’ve read, rather than, say, an attempt to make an argument of your own against them. (I recommend this *particularly* if one or more of these authors rubs you the wrong way or seems obviously wrong or uninteresting.) All of the suggested topics below are along those lines. This is only a recommendation, however: I suspect that an effort in this direction is most likely to produce a good paper, but if you think you have a good idea along other lines, go ahead and try it.

Suggested Topics

1. What, according to the authors we've read, is the relationship between (some or all of): (1) science; (2) philosophy of science; (3) philosophy (in general); and (4) history of science? Are some just subfields of the others? What, if at all, distinguishes one from the other(s)? Subject matter? Methodology? Something else? Which needs or can use the results of which other(s) to do their work? Which is most rational, most authoritative, most free? Which do our authors take themselves to be doing and why?
2. A related issue (but not exactly the same): from what, according to our authors, is science to be "demarcated"? To what field or discipline does it belong to make this demarcation, and/or from what point of view do we make it, and/or who is authorized or has the requisite knowledge or ability to make it? How can we tell if the demarcation has been made correctly or not, and/or in what terms can we criticize a suspect or incorrect demarcation? Why, if at all, is such demarcation important? (E.g., what characteristics of science make it important that we not confuse it with something else?) Would something go wrong if we made the demarcation incorrectly or not at all, or is this just a matter of intellectual interest?
3. What, according to our authors, is the proper relationship between (what Quine calls) the "conceptual side" and the "doctrinal side" (of science, epistemology, philosophy or history of science, and/or whatever seems relevant)? Which is prior, and/or more important, and/or more relevant to "demarcation" (or to some other problem), and/or more fruitful to talk about? Has this proper relationship mostly been maintained (by scientists and/or philosophers), or has it, according to our authors, sometimes or often been gotten wrong, either in theory or in practice? What can we learn from the history of philosophy, especially from Hume and/or Kant, about this relationship? How and why do our authors disagree in their interpretation of that history?
4. Discuss the meaning of and/or relationship between some of the following things, according to authors we've read: (scientific) theory, observation(s), common or everyday knowledge, experience, sense data. How (if at all) do they define them? Which do they consider most certain/reliable, or more justified, or otherwise better, and why? Do they think that some of these things are not well defined, or not relevant to science, or don't exist at all? Which of them depend on or change along with our scientific theories, practices, standards, methodological decisions, and/or ways of "seeing"? How and on what grounds do our authors disagree with each other about

these issues? (How, if at all, is it possible to disagree about the *definitions*? Can't everyone define the terms as he or she likes? What would our various authors say about that?)

5. A more general suggestion, which to some extent overlaps with some of the above: pick a difference or debate between two authors and explain what the *real* disagreement is (as opposed to what one might have thought it was). You can try to decide who “wins,” if you want, but I don't particularly recommend this.
6. What was really important to Popper, and what wasn't? How does this explain the adjustments in his project as time went on, and/or his response to (one or more of) his critics? To write on this you should probably look at least at Popper's responses to his critics and/or to Kuhn in *The Philosophy of Karl Popper*, ed. Schilpp (on the recommended reading list and on reserve at Regenstein, parts also on e-reserve). (You could also try doing the same thing with Kuhn—the “Postscript” to *SSR* might be useful here, but I'll try to suggest some more stuff if people are interested.)
7. Carnap was an Old Left democratic socialist, Neurath was a Marxist, Quine was an extreme right wing conservative (though, I've been told, perhaps not so extreme earlier on), Putnam was (in the period when he wrote “What Theories Are Not” and “The ‘Corroboration’ of Theories”) a New Left activist, and Popper was a anti-Marxist liberal democrat (probably more information than you want on that is available in his books, *The Poverty of Historicism* and *The Open Society and Its Enemies*). (I unfortunately don't know much about Lakatos or Kuhn's politics.) Discuss the relationship between the political views of these authors (i.e., one or more of them) and their views in philosophy of science. (I hinted at some things about this in class, but there's a lot more to be said.) (Note: to do this well you need to understand and deal carefully with the philosophy of science aspect, not just take off on the politics.)