

Philosophy of Science Paper Assignment Spring 2010

Argumentative Paper

Form of paper. Argumentative paper with a *thesis*, i.e., the view you wish to defend and a reasoned defense.

For a model of an argumentative paper and for documentation style see L. McHenry, "Popper and Maxwell on Scientific Progress," forthcoming in *From Knowledge to Wisdom: Studies in the Philosophy of Nicholas Maxwell* (Frankfurt: Ontos Verlag) available at: www.csun.edu/~lmchenry

This is not a research paper so you will not have to spend time doing research in the library or on the internet. Rather the project is to engage the material of the course in what is called a "problem paper." Identify clearly your thesis in the first paragraph of your paper. You may, for example, do so by saying: "In this paper I will argue that...." The paper will then be evaluated on the basis of your success in providing support for your thesis. Thus, your *thesis* is the main *conclusion* of your paper that you support with *premises*. This gives your paper its essential logical structure such that the development of your essay is a process of articulating reasons for your main conclusion. You may either argue in support of some author's view or challenge it and therefore provide an argument against the author's view.

"One point cannot be emphasized too much: *Your thesis is a proposition or statement that demands demonstration.* Therefore, the thesis should be less obvious than the reasons used to support it. An argument is a set of statements that support a conclusion, but if you begin to defend some point that is already well established or uncontroversial, the paper is doomed from the start because there is no argument or any point that needs demonstration. A genuine thesis, on the other hand, should elicit this response from the reader: 'Interesting, but let's see you prove it!'" (L. McHenry, *Reflections on Philosophy*, p. 205). Examples of theses: Popper's criterion of falsifiability fails to characterize the essence of science. Hempel's hypothetico-deductive method is superior to the traditional conception of scientific method. Hume's critique of induction contains a fatal flaw. Kuhn's view of anti-incrementalism is false.

Possible Topics:

1. Give an exposition of one of the philosophers' views (Popper, Kuhn, Ayer, Maxwell, Lakatos, Ruse, Dawkins, etc.) and argue that the view solves some problem or illuminates some example in the history of science.
2. Critically evaluate one of the philosophers' theories. Take up a problem or issue—demarcation, definition of science, scientific progress, the verification principle, evolution vs. creationism—give an exposition of the philosopher's view and then provide

your own critical evaluation of that view. You might also select some example from the history of science and show that the theory simply fails to account for the example. Here you might use your own background in science to find good examples.

3. Compare two different views in the philosophy of science and show that one is superior to the other, or that both fail. For example, Popper vs. Kuhn, Ayer vs. Popper, Hume and Ayer, Maxwell vs. Popper.

If you are unclear about the options or wish to explore another alternative, contact your instructor before writing the paper.

Reminders:

1. This is a FORMAL writing assignment. Be sure you are clear about what material is relevant for your paper. Autobiography, personal recollections and the like are inappropriate material.

2. When you have finished your paper, set it aside for a day or two, read it again and see if it makes sense to you. You might also have someone else read and critically evaluate your paper before you turn it in. There is no opportunity for revision on this assignment once it is due.

3. A paper that does nothing more than simply repeat lecture material from class is unsatisfactory. The whole point of the paper assignment is for you to become engaged in the course material.

4. Use of primary or secondary sources must be documented in endnotes. It is vital that you realize that lack of documentation of sources constitutes plagiarism. Never attempt to disguise the work of others as your own. Plagiarism is cheating and will be dealt with according to university policy. See page 3 of syllabus.

5. A term paper is not merely patchwork of material taken from books, articles or internet websites. (Beware anything can be posted on the internet.) Rather the paper is your original thinking about a problem or issue.

Written Proposal:

This should be a one or two page proposal that gives a tentative title, a thesis statement, a brief outline, and any references that you plan to use.

Length of Final Paper:

Minimally, 7 typed pages @ 250 words per page.

Final paper due: 1 April 2010. Late papers will be subject to penalty at one letter grade for each class date the paper is late.