

**Philosophy 3330: Philosophy of Science
Spring 2021, Long Paper Assignment #2**

Due Wednesday, April 14 (11:59pm)

Purpose: The purpose of our class as a whole is to think about the nature of science. Chapters 7 and 8 in James Ladyman's *Understanding Philosophy of Science* discuss scientific explanation, how explanation relates to inference, and defenses and criticisms of scientific realism such as the 'no miracles argument' and 'the pessimistic meta-induction.' The next stage of our class will focus on issues in medicine and we are starting with reading chapters 1 and 2 of Jacob Stegenga's *Care and Cure: An Introduction to the Philosophy of Medicine* which focus on the nature of health and disease.

The standard unit of philosophical analysis is the argumentative essay. Writing is an extension of thinking. It allows you (and forces you!) to think more deeply about a topic than you are able to do by keeping things 'in your head.' Exposition of someone else's views (including careful description of those ideas, issues, terms and scope) allows you to understand them better, and it is then much easier to critically evaluate these views. Laying out your own argument or that of someone else often forces you to be explicit about connections which can reveal weaknesses in your own thinking which must be acknowledged so they can then either be fixed or can lead to better views overall. Thus the purpose of assigning an essay is both as an effective way to evaluate your learning and progress in the class and to help improve your philosophical skills.

Instructions: You are to write an argumentative paper on some topic relevant to Chapters 7 and 8 in Ladyman or Chapters 1 and 2 in Stegenga. The paper should be between roughly 1300 and 1800 words. If you double space and have natural fonts and margins, your essay would be about 4-6 pages.

Due Date: Your essay should be uploaded into Blackboard before **Wednesday, April 14 at 11:59pm.**

Grading: This paper will be worth 20 points (20% of your final grade).

Guidelines: An argumentative essay is a reasoned defense of some particular claim. A general guideline for a paper like this is that you should spend about half of your time in exposition and half your time in evaluation.

Here are some useful guides to writing philosophy papers:

https://philosophy.fas.harvard.edu/files/phildept/files/brief_guide_to_writing_philosophy_paper.pdf (from Harvard College's Writing Center)

<https://www1.cmc.edu/pages/faculty/akind/Intro01s/Writing.htm> (from Amy Kind)

<http://www.jimpryor.net/teaching/guidelines/writing.html> (from Jim Pryor)

http://joelvelasco.net/teaching/120/How_to_Write.pdf (from Chris Hitchcock)

Topic:

You may choose to write about any topic relevant to these four chapters. For example, here are some sample questions that might help stimulate your thinking.

1. Ladyman starts his discussion of scientific explanation by looking at the deductive nomological model of explanation. What is this model and what are some of the well-known problems with this model? Ladyman points out that some authors have thought that introducing the notion of causation to explanation would solve these problems. Is this right? Or does causation not really help here? Or add new problems?
2. Many authors think that inference to the best explanation is a common and important type of inference in science. But does it work? And how exactly does it work? What if the 'best' explanation just isn't a very good one?
3. What is the 'no miracles' argument for scientific realism? Could anything else explain the success of science besides the fact that it is true?
4. What is the pessimistic meta-induction? Does it show that we should not be scientific realists?
5. Novel, predictive successes of a theory seem particularly impressive. But what does it mean to be a 'novel' prediction in this context? Does predictive accuracy *have* to be novel in order to confirm a theory? Or are non-novel predictions confirmation too? (maybe less confirmation? Or none at all?)
6. Are the concepts of health and disease separable? Or are they really two sides to the same coin?
7. Are health and well-being objective concepts? Or all (or partly) subjective?
8. What is the relationship between health, disease, and being normal? Is having a disease simply being not normal for your sex and age?
9. How are health and disease related to function?
10. Is a disease something that harms you?