

Phil 309B: Darwin · Take-Home Exam 2

Due: 4/11/11

Please choose *three* of the following questions to answer. Be sure to address ALL parts of the question. As always, strive for clarity. An intelligent student not in this class should be able to understand your answer.

1. Explain Searle's Chinese Room example. Then, discuss as clearly as possible whether or not there is a way of understanding the example according to which it raises trouble for Dennett's evolutionary view about how mind could have arisen from non-mind. [TIP: If you think that Searle's example causes trouble for Dennett's view, then you need to explain precisely how it causes trouble; if you think that it doesn't cause trouble, then you need to explain precisely why it doesn't. Notice that either way, this will require you to explain Dennett's view about how mind could have arisen from non-mind.]
2. Explain what it means for an explanation to be teleological versus non-teleological. After that, come up with your own example of a teleological and a non-teleological explanation for a particular event. Defend your claim that one is teleological and the other is not. Finally, explain how this relates to Dennett's discussion of skyhooks and cranes and why he thinks this issue is so important to the proper understanding of the theory of evolution.
3. Consider the following quote:

“Evolutionism claims that over billions of years everything is basically developing upward, becoming more orderly and complex. However, this basic law of science (2nd Law of Thermodynamics) says the opposite. The pressure is downward, toward simplification and disorder.”

First, explain how this could be seen as an objection to the theory of evolution by natural selection. Then, explain where such an argument goes wrong.

4. There is some evidence that the laws of nature are “fine-tuned” for life, in the sense that: (a) there are many different ways the laws could have been, and (b) if the laws were even slightly different, life would be impossible. Suppose that the laws are fine-tuned in this sense. The sheer improbability of the laws being as they actually are appears to cry out for explanation. For this question, you need to critically evaluate two ways in which one might try to argue that this appearance is misleading and that the fine-tuned laws do not require explanation. The two ways to consider are below:
 - 1 According to the Anthropic Principle, if we are here, then the universe must have fine-tuned laws. But we know that we are here. So, from the Anthropic Principle it follows that the universe must have fine-tuned laws. But if the universe *must* have fine-tuned laws, then there is no improbability to explain.
 - 2 The fine-tuned laws do not require explanation because improbable things happen all the time with no particular explanation. Suppose I toss a bag of rice in the air and the grains land randomly on the floor. Of course it is very unlikely that they would land just like this. But that does not cry out for explanation. Similarly, neither do the fine-tuned laws.

5. Consider tall trees in the rain forest. They have very tall trunks with all their leaves on the top. It might seem odd that they grow so tall: isn't it just a waste of energy? This is further confirmed when one considers an alternative strategy, where each tree grows to half the height it could grow to. If every tree did this, then they'd all get the same amount of light, but with less energy expended. Explain how this alternative strategy is not an ESS. Does this show that the strategy in question *couldn't* evolve? After you've addressed this, explain how a strong form of Adaptationism can be seen as the view that every trait is evolutionarily stable in this sense. [NOTE: This last part of the question can be especially tricky. You will need to be exceptionally clear about how you are understanding Adaptationism, why that is a good way to understand it, and how it relates to the concept of an ESS.]