Logical Positivism

Metaphysics, Epistemology, and Semantics

- Thus far in the course, we’ve been asking questions about what kind of beliefs we’re justified in holding, or which kinds of beliefs we know, given a certain body of evidence.
  - Are we justified in holding beliefs (do we know) about the future, on the basis of our experiences of the past?
  - Are we justified in believing (do we know) that all emeralds are green, as opposed to believing that all emeralds are grue, on the basis of our observation of green (and therefore grue) emeralds?
  - Are we justified in getting more confident that all ravens are black on the basis of an observation of a non–black non–raven?

- These are all questions about epistemology.
  - To ask an epistemological question is to ask a question about whether or how our beliefs about the world are justified, or whether they are known.

- Contrast these kinds of questions with questions about the way that the world is— independent of what we believe or are justified in believing about the world.
  - Will the future resemble the past?
  - Are all emeralds green, or are they all grue?
  - Are all ravens black?

- Questions about the way that the world really is are metaphysical questions.
  - To ask a metaphysical question is to ask a question about what reality is like.

- Metaphysical questions and epistemological questions tend to blur together in the first-person perspective. It would be crazy to think that you are fully justified in believing that all emeralds are green, and simultaneously think that not all emeralds are green.

- However, we can see that these questions come apart by considering the following kinds of cases:
  - misleading evidence.
* At the start of *The Matrix*, Neo has tons of evidence to the effect that he lives in the late 20th century. However, he is wrong. In point of fact, he lives in the late 22nd century. So the way that he is justified in believing the world to be is different from the way that the world really is.

- facts about which we don’t have any evidence

* There is a certain number of fish currently living on planet earth. I don’t know what that number is, and neither do you. However, that number—whatever it is—is either even or odd. We don’t have any evidence about whether the total number of fish is even or odd, so we can’t have any justified beliefs about whether that number is even or odd; but there is still a fact-of-the-matter.

• Lesson: *metaphysical* questions are distinct from *epistemological* questions.

• Finally, contrast these two kinds of questions with another kind of question: questions about *meaning*. When we believe that all emeralds are green, or that all ravens are black, what is it that we believe? What does it take for these beliefs to be *true*? What are they claims *about*? What do they *mean*?

  - To ask a question about the meaning of a belief or a sentence—what it would take to be true, what the claims about about—is to ask a question about *semantics*.

• There will be interesting connections between these three kinds of questions.

  - For instance, if the world is a certain way—if, for instance, it is filled with systematically misleading evidence—then it could become difficult to understand how we could know that the world is that way. (Like, for instance, in the Matrix.)
  
  - If the things we claim to know are *about* things like our sensory experience (if the propositions that we claim to know just *mean* that our sensory experiences are a certain way), then it is easy to see how we could actually know those things.
  
  - If we have a theory of meaning according to which we can only talk about our own sense experience, then many metaphysical questions will appear to be *meaningless*.

**Logical Positivism**

• The logical positivists accepted *epistemological* and *semantic* claims that held radical *metaphysical* conclusions.

• First, they accepted *empiricism*, which is the claim that we can only come to know *synthetic* truths through sense experience.

  - The *analytic/synthetic distinction*: a claim is *analytic* just in case it is true or false solely in virtue of the meanings of the words involved. (*e.g.*, “All bachelors are unmarried”, “If my car is red, then it is not red”.) A truth is *synthetic* just in case it is true or false in virtue of the way that the world is.
So, the positivists thought that, even though we could know analytic truths independent of sense experience (or a priori), they denied that we could know any synthetic truths in this way.

What about mathematics? The positivists claimed that all of mathematics was analytic.

- Secondly, they accepted the verificationist theory of meaning, according to which the meaning of any synthetic claim is exhausted by the sense experience we could expect to undergo if the claim were true. That is to say, all that the sentence says is that we will undergo such-and-such sense experience in such-and-such circumstances.

  - The meaning of any sentence is just given by the course of sense experience which would verify the sentence. If there is no such sense experience, then the sentence has no meaning—that is, it is meaningless.
  - What it takes to understand a sentence (to know what it says) is just to understand what it would take to verify it (to know what kind of sense experience would verify it).
  - In order to be meaningful, a sentence must be about our sense experience.

- With these epistemic and semantic theses in hand, the positivists went on to argue that much of traditional metaphysics is simply meaningless.

  - There are lots of claims about the way that the world is which aren’t meaningless—but these are just the claims which are verifiable, and which are investigated by the sciences.
  - The claims made by traditional metaphysicians, on the other hand—claims about whether numbers exist, whether a statue is or is not identical to the clay that makes it up, whether God exists—don’t make any difference to the course of our sense experience. So these claims are just meaningless. They don’t actually succeed in saying anything at all.

- Problem: some of the terms that show up in our fundamental physical theories—quark, charm, color, spin, etc—aren’t observable. Does that mean that fundamental physics is also meaningless?

- The logical positivists thought that the terms appearing in fundamental physical theories could be meaningful—but only insofar as they help make predictions about future sense experience.

  - The accepted the thesis of semantic instrumentalism: the theoretical terms appearing in our scientific theories do no refer to unobservable entities (they are not about unobservable entities). Rather, they are merely tools or instruments used for the purpose of making predictions about our future sense experience.

- So, when we believe that “there are quarks”, what we believe is not that there are some unobservable entities which have color and charge properties and which obey certain laws. Rather, we just believe that the predictions which quark theory makes about the future course of experience will turn out true.
Problems with Logical Positivism

- What about claims about the distant past, such as “Caesar scratched his nose as he crossed the Rubicon”? I don’t know how to verify this claim, but it doesn’t seem meaningless.
  - Response: what matters is not verifiability *in practice*, but rather verifiability *in principle*. In order for a claim to be meaningful, it must be verifiable *in principle*.
    * Can we make sense of this ‘*in principle*’ qualification in a way that both makes claims about distant reaches of the universe meaningful yet *doesn’t* end up counting traditional metaphysics as meaningful?
    * More importantly, can we make sense of this qualification *without doing* any traditional metaphysics?

- What does the verificationist theory of meaning say about itself? What sense experience would verify it? It doesn’t look like there is any, so it looks like, by its own lights, the verificationist theory of meaning is meaningless.

Scientific Realism

- Scientific Realism is the position that
  
  i) the theoretical terms appearing in our fundamental physical theories refer to mind-independent, unobservable entities out in the world (they are *about* mind-independent, unobservable entities out in the world). (the semantic claim)

  ii) these entities really exist. (the metaphysical claim)

  iii) we know things about these mind-independent, unobservable entities out in the world. (the epistemic claim)