Lecture 7

Part One:

Using the Possible Worlds Framework to Understand Correlation and Identity

Plan

- Last time we briefly looked at some of the ways that consciousness has been operationalized so that we could get underway with a science of consciousness
- Then we turned to the the possible worlds framework to try and understand the difference between possibility and conceivability
- This time we will start by using the possible worlds framework to try and understand correlation and numeric identity (p=p)
- We will then return to operationalizations, and the issue of whether discovering neural correlates of consciousness shows us that consciousness is one and the same as the physical correlates

The Possible Worlds Framework

- Braddon-Mitchell & Jackson, and Chalmers say to think of possible worlds as ‘universes’
- Modal realists think that possible worlds are objectively existing and concrete (though spatio-temporally and causally isolated from this world)
- Other theorists think that possible worlds are best understood as something along the lines of sets of ‘maximally complete sentences / propositions’

Possible Worlds

- Fictional worlds are incomplete insofar as there are truth value gaps
  - E.g., ‘Cinderella had 10,000 hairs on her head when she put on the shoe that fit’
- Possible worlds are maximally complete insofar as there are no truth value gaps
  - Either because there is a fact about the world (on a modal realist view)
  - Or because worlds are constructed by stipulating (consistent) truth values for sentences / propositions (on the view that they are sets of sentences / propositions)

Correlation

- X and Y are correlated in the actual world if whenever X occurs Y occurs and vice versa
- Correlations can be contingent, however
- This is just to say that while X and Y might be correlated in the actual world it might be possible that they not be correlated
- This is just to say that there are possible worlds (or a consistent set of sentences) where they aren’t correlated

Identity

- X and Y are numerically identical if there is one object (substance, property etc) rather than two
- An object (substance, property etc) is numerically identical to itself
  - E.g., p=p, brain state x = brain state x
- If there is no correlation between X and Y then X and Y cannot be numerically identical (one and the same object, property etc)
- This is because of Leibniz Law
  - If X has a property that Y lacks (or vice versa) then X does not = Y

Contingency of Correlation, Necessity of Identity

- While correlations may be contingent (so if X and Y are actually correlated it may be possible that they not be)
- Identities are thought to be necessary (so if X and Y are numerically identical then they are in all possible worlds)
- This is because an object is always numerically identical to itself (p necessarily = p, brain state b necessarily = brain state b)
- So while correlation in the actual world is NECESSARY for identity it is not SUFFICIENT

Informative Value

- To say that ‘p=p’ or ‘brain state b = brain state b’ seems uninformative
- To say that ‘brain state b = mental state m’ seems informative, however
  - Informativeness seems to do with the state of our knowledge
  - Like how conceivability was relative to our state of knowledge
- But it is that we can conceive of things turning out either way. IF the identity holds in the actual world it holds in all possible worlds (it is necessary)

Gold

- gold = atomic number 79 (79 protons in the nucleus)
- If the above identity claim is true then it holds in the actual world and in all possible worlds
  - So if we actually got a proton gun and shot a proton out of the nucleus we would have transmuted the atom of gold into an atom of something else
  - Similarly if there is a possible world in which the yellowy malleable valuable stuff turned out to have 80 protons in the atoms nucleus that substance would not be gold

Water

- Water = H20
- If the above identity claim is true then it holds in the actual world, and in all possible worlds
  - So if the colorless odorless stuff that falls from the skies and fills the lakes, the drinkable potable stuff is XYZ it is not water

Neural Correlates of Consciousness

- Let us suppose that scientists find a perfect correlation between phenomenal consciousness and some material state

- We have seen that while correlation is NECESSARY for identity, it is not SUFFICIENT

Neural Correlates of Consciousness

- Thus both materialists and dualists can be interested in discovering the neural correlates of consciousness
  - Identity theorists think that the discovery of neural correlates is a discovery of the identity of conscious states
  - Dualists think that the discovery of neural correlates is nothing more than that
  - Functionalists think that the discovery of neural correlates that fill the functional role isn't a discovery of the identity of conscious states (because they identify conscious states with the role being filled rather than the filler of the role)