

Philosophy 1320: Theories of the Mind, Stern College - Yeshiva University, Spring 2007
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Lecture Notes, March 14

I. Theoretical identities, modal properties, and contingent identity

Smart's identity theory simply claims that sensations are brain processes.

Smart urges us to see identity theory like any other common theoretical identification in science.

For example, consider the identity of lightning with electrical discharge.

Or, consider the identity of water with H₂O.

These two cases are paradigmatic theoretical identifications.

People were once ignorant of the nature of lightning and water.

Scientific theories were eventually proposed which identified their real natures.

Now we know that lightning is electrical discharge and water molecules are made of hydrogen and oxygen.

Similarly, people do not know that their pains are really stimulations of C-fibers in their brains.

Now that we know these things, we can use the old terms (lightning, water, pain) as shorthand (for electrical discharge, H₂O, and C-fiber stimulation).

Smart claims that such theoretical identifications are contingent.

Contingency is a modal property.

To understand contingent identity, and the most important criticism of identity theory, it is necessary to understand a bit about modal properties.

The modal properties with which we are concerned are possibility and necessity .

A modal property is anything that an object could have (possible properties) or must have (necessary properties).

An actual property of an object is contingent if it is possible for the object not to have that property.

For example, I am contingently the height I am, but (arguably) I necessarily have my parents.

Necessary properties are historically called essences.

Scientists explore actual (non-modal) properties.

Philosophers explore possible properties, often by engaging in thought experiments.

There has been a lot of work on the question of theoretical identifications and essences, and on the related notion of rigid designation which I discuss below, in the last thirty years, involving metaphysics and the philosophy of language.

These topics are too broad for us, though extremely interesting.

To see how theoretical identifications are contingent, consider whether it is possible for pain not to be a burst of neural activity.

It seems possible for pain, or any mental state, not to be identical with a particular brain state.

Similarly, since people once did not know that lightning and water were electrical discharge and H₂O, respectively, it seems wrong to say that they are necessarily identical.

For all people knew, it could have turned out that water is something entirely different.

So the identifications seem contingent.

Smart concedes, indeed embraces, contingent identity, p 235 and p 236.

Smart uses the contingent identity of mental states and brain states to block a criticism.

If pain were necessarily identical with, say, a burst of activity of some specific regions of the central cortex, then it might be thought that we should be able to translate statements about pain into statements about neural activity.

The two kinds of statements might also be taken to have the same logical structure.

Consider the identifications of bachelors and unmarried men; or of Superman and Clark Kent.

Any entailments from sentences containing one of the pair, it might be argued, would equally follow from sentences containing the other of the pair.

But mental-state sentences and brain-state sentences are different in both meaning and logic.

Smart's claim that the identities are contingent allows him to concede differences in meaning and logic, without denying the identity.

More plausibly, Saul Kripke has criticized identity theory for identifying mental states with brain states, since even if they share actual properties, they have different possible properties.

Kripke's worry about identity theory is perhaps clearest in fn 17, pp 248-9.

He claims that if two objects are identical, then they share all properties, including modal properties.

Kripke claims that mental states can not be identical to brain states, since mental states and brain states have different possible properties.

[In fact, Kripke has called into doubt the legitimacy of contingent identity.

If two objects are identical, then they have to share all properties.

Thus, they share all modal properties.

So, to say that two objects are necessarily identical is to say no more than that they are identical.

The distinction between identity and necessary identity collapses.

The debate over whether there is any contingent identity continues, but we need not be concerned with it.]

II. Kripke, rigid designation, and contingent identity

Kripke introduces the notion of rigid and non-rigid designators to highlight the difference between necessary and contingent identity statements.

A rigid designator is something that names the same object in all possible worlds, in all counterfactual circumstances.

Names are, according to Kripke, rigid designators.

Even if the facts about a person were different, the person's name still refers to that person.

Kripke uses the example, in our selection, of Ben Franklin.

Even if 'the inventor of bifocals' referred to some one else, 'Ben Franklin' would still refer to Ben Franklin.

Thus, 'the inventor of bifocals' refers non-rigidly.

Next, Kripke alleges that 'heat' and 'molecular motion' are rigid designators.

'Heat' is a rigid designator, since in counterfactual situations in which people, or Martians, did not feel warmth when putting their hands near fires, we would not say that they did not feel heat.

We would say that they get a different sensation from heat than the one that we get.

Even if there are no people to feel it, fire heats up the air around it.

Heat thus rigidly designates molecular motion, and the identification of heat with molecular motion is

necessary.

That there are people who feel heat in a certain way is contingent, but we should not confuse the contingent property of heat (that people feel it in a particular way) with a necessary property of heat (that it is molecular motion.)

Similarly, according to Kripke, the identification of water with H₂O, or lightning with electrical discharge, is necessary.

There is a contingent fact about how we experience heat, or lightning, or water.

But, theoretical identity statements are, in fact, necessary identities, not contingent identities.

Kripke's argument relies on the claim that paradigm theoretical identity statements are necessary.

Since theoretical identity statements are necessary, the identification of pain states with brain states must also be necessary.

For, Kripke claims that pain is a rigid designator, p 247.

Nothing could be a pain if it did not hurt in the way that pains do.

Similarly, brain state S is rigidly brain state S.

The identity of any two rigid designators must be necessary, since neither term could refer to anything other than its referent.

But, there were three (overlapping) considerations against the necessary identification of brain states and mental states.

We can ignore the first two, which claimed that if the identity were necessity, then the meanings and the logic of statements involving the terms should be the same.

Really, the problem distills to this: it seems possible that pain could be something other than a particular state of the brain.

But, if it is possible that pain is not a state of the brain, then the identity of the two must be contingent.

As we have seen, such theoretical identifications must be necessary.

So, the necessary identification must be false.

Thus, Kripke's argument is:

1. The identification of mental states and brain states must be either contingent or necessary.
2. Since mental states and brain states refer rigidly, the identification can not be contingent.
3. Since it is possible that mental states are not states of the brain, the identification can not be necessary.

Thus, mental states and brain states must not be identical.

[A different version of the argument relies on the incoherence of contingent identity:

1. Theoretical identities must be necessary.
 2. But, it is possible that mental states are not states of the brain.
- So, mental states and brain states must not be identical.

I will not pursue this version of the argument.]

III. Kripke's argument: summary and criticism

Smart agrees with Kripke that the identifications should not be necessary.

Kripke's argument against contingent identity depends on his notion of rigid designation, and its application in this particular case.

I am not sure that theoretical identifications must be necessary, since I don't accept his allegation that water, or lightning, or heat, are rigid designators.

Consider Kripke's description of the Martians, whose sensations of heat and cold are the reverse of ours, p 245-6.

Kripke claims that we would say that heat exists, even if there are no people to feel it.