

Philosophy 110W - 3: Introduction to Philosophy, Hamilton College, Fall 2007  
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## I. Skinner, Descartes, and the death of dualism

The conflict between Descartes and Berkeley now looks mostly theological.

The central problem with substance dualism might be labeled as the problem of mental causation, or as the problem of mind-body interaction.

The dualist seems to lack an account of how a non-physical mind can interact with the physical world.

How does thought lead to action?

Why does the mind get drunk when the body does the drinking?

Skinner points out an additional problem with the moderns, which is that they hold the copy theory.

He alludes to Theophrastus's problem, p 441.

Even if we do make an image of our sense experience, we must account for our awareness of that image.

Despite dissent from various philosophers, not merely Locke and Berkeley, from Descartes's time, in the early seventeenth century, through the nineteenth century, Cartesian dualism, and the pre-eminence of consciousness as definitive of the mental, dominated philosophical thought.

The most influential philosopher of the eighteenth century, Immanuel Kant, agreed with Descartes that the ability to reason distinguished humans from other animals, that minds were different in kind from bodies, and that our understanding of ourselves must be rooted in our conscious experience.

Developments in the nineteenth and early twentieth centuries started to erode the Cartesian view.

By 1980s, there were at least four major alternatives to Cartesian dualism, and many minor variations. Substance dualism is mostly regarded as dead.

The role of consciousness as the distinguishing mark of the mental is also dying, but persists.

The first sustained 20<sup>th</sup> century attack on Descartes' dualism came from a variety of sources (logical positivists, psychological behaviorists, linguistic philosophers) which we can loosely group together as behaviorists.

The positivists, inspired by early Wittgenstein and behaviorists like Skinner, were united in their desire to dispense with metaphysical speculation in favor of concrete, observable scientific evidence.

The linguistic philosophers, like later Wittgenstein, agreed that appeals to obscure internal processes were dispensable, and that we should explain behavior in terms of what is observable.

Skinner distinguishes methodological behaviorism, which he assimilates with some positivism, from his own radical behaviorism.

The methodological behaviorists deny that science can make any appeals to internal states, since they are private and thus unavailable for observation and verification.

Skinner thinks that we can talk about internal states, as long as we recognize that any internal awareness is just awareness of one's own body.

So, the feeling of pain is not a private feeling.

Pain is the feeling of, say, a knife cutting your flesh.

## II. Psychology and science

The methods of psychology, until the time of the positivists, relied almost exclusively on introspection. Freud, Adler, Jung, and William James all agreed with the Cartesian view that we have privileged access to our mental states.

Introspective psychologists believe that we can know about our own minds best by reflection, and the only way to know about the minds of others is by their reports of their own mental states.

Of course, the increasing importance of unconscious mental states to psychological explanation eroded the Cartesian notion that the essence of mental states is their consciousness.

The introspective psychologist can maintain his focus on consciousness by noting that even unconscious mental states may eventually become conscious.

Further, psychologists tried to access the unconscious states through introspection.

More threatening to introspective psychology is that there is no way to test or verify what some one says about their own mental states.

So, the Cartesian view resists proper scientific treatment.

Furthermore, the Cartesian, immaterialist view of humans was opposed by Darwin's work.

For the Cartesian, human beings are distinct from other animals by virtue of their distinct ability to reason.

Darwin's work evoked an understanding of human beings as no different in kind from, as contiguous with, other animals.

We have more advanced faculties than lower animals, but our ability to reason can be explained according to evolutionary principles.

Darwin's work thus marked a return to an Aristotelian view of the place of human beings in the world.

Thus, from the point of view of science, including scientific psychology, in addition to the problem of mind/body interaction, the Cartesian view is unsatisfactory because it allows for no testable hypotheses and no observational access to the mind.

The positivists held that the meaning of a statement consists in just the methods we use to verify the statement.

So, 'John has a toothache' means that John holds his mouth, and cries, and has swollen gums, etc.

It does not mean that there is some inner sensation, pain.

Note that the positivists are concerned with the meaning of psychological terms.

The focus on language was a central element of most twentieth-century philosophy.

That is, they wondered what 'pain' meant, rather than what pain is.

The positivists focused on the meanings of words because they were determined to rid philosophy of unscientific doctrines.

Certain words and sentences that look meaningful are in fact meaningless.

Their criterion for meaningfulness is verifiability.

Any term that is not verifiable is unscientific, and should be dismissed.

Instead of trying to determine the nature of mental states, or whether the mind is material, the positivists thought that these questions were pseudo-questions.

The positivists, while inspired directly by Wittgenstein, were also clearly indebted to Hume, who held that terms like 'God' and 'soul' were meaningless, since they correspond to no sense impression.

For the positivists, such philosophical terms are meaningless because sentences which contain them have no hope of being verified.

By ascribing verifiable, behavioral meanings to sentences referring to mental states, the positivists turned such sentences into legitimate scientific hypotheses.

But, they eliminated any introspective aspect of mental state vocabulary.

### III. Behaviorism and positivism

The behaviorist approach to psychology, endorsed by the positivists, rejected introspection in favor of behavioral analysis.

The positivists interpreted terms which referred to mental states as shorthand for behavior.

The psychological behaviorists worked to describe and predict behavior.

Skinner saw behavior as a function of environmental history.

If we knew all of a person's antecedent experiences we could predict with certainty his or her behavior.

Since we can not know all of a person's antecedent experiences, we can only predict with probability.

Still, in theory all that we need to know to predict a person's behavior is what happens to that person, and not what his or her inner, mental life is like.

Thus, for both the positivist and the behaviorist, psychology can be a legitimate science.

We can have observational access to people's minds, since mental states are just behaviors and we can watch people behaving.

We can even introspect, according to Skinner's radical behaviorism, as long as we remember that we are introspecting about our bodies, not about some non-physical mind.

Our mental states are just their physical manifestations.

Skinner considers, "He eats because he is hungry."

For the behaviorist, this sentence a redundant explanation.

Skinner claims that there is one set of facts, and that it is not the case that a private inner state is a cause of a separate, observable action.

Consider memory, thinking about Venice.

Skinner wants to replace the forming of mental images with sight.

We see Venice in memory, just as we see it in reality, but fainter.

There is no important distinction.

Dreaming is perceptual behavior, p 442.

We can test specific psychological hypotheses, since they are hypotheses about behavior.

Psychology becomes a physical science.

Note that parsimony is in the behaviorist's favor.

If we really could predict all of a person's behavior without reference to introspective mental states, then we could at least eliminate them from behavioral science.

The behaviorist's elimination of internal states makes his theory more limited in scope, though.

The question is whether the advantages in simplicity outweigh the losses in explanatory power.

### IV. Troubles for behaviorism

Skinner argues for behaviorism because observable behavior is available for scientific analysis.

But, what if internal states were available for scientific analysis, too?

This question could be interpreted in two ways.

One, what if brains and their states were available for scrutiny?

Two, what if mental states were available for scrutiny?

If we could develop a sophisticated theory which referred to mental states, then Skinner's behaviorism would be doomed.

Is Skinner arguing against mental language, as he says he is?

Or, is he merely arguing against a bad science of mental language?

More troubling is that the behaviorist seems to lack an account of any mental state that has no behavioral correlate.

The behaviorist identified mental states with behavior, or dispositions to behave.

So, pain is not an introspective state, but the disposition to scream, cry, wince, etc.

According to the dispositional theory, I don't cry because I am sad; my sadness is the disposition to cry.

I don't say that the apple looks red because I see red.

My seeing red just is my statement, and other related behaviors.

The question of why I scream when I am in pain remains without an internal account.

Consider two people whose motor nerves are cut, but only one of whom has cut pain fibers.

Now, kick them both, hard.

One feels pain, and the other does not.

But, they have the same behavior, even potential behavior.

Fodor's worry about the behaviorist is couched in terms of mental causation.

Often, our overt behavior is the result of long causal chains of thoughts.

Consider a master chess player.

Every thought in the chess-player's sequence of thoughts would have to be explained in terms of dispositions to behave.

But, there is no overt behavior to distinguish among the distinct thoughts, to guide the train of thought.

More subtly, how can the behaviorist explain, 'John was disposed to produce headache behaviors because he had a headache'?

If 'he had a headache' is explained as 'John was disposed to produce headache behaviors', then the resulting behaviorist analysis becomes tautological, and bereft of any explanatory power, while the original sentence is not.

## V. Mental states, brain states and the identity theory

Behaviorism was the first of the contemporary materialist programs.

The behaviorists were mainly criticized for ignoring, or denigrating, the internal workings of the mind.

Additionally, neuroscience seems to imply that some understanding of the brain is relevant to our understanding of minds.

For example, consider [transcranial magnetic stimulation](#) (TMS).

By stimulating neurons, we can alleviate depression in some patients.

That is, we can change people's mental states merely by massaging their brains.

This seems like evidence that the workings of the brain are in some deep way related to our mental states.

Of course, punching me in the gut will affect my mental states, as well.

But, the brain seems to have a deeper causal connection with my mental states.

Smart interprets mental states, naturally, like the dualist, as causes of behavior.  
We might think of behavior as caused by thought, but not as identical with it, or constitutive of it.

Mental states divide roughly into two classes: occurrent sensations like pain or seeing red, and intentional states like belief and desire.

The first category are characterized by their qualitative content, how they appear to us.

The raw feels of sense experience are sometimes called qualia.

The second category are characterized by their propositional content, by what I believe, or what I desire.

Smart focuses on sensations, rather than intentions, in particular pain, and an after-image.

Smart's claim is that every mental state is strictly identical with a physical state.

Thus, we call his position identity theory.

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

Thus, he solves the problem of mental causation.

Mental events can cause physical events because they are themselves physical events.

Note that Smart claims that the identities of mental states with brain states are contingent, p 445 and p 446.

## VI. Theoretical identities, modal properties, and contingent identity

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 H<sub>2</sub>O.

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, H<sub>2</sub>O, 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 H<sub>2</sub>O, 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.

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.

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.

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.

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.

## VII. Identity theory and behaviorism

Smart anticipates that his real opponent is the dualist, though he also argues against the behaviorist.

In particular, he identifies the behaviorist with the Wittgensteinian eliminativist: mental state terms are shorthand for behavior.

Rather than report or be caused by internal states, behaviors replace them.

Recall that Wittgenstein argues that language is essentially public; there can be no private language.

Reports of private phenomena, terms which refer to mental states, are misleading and deviant.

We should be wary of claims about private mental states, since there are no public criteria for verifying them.

Consider the man who tries to write a note every time he feels a particular sensation.

How can he know when he is having the same sensation?

Wittgenstein wants us to believe that there is no difference between seeming to sense and really sensing.

If seeming to sense and sensing collapse, then the whole edifice of private mental states should collapse, as well.

The advantage of behaviorism over dualism was, remember, Ockhamist: the behaviorist did not posit an independent, immaterial realm.

The identity theory wants the same advantage over dualism.

But, in arguing against the behaviorist, Smart appeals to the feeling of mental states, which the dualist makes central.

Smart argues that reports of how we feel (terms which refer to mental states) are related to reports of observable phenomena in the same way as seeming is related to being, p 240.

For example, we know how to distinguish optical illusions from real phenomena.

When we are experiencing an illusion, we talk about our inner experiences, in contrast to the observable ones, the real ones.

Against the behaviorist, Smart aligns with the dualist in emphasizing the feelings of our mental states.

But, by emphasizing sensations against the behaviorist, Smart seems to bring us back to dualism.

The mind is back.

Materialists have trouble explaining qualia, or raw feels.

Descartes' solution was to posit an immaterial mind/soul which is the seat of these qualia.

Smart must be careful not to fall into a dualist trap.

#### VIII. Nomological danglers, mental properties, and topic neutrality

Smart's first argument against the dualist is that sensations would be nomological danglers, p 444.

'Nomological' refers to the laws of science.

As natural science proceeds, it subsumes increasingly many phenomena under its laws.

To claim that something is not amenable to scientific explanation is to leave a nomological dangler.

Smart alleges that he has eliminated nomological danglers by avoiding the dualist's posit of an immaterial substance, and its mental states.

First, note that since Smart supposes brain states to be contingently identical to mental states, they need not share all properties.

This point is in Smart's favor, since mental properties seem quite different from physical properties.

The property of appearing red is not the same as the property of a set of neuron firings which correspond with that appearance, even if there is only one event in question.

The fact that I see yellow, instead of say black, when I look at a banana, will figure causally in the explanation of why I ate the banana instead of throwing it away.

But, if mental properties and physical properties are distinct, then even if Smart eliminates mental states in favor of brain states, he has not eliminated mental properties of those brain states.

Smart seems consigned to irreducibly mental properties.

So, the identity theorist seems committed to nomological danglers, too.

A theory which admits irreducibly mental properties, while denying that there are mental substances, is called property dualism.

Since Smart wants to avoid any kind of dualism, he must explain mental properties without appeal to irreducible mental qualities.

To avoid commitment to irreducible mental qualities, Smart says that to say that something appears orange is just to say that it makes me feel as if I am seeing an orange, that I am having an experience

which is like other experiences, p 447.

Smart makes no presumption that this experience is an irreducibly mental experience.

Smart calls it a topic-neutral experience.

That is, Smart wants to avoid the irreducibility of mental states by appealing to the material (behavioral) connections among the mental states.

Mental states are defined by their role in my perceptual experience, not by their (irreducibly) conscious qualities.

Smart must extend the topic-neutral response to other mental states, though he does not go into detail.

The identity of mental states with brain states is much more plausible for occurrent mental states, for sensations, than it is for beliefs, or other representational states.

What state of the brain could count as representing my belief that tigers are dangerous animals?

Is there some state of the brain, identical in all of our brains, that could stand for this belief?

The identity theorist might correlate mental states with the behaviors they produce.

Mental states could then be internal (brain) states, but they are picked out, distinguished or sorted, by behaviors that they cause.

#### IX. Identity theory, evaluated

The point of the identity theory is to provide level ground with the dualist.

At the end of his article, Smart compares materialism with dualism in the form of epiphenomenalism.

Remember, epiphenomenalism says that there are irreducibly mental states, but they do not affect physical ones.

That is, there are mental states, but the direction of causation goes just from the physical to the mental.

Epiphenomenalism is thus a weak form of substance dualism.

Smart's argument for materialism against the dualist is thus:

1. Materialism and dualism can account for our mental lives equally well.
2. Given two equally likely theories, we should decide between them on the basis of simplicity and parsimony.

Thus, materialism is preferable to dualism.

Smart defends his argument by applying it to the Gosse hypothesis, p 450.

Consider the following two hypotheses:

H1: Space-time is curved.

H2: Space-time is flat, though all the evidence will make it appear curved.

Or, consider:

H3: There are no ghosts.

H4: There are ghosts, but they can never appear to us.

Or, consider:

H5: Evolution is correct.

H6: Creation is correct, though the evidence supports evolution.



The question of whether to accept H1 or H2, or H3 or H4, or H5 or H6, is not empirical.

We resolve such questions by appealing to the methods of science, including parsimony, and the desire to unify theories.

The question of whether the mind is the brain or the heart is empirical.

But, the question between dualism and materialism is not empirical.

It is, like the choices between H1 and H2, or between H2 and H4, methodological, or conceptual.