

## Identity theories

### PHYSICALISM

The most common alternative to substance dualism is the view that there is only kind of substance, which is matter. This view is materialism. In recent years, materialism has been supplanted by ‘physicalism’. The most important reason for this is that physics has shown that ‘matter’ is too crude an identification of the most basic substance that exists, e.g. that matter can be changed into energy. As a first attempt, we could define physicalism as the view that everything that exists is physical, or depends upon something that is physical. ‘Physical’ means something that comes under the laws and investigations of physics, and whose essential properties are identified and described by physics.

But we should be more precise about this. Physicalism claims that what is physical is metaphysically fundamental. It is not enough that the only *substance* is physical – the fundamental *nature* of the universe is physical, and this covers events and properties as well. So physicalism should say:

1. the properties identified by physics form the fundamental nature of the universe;
2. physical laws govern all objects and events in space-time;
3. every physical event has a physical cause that brings it about in accordance with the laws of physics. (This is known as the ‘completeness of physics’ or ‘causal closure’.)

Physicalism does not have to claim that everything can be *explained* by appealing to physical properties and laws. ‘Explanation’ brings in all sorts of different considerations, since it relates to how we make sense of things. Physicalism is a view not about explanation, but about properties, laws and causes.

While all physicalist theories of the mind agree that the mind is not a separate *substance*, they can disagree on whether it is right to say that mental events are physical events, or whether mental properties are physical properties. This is the question of ‘reduction’. Not all physicalists are reductionists.

### TYPE IDENTITY THEORY

Physicalism claims that everything that exists is dependent on something physical in order to exist. ‘The mind’ is not a separate substance, a ‘thing’. It is more accurate to talk of mental properties, mental events, mental states and processes. We can then say that these properties (etc.) are possessed not by a mind, but by a person or a brain, which are physical objects. While they agree on this, physicalists differ on whether mental properties are types of property that are entirely distinct from physical properties.

A swan is a bird and white – but what makes it a bird (a biological property) and what makes it white (a colour property) are different properties, though both are physical properties. Are mental properties a kind of physical property? Can we analyse, for example, thinking a thought or feeling an itch in terms of neurophysiological properties, for instance?

The view that we can is called ‘type identity theory’. It claims that mental properties *just are* physical properties, e.g. thinking a thought or feeling an itch is *exactly the same thing* as certain neurones firing. It is called ‘type’ identity, because we identify what *type* of thing something is by its essential properties. Mental things turn out to be the same type of thing as physical things, i.e. mental properties are actually physical properties. They may not *seem* the same, but that’s just because we have different ways of knowing about these properties – through experience and through neuroscience. Many things turn out to be something they don’t seem to be, e.g. solid objects are mostly empty space, water is just hydrogen and oxygen (who’d have guessed?).

Type identity theory is a form of ‘reduction’. An ‘ontological reduction’ involves the claim that the things in one domain (e.g. mental things) are identical with some of the things in another domain. For example, things which appear non-physical are really physical. Mental properties, it argues, are a subset of physical properties. The identity claim is a reduction because we have ‘reduced’ mental properties – which we might have thought were a different kind of thing – to physical properties. I.e. there is *nothing more* to mental properties than being a certain kind of physical property. The theory doesn’t explain what physical properties are; for that, we need some independent explanation, e.g. from physics.

Type identity theory was developed in the 1960s as neuroscience gathered pace. The evidence is that mental events and states are very closely dependent on the brain, so many people now think that ‘the mind’ is just ‘the brain’, and everything mental is actually neurophysiological.

### Reductionism and multiple realizability

However, neuroscientific evidence does not establish type identity theory. To see this, we need to think philosophically, not scientifically. The most famous objection to type identity theory says that mental properties cannot be *identical* to physical properties because the *same* mental property can be ‘realized by’ *different* physical properties. For example, the brain states that relate to pain are different in different species, but pain is the same mental state. Therefore, ‘being in pain’ cannot be exactly the same thing as being in any *one* of these different physical states. And this is true for all sorts of mental states. Could there be aliens who have thoughts? If having the thought ‘snow is white’ is identical with having a particular physical property, then it would be *impossible* for an alien to have this thought if it did not have an identical brain to human beings. This is very implausible. This is the argument from ‘multiple realizability’. (Hilary Putnam, ‘Psychological Predicates’.)

The identity theorist could argue that we should talk about ‘human pain’, that this is a different property from ‘dog pain’. Or again, if there are intelligent aliens who have thoughts, but different brains, we should talk of ‘human thoughts’ and ‘aliens’ thoughts’. But this doesn’t seem plausible – pain is pain because of *how it feels*; thought is thought because of *what is thought*. A dog and a human being in pain share something in common, which we identify as the mental property ‘being in pain’. If an alien believes that snow is white, and so do I, we have the same type of thought, whatever our physiology. So mental properties can’t *be* physical properties.

This is not to say that there is *no* relation between mental and physical properties. It is just to argue that the relation is not identity.

## The explanatory gap

Anyone who claims that the mind is just the brain, that mental states are just brain states, faces a very difficult challenge. How could conscious experience have arisen in the brain? Consciousness involves a 'point of view', and there is something it is like, for a conscious creature, to be that creature. Consciousness is available to us first-personally, 'from the inside'. This 'first-personal' view onto the world doesn't fit into a scientific account of the brain or how the brain works, because that account is entirely 'third-personal'. To say that experience *is* a brain process is completely puzzling: how *could* it be, given that conscious experience and brain processes can only be described from different points of view? When we describe a brain process scientifically, we remove all reference to the first-personal. But consciousness is first-personal. So we can't be talking about consciousness when giving a scientific description.

This is known as the 'explanatory gap'. We cannot explain the phenomena of consciousness, especially phenomenal properties, using the terms available to us from science. This is an epistemological argument, about explanation and understanding.

## Zombies

A famous thought experiment puts the argument metaphysically, claiming that the properties of consciousness cannot be physical properties.

A 'zombie', in the philosophical sense, is a physical replica of a person – you, for instance – but without any experiential consciousness. It therefore has identical physical properties to you, but different mental properties. Of course, zombies are not physically possible, i.e. given the physical laws of the universe as it is, any being that has identical physical properties to you will also have consciousness. But it seems that zombies are at least conceivable (I've just described them), and some philosophers argue that they are therefore metaphysically possible.

Now if consciousness were *identical* with physical properties, it would be impossible for a creature to have the same physical properties as you but not have consciousness. If A is identical to B – if A is B – then you can't have A without B or vice-versa; they are the same thing. So if zombies are possible – if a creature could be physically identical to you but not have consciousness – then consciousness is *not* identical to any physical properties. This is property dualism.

The standard physicalist response is that, although zombies are conceivable, they aren't in fact possible. What we are able to imagine as conceivable is not always a reliable guide to questions of identity and what is possible. For example, it is imaginable that water is not H<sub>2</sub>O; however, given that water *is* H<sub>2</sub>O, it's not in fact possible that water isn't H<sub>2</sub>O. Of course, there could be something *just like* water that isn't H<sub>2</sub>O (it falls as rain, is transparent, drinkable, etc.), but if it isn't H<sub>2</sub>O, it just isn't water. So it's not possible for water not to be H<sub>2</sub>O. Likewise, we might argue that if zombies are physical replicas of people with mental properties, they cannot lack mental properties themselves. We are, in fact, imagining people.

However, this analogy doesn't work. In the case of water, what we are imagining is just like water. That's why we get confused and think that it is water, when it isn't. But when we imagine zombies, we are not imagining something just like a person. Zombies lack

consciousness, and a creature without consciousness is *nothing* like a creature with consciousness. For example, to be in pain is nothing like not being in pain.

Furthermore, we can explain how it is that water is H<sub>2</sub>O; there is nothing puzzling here. Water is precisely the kind of thing that would have a chemical formula. But, as we saw above, we cannot explain how it is that any physical property could be consciousness. Consciousness is not the kind of thing that could be identical with a physical property. Perhaps it is really the explanatory gap, rather than what we can or can't conceive of as possible, that supports the argument for property dualism.

## **TOKEN IDENTITY**

A different identity theory agrees that mental events are physical events, but rejects the claim that mental properties are identical to physical properties as we have been discussing them, e.g. properties investigated by neuroscience or physics. Token identity theory claims that while mental properties are not physical properties, each individual occurrence ("token") of a mental property is identical with the occurrence of a physical property. The occurrence of the mental and physical properties forms one and the same event. An example: the mental property 'being in pain' is not identical with any physical property (the multiple realizability argument). However, each time the mental property 'being in pain' occurs in some creature, it occurs *with and because of* the occurrence of some physical property, e.g. in human beings, some part of the brain being activated. In a different species, or on a different occasion, 'being in pain' may occur with and because of the occurrence of a different physical property. However, 'being in pain' always and only ever occurs with and because of *some* physical property of other.

The idea of 'token identity' becomes clearer when you look at a specific version of the theory. Functionalism is usually understood as a token identity theory, while anomalous monism was the first token identity theory.