

Mental causation

SUBSTANCE DUALISM

The traditional problem of mental causation is the one posed to substance dualist theories of mind, and Descartes admitted he never solved it satisfactorily. If the mind is just thought and matter is just extension, how could one possibly causally affect the other? The mind is not to be thought of as very insubstantial matter; we can understand how something very refined, like a gas, can have causal effects. But the mind is not in space at all. The problem is particularly pressing for Descartes, if causation is thought to involve contact of some kind between cause and effect. Clearly nothing can come into contact with a mind which occupies no space.

However, we can reject the ‘contact’ view of causation in favour of a version of Hume’s theory. Causation is nothing more than regular succession, and it is clear that physical events regularly succeed mental events and vice-versa. However, if we interpret causal regularity in terms of laws, we face Davidson’s objection that it is difficult if not impossible to frame any laws that connect mental causes to physical effects. Mental events can combine in an indefinite number of ways to produce different events, e.g. although I’m thirsty, I might believe there is nothing suitable to drink nearby, so don’t try to get a drink. To say that ‘by and large, people who are thirsty get a drink’ isn’t a law.

As we will see below, this is not a problem just for substance dualism. It causes problems for non-reductive physicalism as well.

BEHAVIOURISM

Behaviourism claims that the mind is not ‘something’ that interacts with the body, but is a way of speaking about complex behavioural patterns. So there is no problem of mental causation. Mental states don’t cause behaviour; they are (in a sense) behaviour.

Yet it seems, from introspection, that my thoughts and sensations do cause my behaviour, such as when I make a decision and then act on it; or when I have a headache, and start looking for painkillers. Behaviourism must claim that these apparently causal claims are in fact not causal at all. And this is what Wittgenstein did – ‘Because I thought it would be a good idea’ and ‘Because it hurts’ are not causal explanations of what we are doing; they are rational explanations, i.e. they cite reasons, not causes. They explain my behaviour by fitting it into a certain pattern that we can readily understand. The fact that this type of explanation doesn’t attempt to give a law covering the cause and effect shows it’s not a causal explanation.

Davidson famously challenged this conclusion. Suppose I have two reasons to do something, but I only act on one of those reasons. For example, I go to the party because I want to see you and believe you’ll be there, not because I believe the party is cool and I want to be seen as cool. What makes it the case that the first reason, and not the second, is the reason I act on? ‘Central to the relation between a reason and an action it explains is the idea that the agent performed the action because he had the reason’.

(‘Actions, reasons, and causes’) This ‘because’ must be a causal ‘because’. So behaviourism is wrong to think that there is no mental causation.

IDENTITY THEORY

Type identity claims to solve the problem of mental causation. To understand this, we should first recast the problem in terms of properties. Causation requires things to ‘happen’. ‘Things happening’ are events. A cause and its effect are both events, changes at a time (or over time) in the properties of objects. Events involve something changing or realizing (coming to have) a property at a particular time.

According to type identity theory, mental events just are physical events, and mental properties just are physical properties. To say your decision is the cause of your picking up the remote control is just to say that some particular event in your brain involving just physical properties is the cause your picking up the remote control. Mental events and properties cause actions because they are physical events and properties.

However, the identification of mental and physical properties that solves the problem of mental causation also brings about the objection from multiple realizability.

NON-REDUCTIVE PHYSICALISM

Non-reductive physicalism and token identity theories avoid the objections to behaviourism and type identity theory. But they have struggled with the issue of mental causation.

Following token identity theory, we might think that if a mental event, such as making a decision, just is a physical event, say a particular brain state coming into being, then surely if that physical event causes something, e.g. some type of behaviour, we can say that the mental state, the decision, caused it. And there is no difficulty in saying how physical states can causally interact with each other.

But this does not solve the problem, because we can ask ‘was it because of its physical properties or because of its mental properties that the event caused its effects?’. Do I look for aspirin because a headache hurts and I decide to look for aspirin, or because certain neurones fire in my brain? How can we defend the common-sense view that the pain of the headache and the decision are causally relevant?

Causal laws

We might try to solve the challenge raised above by rejecting the idea that causation must be covered by laws. Commonsense psychology seems to do fairly well in discovering the mental causes of our behaviour – but it doesn’t do so by finding laws. It does so by interpretation. If we can understand the meaning of what someone is doing, the reason why she is acting as she is, we thereby discover the mental states that are causing her behaviour. This shows that not all causal investigation relies on laws. It is clear we don’t come to know mental causes through establishing causal laws. So why think mental causes require causal laws at all?

Philosophers have resisted this solution, since it requires us to rethink our concept of causation. Ever since Hume, philosophers and scientists have been drawn towards

thinking of causation in terms of regularity, and regularity in terms of laws. How are we supposed to understand causation without analysing it in terms of these concepts?

There is an alternative that we will appeal to below, viz. using counterfactuals. In the circumstances, what change would mean that the effect did not occur? We identify causes by asking what needs to happen for the effect to occur (what is necessary), or what is enough to bring about the effect (what is sufficient).

Causal closure

Even if we can solve the problem of causal laws, we face a second problem. The ‘causal closure of the physical’, a commitment of physicalism, is the view that every physical event has a sufficient physical cause. This entails that the physical properties of the mental event must be sufficient to bring about its effects. If type identity theory is true, mental events can be causes without violating physicalism. But if token identity is true, this is less obvious.

Why believe in the causal closure of the physical? Because if we do not, we suppose that some physical events have no complete physical explanation. We could argue that events that need a non-physical explanation are miracles, from the point of view of physics. Furthermore, wherever science has so far found the cause of a physical event, it has found a sufficient physical cause. Denying the causal closure principle commits us to saying that science cannot and will not find the causes of certain physical events (in the brain, most likely).

The options

The problem of mental causation, as it is faced by non-reductive physicalism, brings us to four options:

1. Epiphenomenalism: mental properties have no causal effects. This is very counter-intuitive.
2. Overdetermination: both the physical properties and the mental properties of a mental event are each sufficient to bring about the effect. However, suppose I decide to walk to the fridge to find a drink. We can't say that if the neurones in my brain didn't fire, the decision to do so would have been enough to cause my walking. To walk I need muscular contractions, and these in turn require nervous stimuli from the brain. The mental properties, if relevant at all, aren't sufficient – they rely on the physical properties occurring as well. But, according to physicalism, the physical properties are sufficient on their own. So given the primacy of the physical properties, it seems that it is not in virtue of being mental that these states and events cause other events. This takes us back to epiphenomenalism.
3. Solving the two challenges above.
4. Abandoning causal closure, and therefore, rejecting physicalism.

In the next section, we discuss these last two options.

SOLVING THE PROBLEM

In the absence of causal laws, many non-reductive physicalists have analysed mental causation in terms of counterfactuals. Suppose, on having a headache, I reach for the aspirin. Is it the pain of the headache that causes this movement, or the neurons firing? To say that it was because the headache hurt that I reached for the aspirin implies that if

the headache hadn't hurt, I wouldn't have acted as I did. If we want to say that it was just the neurones firing that caused me to reach for the aspirin, we have to say that if the neurones had fired, but the headache hadn't hurt, I would still have reached for the aspirin. But this seems false. Can we suppose that the neurones would have fired anyway, without the headache hurting? If the neurones firing are one particular physical realization of the pain of a headache, how could they have fired without the headache hurting?

There are a wide variety of theories about the supervenience relationship between the pain and the neurones, but they all attempt to secure the idea that without the pain, I wouldn't have done what I did. For example, functionalism argues that pain can be realized by many different physical states, so mental and physical properties can't be the same. However, mental states, on any particular occasion, are realized by physical states. So the causal role of the mental state is, on any particular occasion, filled by a physical state. The physical properties fill the causal role of pain on this occasion. In this way, we can say both that it was the pain that caused me to reach for the aspirin and that it was the physical properties.

But non-reductive physicalists face this problem: according to physicalism, the physical event of reaching for the aspirin has a sufficient physical cause, so the firing of the neurones on its own must be sufficient. If it is sufficient on its own, then the pain of the headache is not necessary. Now, of course, if the neurones firing is a realization of the pain, then the pain will always accompany the firing; but it is still unclear whether the pain plays any part in bringing about my reaching for the aspirin, or whether it is epiphenomenal. If we get a complete causal explanation without mentioning the pain, then the fact that the physical properties realize pain appears to be irrelevant.

Some emergentists argue that to secure the causal relevance of mental properties, we must reject physicalism. On this view, we should say that the neurones firing is sufficient for me to reach for the aspirin only given the presence of a headache, i.e. there must be a mental cause present as well. So the neurones firing is not sufficient on its own. Furthermore, it is not true that if the neurones hadn't fired, I wouldn't have reached for the aspirin, because for me to have a headache, some other neurones would have fired. So these particular neurones firing is not necessary, as long as some neurones fired in a suitable way. Since the physical properties of the event are neither necessary nor sufficient to explain the effect, they are not a complete physical cause.

On this account, our causal explanation must mention the mental property, the pain. It is true that the pain isn't sufficient, because some neurones must fire for any effect to follow. However, the pain is necessary, and this secures its causal relevance. The conclusion is that physicalism is false, because the physical cause of my reaching for the aspirin is not sufficient. This account of mental causation is emergentism, and a form of property dualism, because mental properties have irreducible causal powers.