

# Problems for Dualism

Metaphysics of Mind, Week 3

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## 1. Cartesian Dualism

*Substance dualism* is the thesis that there are minds, that minds are non-physical substances, and that there are physical substances. *Interactionism* is the thesis that the mind, mental states, mental events, or mental properties, can interact with physical stuff. So, interactionist substance dualism—*Cartesian Dualism*—is the conjunction of *substance dualism* and *interactionism*. Prima facie, however, there is problem. How can two fundamentally different kinds of substances, the mind and the body, interact with each other, given their radically different natures?

## 2. The Problem of Interaction

Famously, Princess Elisabeth of Bohemia raised the problem of interaction for Cartesian Dualism:

“[...] how the human soul can determine the movement of the animal spirits in the body so as to perform voluntary acts—being as it is merely a conscious substance. For the determination of movement seems always to come about from the moving body's being propelled—to depend on the kind of impulse it gets from what sets it in motion, or again, on the nature and shape of this latter thing's surface. Now the first two conditions involve contact, and the third involves that the impelling thing has extension; but you utterly exclude extension from your notion of soul, and contact seems to me incompatible with a thing's being immaterial”

### 2.1. The interaction argument against Cartesian Dualism:

First, consider Cartesian Dualism, the thesis that there are non-physical minds which can causally interact with physical bodies. A logical consequence of this thesis is that:

**Cartesian Dualism:** There are some non-physical events that have physical causes.

Now suppose that the physical world is causally complete. On this view, every physical event has a sufficient physical cause:

**Completeness of the Physical World:** Every Physical event has a physical cause.

Now, suppose that there is no systematic overdetermination in the physical world. What does this mean? It means that if a physical event  $E_1$  causes a distinct physical event  $E_2$  at time  $t$ , then it's not the case that there is some other physical event,  $E_3$ , which caused  $E_2$  at  $t$ .

**No Physical Overdetermination:** There is no systematic causal overdetermination of physical effects.

These three principles entail a contradiction. To see this, suppose that my thought and desire that I want to raise my arm causes some neurons to fire, causing, in the end, my arm to rise. From Cartesian Dualism, it follows that:

(1) My thought and desire are non-physical events which caused a physical event—e.g. neurons firing and my arm raising.

Now, from *the completeness of the physical world*, it follows that:

(2) My neurons firing and my arm raising thereby had a sufficient physical cause. Whatever it is, let's call it  $C$ .

So, from *the completeness of the physical world*, then,  $C$  is the physical cause of my neuron's firing. From (1) and (2), it follows that:

(3) There are *two* numerically and metaphysically *distinct causes* of my neurons firing: there is my non-physical thought and desire that I want to raise my arm and there is the physical event  $C$ .

But (3) contradicts the principle that there is no systematic causal overdetermination in the physical world. It follows, therefore, that if the principle of the completeness of the physical world is true and the principle that there is no causal overdetermination in the physical world, then Cartesian Dualism *is false*.

## 2.2. Responses to the Interaction argument

The interaction argument against Cartesian Dualism seems to be a valid argument. So, a proponent of Cartesian Dualism will need to argue that either:

- Contra initial appearances, the interaction argument is *not* valid.
- It's *not* the case that the physical world is causally complete.
- It's *not* the case that there is no systematic causal overdetermination in the physical world.

### 2.2.1 Challenging the causal completeness of the physical world

- Baker (1993) argues that it is part of our ordinary, scientific, and psychological practices to attribute mental causes to certain paradigmatically physical events, such as neurons firing. According to Baker, if there is an incompatibility between such deeply entrenched practices and a metaphysical principle, the deeply entrenched practice trumps the metaphysical principle.
  - What's not clear about this kind of argument, however is that it doesn't seem to offer any specific assistance to substance dualism. Instead, it simply seems to provide support for the thesis that *mental events are causally efficacious*, and that this principle (if it really is a pre-theoretical part of our ordinary practices) trumps metaphysical principles, such as the causal completeness of the physical.
- Stapp (2005), Sturgeon (1998), and Davies (2006) argue that there are 'causal gaps' in the physical world, and that it is possible that the non-physical mental states or events intervene in these gaps.
- Proponents of *emergent properties* in general deny that the physical world is causally complete. (see Bedau and Humphreys 2008; Clayton and Davies 2006; Macdonald and Macdonald 2010.)
- Quantum-indeterminacy response: on this view, there is low-level indeterminacy in the world, and the mind can intervene to select one outcome over another. For example, Keith Campbell (1970) argues that:

The indeterminacy of quantum laws means that any one of a range of outcomes of atomic events in the brain is equally compatible with known physical laws. And differences on the quantum scale can accumulate into very great differences in overall brain condition. So there is some room for spiritual activity even within the limits set by physical law. There could be, without violation of physical law, a general spiritual constraint upon what occurs inside the head (Campbell 1970, 54)

### 2.2.2 Challenging the no causal overdetermination principle

- Mills (1996) argues that causal overdetermination is plausible for mental to physical causation. So, according to Mills, if a non-physical

mental state *M* and a physical event *P* each satisfy the following two counter-factual conditionals, it's plausible that the physical behaviour *B* is causally overdetermined:

(a) If *M* had occurred in the absence of *P*, *B* would still have occurred.

(b) If *P* had occurred in the absence of *M*, *B* would still have occurred.

Now consider someone who defends causal completeness. They might argue that causal completeness is incompatible with interactionism as follows:

“For *X* to be a cause of *Y*, *X* must contribute something to *Y*. The only way a purely mental event could contribute to a purely physical one would be to contribute some feature not already determined by a purely physical event. But if physical closure is true, there is no feature of the purely physical effect that is not contributed by the purely physical cause. Hence interactionism violates physical closure after all” (Robinson 2011).

Mills thinks that the argument is invalid. The reason it is invalid is that the event *Y* might have a feature that is not already determined by the event *X*. So, let *X* be a purely physical event (C-fibres firing), and *Y* be a purely non-physical mental event (a feeling of pain). Can't the feeling of pain, *Y*, have some features that aren't wholly determined by the physical event *x*, the c-fibres firing? Consider an easy example from Robinson:

[...] the rock's hitting the window is causally sufficient for the window's breaking [*the event X is causally sufficient for the event Y*], and the window's breaking has the feature of being the third window-breaking in the house this year [*the event Y has the property P*]; but the facts about prior window-breakings, rather than the rock's hitting the window, are what cause this window-breaking to have this feature [*it's not the case that all of the properties of X are what cause Y to have P*] (Robinson 2011, *my additions*).

### 2.2.3 Challenging interactionism: substance dualism *without* interaction

- *Epiphenomenalism* is the thesis that mental events are non-physical; these mental events are caused by physical events, but the mental events cannot cause physical events. See Huxley (1874) and Jackson (1982).

- Besides the sheer counter-intuitiveness of epiphenomenalism, the most influential objection to it is the *self-stultification objection*. According to this objection, epiphenomenalism is incompatible with the thesis that we have knowledge of our own minds. See Bailey (2006) and Chalmers (1996), and Robinson (2011) for discussion.
- *Parallelism* is the thesis that mental events are non-physical, but there is no causal interaction between the mental and the physical at all. Instead, the appearance of causal interaction is explained by them occurring in parallel to each other.

A proponent of parallelism was Gottfried W. Leibniz. In his *Primary Truths* (c. 1686) he expresses his parallelist substance dualism as follows:

Strictly speaking, one can say that no created substance exerts a metaphysical action or influx on any other thing. For, not to mention the fact that one cannot explain how something can pass from one thing into the substance of another, we have already shown that from the notion of each and every thing follows all of its future states. What we call causes are only concurrent requisites, in metaphysical rigor (Leibniz, quoted in Kulstad and Carlin 2013).

### 3. The Pairing Problem

Imagine that there is a mind  $M_1$  and a mind  $M_2$ , and a body  $B_1$  and a Body  $B_2$ . Now imagine that these minds are non-physical, while the bodies are physical. Furthermore, suppose that it's possible for minds to causally interact with bodies, such that  $M_1$  exerts causal influence of  $B_1$ , and vice-versa, while  $M_2$  exerts causal influence over  $B_2$ , and vice-versa. Now consider the following question: in virtue of what properties pairs  $M_1$  exclusively to  $B_1$  and  $M_2$  exclusively to  $B_2$ ? Call this *the pairing problem* (Kim 1973; 2005, chapter 3).

- What pairs  $M_1$  with  $B_1$  and  $M_2$  with  $B_2$ ?

Kim says there are two options:

- Option 1:     A *causal chain* from  $B_1$  leading back to  $M_1$ .
- Option 2:     A *pairing relation*  $R$  between  $M_1$  and  $B_1$ , but not between  $M_1$  and  $B_2$ .

- What is the pairing relation  $R$ ?

For the Cartesian Dualist, how could there be a causal chain from  $B_1$ , leading back to  $M_1$ ? No *spatial relations* can be invoked here, so how could a causal chain from  $B_1$  lead back to  $M_1$ ?

- The pairing relation  $R$  is not a spatial relation.

Kim (2005, 80) then suggests that perhaps  $R$  is a psychological relation (such an intentional relation of *thinking of* or *referring to*). But here too, it seems like causality comes back in.

- The pairing relation  $R$  is not a psychological relation.

Kim (2005) thinks this is also the case for mental-to-mental causation. We can ask, of a non-physical mental state  $M_1$  and  $M_2$ , and  $M_1^*$  and  $M_2^*$ , what pairs  $M_1$  with  $M_2$ , and  $M_1^*$  with  $M_2^*$ , rather than  $M_1$  with  $M_1^*$ , and  $M_2$  with  $M_2^*$ ?

### 3.1. Replies to the pairing problem

- Proponents of the *individualistic powers* account of interaction (Unger 2006, pp. 242–59; Foster 1991, pp. 167–8) maintain that each mind is necessarily linked to one particular body and no other, and vice-versa. So, we some powers are not individualistic, such as how a key of that particular shape-type has the power to open any lock of exactly the same shape-type, an individualistic power would be like a key that had the power to open *only one particular lock*, and crucially, no other lock of the same type.

## 4. Questions

1. Do you think the interaction argument against Cartesian Dualism is sound? If so, defend it from one of the objections from the opponents of the principle of causal completeness, or the opponents of the principle of no causal overdetermination.

2. Are ephiphenomenalist or parallelist forms of substance dualism more plausible than interactionist substance dualism (e.g. Cartesian dualism?)

3. How plausible is the individualistic powers response to the pairing problem? In general, do you think that the pairing problem provides an insurmountable obstacle to the interactionist substance dualist (Cartesian dualism)?

### **Bibliography:**

Foster, J., 1991, *The Immaterial Self: A Defence of the Cartesian Dualist Conception of the Mind*, London: Routledge.

Baker, L. 1993, "Metaphysics and Mental Causation", in Heil and Mele 1993, pp. 75–95.

Chalmers, D. 1996. *The Conscious Mind*, Oxford University Press, New York.

Campbell, K. 1997. *Body and Mind* (Anchor Books, Doubleday & Co., Garden City NJ).

Davies, P. C. W., 2006, "The Physics of Downward Causation", in Clayton and Davies 2006, pp. 35–51.

Huxley, T. H. 1893. 'On the hypothesis that animals are automata', *Collected Essays*, vol. 1, New York, 199–250.

Kulstad, Mark and Carlin, Laurence, "Leibniz's Philosophy of Mind", *The Stanford Encyclopedia of Philosophy* (Winter 2013 Edition), Edward N. Zalta (ed.), URL = <<http://plato.stanford.edu/archives/win2013/entries/leibniz-mind/>>.

Leibniz, G. W., *Philosophical Writings*, ed. G.H.R. Parkinson, tr. Mary Morris and G.H.R. Parkinson (J.M. Dent & Sons Ltd, London, 1973)

Mills, E. 1996. 'Interaction and overdetermination', *American Philosophical Quarterly*, 33, 105–15.

Robinson, H. 2011. "Dualism", *Stanford Encyclopaedia of Philosophy*. <http://plato.stanford.edu/entries/dualism/#SubDua>

Stapp, H., 2005, "Quantum Interactive Dualism: An Alternative to Materialism", *Journal of Consciousness Studies*, 12: 43–58.

Sturgeon, S., 1998, "Physicalism and Overdetermination", *Mind*, 107: 411–32.

Unger, P., 2006, *All the Power in the World*, Oxford: Oxford University Press.