

- Mental to mental causation, e.g., beliefs lead to another belief
- Physical to mental causation, e.g., perception causes a perceptual experience
- Mental to physical causation, e.g., beliefs and desires cause actions
- Physical to physical causation, e.g., heating causes water to boil

Q: Through what mechanism or process does a mental event manage to initiate, or insert itself into, a causal chain of physical events?

Epiphenomenalism

Epiphenomenalism: mental events are caused by physical events, but they cannot cause anything else.

Evidence for epiphenomenalism

1. Brain damage
2. Animal behavior

Problem 1

1. If mental events have no causal powers, then they are in total causal isolation from the rest of the world -- their existence would be inexplicable since they have no causes; they would make no difference to anything else since they have no effects.
2. If anything is both causeless and effectless, then it cannot really exist.
[Alexander's Dictum]
3. According to epiphenomenalism, mental events have no causal powers whatsoever.
4. Therefore, under epiphenomenalism, mental events are not real. \Rightarrow [Mental Irrealism]

Problem 2: Agency

1. We perform actions for reasons.
2. The reasons for which we perform an action are the cause of that action.
3. Actions involve bodily movements.
4. Therefore, reasons are the cause of bodily movement.
5. Therefore, mental events cause bodily events.
6. If epiphenomenalism is true, mental events cannot cause bodily events.
7. If epiphenomenalism is true, we do not perform actions for reasons.

If agent S desires something and believes that doing A is an optimal way of securing it, S will do A>

Problem 1

- The problem of mental causation under the assumption that there are no immaterial substances like souls:
1. How is it possible for a mental event to cause, or to be caused by, a physical event? 2. How is it possible for an instantiation of a mental property to cause a physical property to be instantiated, or vice versa?
Q: Why is this a problem?
A: The incompatibility between the lawful nature of physical causation and the

unlawfulness of mental causation.

— Causality is lawful and not random. If an event of type A causes an event of type B, then in general all events of type A must cause events of type B. It cannot just be a happy coincidence. But when a mental event (such as having a desire) causes a physical event (such as an action), there is no lawlike regularity. So, could it be that it is not a causal relationship after all?

Causal Exclusion Problem

“Causal Closure of the Physical Domain. If a physical event has a cause (occurring) at time t , it has a sufficient physical cause at t .”

“Exclusion Principle. No event has two or more distinct sufficient causes, all occurring at the same time, unless it is a genuine case of overdetermination.”

“Multiple bullets hit a person at the same time, and this kills the person, where a single bullet would have sufficed. A house fire is caused by a short circuit and at the same time by a lightning strike. In these cases, two or more independent causal chains converge on a single effect.”

1. m is a cause of p .
2. p is a cause of p ...from causal exclusion
3. $m \neq p$.
4. This is not a case of overdetermination.
5. Hence, m is not a cause of p , and (1) is false
6. Mental events never cause physical events.
7. 1-3 entail that this is case of overdetermination.
8. Either m or p must go. But if we kick out p , we get m and it smuggles back in P .

Suppose Candace waves her arm in order to signal a taxi.

9. Candace's arm instantiates a physical property; Candace's arm is also caused to move.
10. CCP.
11. Therefore, the movement of Candace's arm has a complete physical cause, most likely some neuro-physiological event.
12. PD.
13. So, if Candace has the property of having some belief or desire (to wit, that she wishes to signal a taxi and believes that by moving her arm she'll catch the driver's attention), her belief and desire properties are not identifiable with any of her physical properties.
- 6.CEP
14. So, Candace's beliefs and desires cannot be causes of her arm's moving.

“Suppose that a mental event, m , causes a physical event, p . The closure principle says that there must also be a physical cause of p —an event, p , occurring at the same time as m , that is a sufficient cause of p . This puts us in a dilemma: Either we have to say that $m = p$ —namely, identify the mental cause with the physical cause as a single event—or else we have to say that p has two distinct causes, m and p , that is, it is causally overdetermined. The first horn turns what was supposed to be a case of mental-to-physical causation into an instance of physical-to-physical causation, a result only a reductionist physicalist would welcome. Grasping the second horn of the dilemma would force us to admit that every case of mental-to-physical causation is a case of causal overdetermination, one in which a physical cause, even if the mental cause had not occurred, would have brought about the physical effect. This seems like a bizarre thing to believe, but quite apart from that, it “appears to weaken the status of the

mental event as a cause of the physical effect. To vindicate m as a full and genuine cause of p, we should be able to show that m can bring about p on its own, without there being a synchronous physical event that also serves as a sufficient cause of p. According to our reasoning, however, every mental event has a physical partner that would have brought about the effect anyway, even if the mental cause were taken out of play entirely.”

Questions

1. The smell of chocolate causing in me a memory of a certain restaurant is an instance of:

Mental to mental causation.

Physical to mental causation.

Mental to physical causation

Physical to physical causation