“The Mind is the Brain”

Peter Carruthers
Mental States vs. Brain States
Brain States

• States of the brain and/or central nervous system.

• What is “going on” in your brain
  – Nerve cells firing.
  – Brain activity
  – A physiological event or condition in your body, usually affecting your brain and/or your central nervous system.
  – An event or condition in a material substance.
“Mental States?”

• This term sometimes confuses some students.

• A “mental state” is just a “state” or condition some “mind” might be in, like “seeing,” or “thinking,” “being in pain,” etc.
  – So, thoughts, pains, desires, beliefs, etc., are all “mental states.”

• We will use this term in a “neutral” way, that is, without presupposing either dualism or materialism.
  – We need to have some way of talking about these things that doesn’t “takes sides” in the dispute.
The Options

• According to the dualist, mental states are states of an immaterial mind or soul.

• There are different varieties of materialism:
  – According to the Identity Theory (which Carruthers supports) mental states are identical to brain states.
  – According to eliminative materialism (which we are not reading), there are no such things as mental states.
The Question
Mind/Body (or “Substance”) Dualism

• Descartes held that mind and body were fundamentally different.
  – Minds are thinking, but non-spatial
  – Bodies are spatial, but non-thinking.

• This is known as Substance (or Metaphysical) Dualism.
  – That is, the universe is composed of two, fundamental, and ultimately distinct, kinds of “stuff,” i.e., two distinct (kinds of) “Substance.”
Dualism vs. Monism

- The alternative to Substance Dualism is Substance *Monism*.
  - No one seems to hold that there *more* than two ultimate kinds of stuff.

- Substance Monism claims there is only one fundamental kind of substance.
  - This implies that *everything* is ultimately “composed of” and/or *explained* in terms of a single basic kind of “stuff.”
Two or One?

**Dualism:**
- There are **two** ultimate kinds of substance:
  - **Material Substance:**
    - The “material world,” governed by physics; and
  - **Mental Substance:**
    - The “mental world,” not governed by material principles.

**Monism:**
- There is only **one** ultimate kind of substance
  - (but two views about what this single substance is):
    - **Materialism:** Everything that exists is, ultimately, material.
    - **Idealism:** Everything that exists is, ultimately, mental.
Two Varieties of Materialism:

<table>
<thead>
<tr>
<th>The Identity Theory:</th>
<th>Eliminative Materialism:</th>
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<tbody>
<tr>
<td>• Mental states (thoughts, sensations, etc.), are <strong>identical</strong> to states of the brain and/or central nervous system:</td>
<td>• There really are <em>no such things</em> as “mental states” (“thoughts,” “sensations,” etc.):</td>
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<td>– Like ghosts or “caloric,” we used to believe in them. We haven’t learned what they “really” are (what they are “identical to”):</td>
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<td>rather, we have learned that they <em>really aren’t</em>, i.e., that there are no such things.</td>
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<td>– In the way in which water is <strong>identical</strong> to H₂O, or lightning is <strong>identical</strong> to discharges of electricity in the atmosphere.</td>
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Dualism vs. Materialism

**Dualism**
- Dualism claims that there is a mental substance, a mind or soul.
- For the dualist, “thoughts,” “feelings,” and other “mental states” are states of this mental substance.

**Materialism**
- Materialism claims that there is no mental substance.
  - For the Identity Theory (a version of materialism), what we call “mental states” are real, but what they really are (what they are identical to) are brain states, and/or events in the central nervous system.
  - For Eliminative Materialism (another version of materialism), there simply are no such things as mental states. They don’t exist, and so there is nothing they are identical to.
The Position
The Identity Theory

• The Identity Theory rejects Dualism, and is a form of Materialism.
• It claims that everything that exists is, ultimately, material.
• The identity theory accepts that mental states are, in some sense, “real.”
• But it claims that what they really are are states of brain and/or central nervous system.
A Problem for Dualism
Mind/Body Interaction?

• On Descartes’s view, my mind is composed of a fundamentally different kind of “stuff” (or “substance”) than the world of objects I perceive and interact with.
• But if my mind and the physical world (including my physical body) are fundamentally different sorts of stuff, we cannot explain how they could interact with one another, because they would have nothing in common.
• Our next author (Carruthers) will turn this problem into an argument against dualism and for materialism, which denies the existence of mental substance.
Problem: How could mind causally interact with matter?
An Argument For Identity
An Argument for the Identity Theory

1) Some conscious states (i.e., mental states) are the causes of some physical events. For example, my desire causes me to move.

2) But (according to science) the only things that cause physical events are other physical events.

3) So, at least some mental states and events must be identical with some physical states and events.
Strategy

• Carruthers turns a criticism of mind/body dualism into an argument for the identity theory.

• Dualism says that my choosing to move my arm is something that happens in my non-material mind.
  – The problem is explaining how this “mental event” can cause a physical event—the movement of my arm.
  – This is a problem because it seems that physical events can only be caused by other physical events.

• So, Carruthers concludes, if my arm moving is actually caused by my choosing (a “mental event”), then, since only a physical event can cause a physical event, my choosing to move my arm must be (identical to) a physical event.
The Argument

• 1) At least some mental events (like choosing to do something) cause physical events.
• 2) But only physical events can cause physical events.
• 3) So, at least some mental events must be physical events.
  – i.e., *at least some mental states are identical to brain states.*
Only Some?

• The argument concludes that at least some mental events (those that cause physical events) are identical with brain states.

• Yet many (perhaps most?) mental events can at least sometimes cause physical events.

• More importantly, it seem unlikely that some mental states are brain events while others are not.

• So if the argument succeeds, we should conclude that all mental states are identical to brain states.
Does the Argument Succeed?

• It is a valid argument,
  – i.e., \textit{if} the premises are both true, then the conclusion \textit{must} be true.
  – And, both premises certainly \textit{seem} to be true.
    • 1. (\textit{thoughts cause actions}) is a deeply rooted common sense belief.
    • 2. (\textit{only physical events can cause physical events}) is a deeply rooted scientific belief.

• The only reasons for doubting that the argument succeeds are the various arguments \textit{against} the identity theory, which Carruthers considers next.
Two Rebuttals
Arguments Against the Identity Theory

• Carruthers offers rebuttals for several arguments against the identity theory.
  – We will look at the argument from *certainty* and the argument from *color*.

• All of these arguments rely on our understanding of the nature of identity
  – known as *Leibniz’ Law*. 
Leibniz’ Law

- If A and B are identical, then whatever properties one has the other must have too.
  - That is, if A and B are the very same thing, then “they” must have exactly the same properties.
- So if A and B have different properties, they cannot be identical.

- So, if mental states and physical states have different properties, they cannot be identical.
The Argument from Certainty

• 1. I can be certain of my mental states (e.g., pain).
• 2. I cannot be certain of my brain states.
• 3. So, mental states have properties (of being such that I can be certain of them) that brain states lack.
• 4. So, mental states cannot be identical to brain states.
Descartes (?)

• D: I might be deceived about the world, but I am certain that I have sensations.
  – So, my mental states are things I can have certainty about.
• D: I can conceive of myself existing without a body.
  – I cannot be certain I have a brain at all, and so
  – My brain states (if I have any) are not things I can have certainty about.
• So, (some dualists argue) mental states can’t be identical to brain states because I can have certainty about my mental states but not about my brain states.
  – (I’m not sure Descartes makes this argument.)
Carruthers’ Rebuttal:

• Leibniz’ Law does not apply in cases involving mental states such as desire and belief.
  – Suppose I know my neighbor likes gardening.
  – I don’t know who the fastest runner on the block is, so I don’t believe the fastest runner on the block likes gardening.
  – Does it follow from this that my neighbor isn’t the fastest runner on the block?
  – Of course not!

• What I believe about a thing is not really a property it “has,” so Leibniz’ Law doesn’t apply.
Carruthers on Identity

• If A and B are the very same thing, then A and B must have the same intrinsic properties. – i.e., not merely involving beliefs about it.

• But being “believed by me to like gardening” and being “something I can have certainty about” are not intrinsic properties.

• So, the fact that I know or believe different things about mental states and physical states doesn’t prove they aren’t identical.
The Argument from Color

1. I am experiencing a green after-image.

2. No brain states are green.

3. So (by Leibniz’ Law) my after-image is not identical with any brain state because one is green (the after image) and the other (the brain state) isn’t.
Brain States

• Who says brain states can’t be green?
  – *Brains* can be green!

• The term “brain state” (like “mental state”) sometimes causes confusion.

• A brain state is a “condition” a brain (or part of the central nervous system) might be in.
  – E.g., something *happening* in the brain, like blood flow, neuron-firing, etc.

• So, brains might be green, but brain states (things happening in the brain) cannot.
Carruthers’ Strategy:

• The “Argument from Color” argues against mind/brain identity.
  – Carruthers is trying to refute this argument against the identity theory.

• The reasoning is that mental states have properties that brain states lack, and so, according to Leibniz’ Law, they cannot be identical.
  – After images, the argument claims, can be green; but brain states can’t.

• Carruthers’ strategy is to deny that mental states actually have this property.
The Argument from Color

1. I am experiencing a green after-image.

2. No brain states are green.

3. So (by Leibniz’ Law) my after-image is not identical with any brain state because one is green and the other isn’t.
Carruthers’ Rebuttal:

• The Argument from Color suggests that after images have a property that brain states lack: that of being green.
• But, Carruthers argues, it is simply false that after images are (literally) green.
• So, he concludes, the Argument from Color fails because it has not found a property mental states have that brain states lack.
Green After Images?

• Do you have green after images, --green sensations, -- green mental states?
  – Think: Do you have *big* sensations?
  – Do you have *heavy* sensations?

• We have sensations (mental states) that are *of* things that are big, green, and heavy.

• But my *sensations* aren’t literally *green* any more than they are literally *big* or literally *heavy*.
Carruthers’ Explanation:

• After images are not, literally, green.
• When we “experience a green after image,” we have a sensation similar to one normally caused by seeing something that is, literally green.
  – This is all we mean by “green after image.”
• But brains states do have this property—of being caused by something green.
Green vs. “of Green”

• Mental states are not, literally, green.
  – Objects are green, not mental states.
  – Mental states can be “of green.”

• Brain states are not, literally, green.
  – Brains could possibly be green, but not brains states, which are conditions of or events happening to brains.
  – Brains states can of “of green” in the sense of being caused by objects that literally are green.
Carruthers’ Analysis

• The argument only *seems* persuasive because we are confused about the difference between *being green* and being a *sensation of something green*.

• Once we understand what “of green” means, we see that both the after image and the brain state *share* the property of being “of green,” i.e., of being *caused by* something that is, literally, green.