

# MIND-BODY PROBLEM: IS A MENTAL STATE OR A BRAIN STATE?

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## Abstract

In this essay the writer explains the debate of the relations between a mental state and a brain state. This essay looks at whether a mental state is identical with a physical state. Here, the writer argues against the identity theorists who claim that a mental state and a brain state are identical. According to the writer, the identity theorists cannot accommodate both ontological and epistemological objections. Finally, he argues that we cannot know the qualities of mental state by only observing physical information given by physical sciences of bodies including brains.

Keywords: *a mental state, a brain state, Cartesian dualism, and necessarily true.*

## A. Introduction

This essay begins by asking whether states of mind could be states of the body or states of the brain. The focus of this issue will be concentrated on the arguments put forward by Cartesian dualism and the identity theories. This essay discusses the competing arguments put forward

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by philosophers on the nature of mind in terms of *states*, e.g. mental states. Mental states such as desire, belief, intention, hope, fear, wish are grouped and called by philosophers as 'propositional attitudes.' These attitudes have propositional contents as the object of attitudes. The question is whether these mental states are identical to brain states or they are distinct properties.

Historically, there is a shifting paradigm in dealing with the mind-body problem: from the view about the mind in terms of substances to the view about it in terms of *states*. Traditionally, Descartes, for example, casts the issue whether the mental is physical or non-physical. He claims that the clear and distinct nature of mind as non-physical substance is its ability to think. He holds that the mind is a non-physical thinking thing, e.g. thing that doubts, understands, affirms, denies, is willing, is unwilling, and also imagines and has sensory perceptions.<sup>1</sup> The material thing, he means the body, does not have this ability. However, he does not cast the issue whether the distinctively mental states of thinking are physical states or non-physical states.

## B. Cartesian Dualism

The Cartesian picture of mental states has two chief arguments for supposing that states of mind could not be brain states. These arguments are both epistemological and ontological.<sup>2</sup>

### 1. Epistemological Argument

How do we know our states of mind? Do I know your mental states? Do you know my mental states? These questions are concerning about the access to the states of mind. The access we have to states of mind is notably asymmetrical. Our mental life is private in a way no material object or state ever is. We can know with certainty what we believe, desire, think, feel, and want. This certainty is contrast with our knowledge of the physical world. I as the first person have authority with re-

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<sup>1</sup>Rene Descartes, *Meditations on First Philosophy*, trans. John Conningham, (Cambridge: Cambridge University Press, 1996), p. 19.

<sup>2</sup>John Heil, *Philosophy of Mind: A Contemporary Introduction*, (London & New York: Routledge, 1998), pp. 73 -74.

spect to the contents of my mind, whereas others as the third persons can only know these contents indirectly. I as the first person have an authority because I have a direct and immediate access to my mental states themselves, while the others know them by observations. The others observe the effects of mental states on the body. The first-persons' sources of knowledge are the mental states themselves, whereas the others' are the effects of those states on the body. This private and direct access to the mental states gives the first-persons the highest authority that does not belong to the third persons.

There are at least three notions of authority<sup>3</sup> First, if I claim sincerely that I am in pain, then I cannot be wrong. If I do not claim sincerely, then I give the wrong information to the others. If it is the case that my claim is sincere, then my judgements of my own mental states are reliable (the notion of *infallibility*). Second, I have the highest authority, if my judgements about my mental states are wrong and I do not know it is the case, then I cannot be corrected by others (the notion of *incorrigibility*). Finally, I might argue that my mental states are transparently available to me, if I am in pain, then I know it. If it is the case, then I will not be either infallible or incorrigible about my pains or other mental states (the notion of *self-intimation*).

This argument is also called as the *first-person* authority. If it is plausible, then our knowledge of other mental states is true as long as the others as the first-person says that it is the case. However, there are possible situations when the first-person might not be sincere. If the first-person gives wrong information to us, then we will never know the truth of his mental states. The truth of our knowledge of others' mental states depends on their sincerity and accuracy. If they are wrong, we cannot correct them or we have no authority to say that they are false.

## 2. Ontological Argument

The questions about the existence and relation between mind and body, or mental states and brain states, are ontological. The ontological status of pains, sensations of colour, qualia and actions are among the

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<sup>3</sup>Samuel Guttenplan, 'First - Person Authority' in S Guttenplan (ed.), *A Companion to the Philosophy of Mind*, (Oxford: Blackwell Publishing, 1995), p. 291.

debates. According to Cartesian dualism, mental states, events and properties are different in kind from physical states, events, and properties. There is striking difference between the qualities of our conscious states of mind and the qualities of material bodies, including the brains. By examining the visual experience of colour, for example<sup>4</sup>, F. Jackson attempts to prove that mental states are not physical states. Supposed that a person, in Jackson's example is Mary, lived in a black and white room and had all the physical information about what is going on in her brain when we see ripe tomatoes, or the sky and use terms like 'red', 'blue,' and so on. Will Mary learn anything or not, if she is released from her black and white room or is given colour television monitor? Jackson assumes that she will learn something new about visual experience, although she had all the physical information before. Jackson's arguments can be explained such these:

1. If Mary learns colours only from all the physical (neurophysiological) information, then her visual experience of colours is a physical state.
2. Her visual experience of colours is not a physical state.
3. Therefore, Mary does not learn colours only from all the physical information.

Or:

1. If P then Q ( $P \rightarrow Q$ )
2. Not Q ( $\sim Q$ )

Therefore,

3. Not P ( $\sim P$ )

His argument is formally valid or his conclusion follows from the premises. However, it is not sound according to the factual and empirical experience. By this, I mean that while Mary is seeing colours she is learning them by means of her eyes. If eyes are parts of material bodies, then seeing colours is physical state or not purely mental states. In terms of qualities of experience, Jackson's argument is intuitively persuasive.

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<sup>4</sup>Frank Jackson, 'Ephiphenomenal Qualia,' in William G Lycan (ed.), *Mind and Cognition: A Reader*, (Oxford: Blackwell, 1990), pp. 469 – 70.

He holds that the qualities of mental experiences while we are seeing colour cannot be known from what is going on a living brain. No physical information can tell us the qualities of seeing the sky, the hurtfulness of pains, the itchiness of itches, pangs of jealousy, or the characteristic experience of tasting a lemon, smelling a rose, or hearing a loud noise. Therefore, ontologically there is a difference between mental states and brain states. Or In the other words, mental states are not physical states or brain states. If we can know qualities of mental states from physical information, then it is true that mental states are brain states. We cannot know the qualities of mental states from physical information. Therefore, it is not the case that mental states are brain states.

### C. Identity Theories

Mental phenomena can be distinguished in terms of the type and token. The type is understood as sorts of mental or physical states and the token as mental physical instances. In the type way, mental states or physical states can occur many times, whereas in the token way we think of a mental or a physical state as an individual event that occurs only once. For example, the burning pain that we experience many times is a type of mental or physical state, the burning pain that is currently being suffered is a token. When we attempt to describe the relationship between mental and physical phenomena, the type/token distinction for mental states and events become important in this context.<sup>5</sup>

We use this distinction to classify identity theories of mind. Based on this distinction, identity theories fall into two classes: (1) type-type identity theories, which maintain that every *type* of mental state is identical to a *type* of neural (brain) state or even and (2) token-token identity theories, which assert that every *token* mental state is identical to some *token* physical state.<sup>6</sup> The popular examples frequently used by philosophers of mind are:

1. The property, being in pain = the property, having your cfs fire or pain = c-fibre firing.

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<sup>5</sup>Guttenplan, 'type/token', in Guttenplan (ed.), *Companion*, pp. 596 – 7.

<sup>6</sup>E.J. Lowe, *An Introduction to the Philosophy of Mind*, (Cambridge: Cambridge University Press, 2000), p. 48.

2. Hesperus = Phosphorous = the Morning Star = the Evening Star = Venus.
3. Water = H<sub>2</sub>O.
4. Lightning = cloud/ ground electrical discharge.
5. Being hot = having constituent molecules that are jangling around a lot.

J.J.C.Smart<sup>7</sup>, one of philosophers who advocate neural reductionism or the type identity theory, maintains that:

1. Sensations = brain processes or sensations are identical with brain processes
2. Lightning = an electric discharge.
3. The Morning Star = the Evening Star.

In ontological context, Smart denies the doctrine that mental states are different from brain states. He maintains that there is no correlation between a sensation and a brain process. What is the relation between states of consciousness and brain processes? He holds the view that mental states are nothing over and above brain processes. In other words, he says that mental states are 'strictly identical' with brain processes. We can analyse his arguments as follows:

1. If there is a correlation between a sensation and a brain process, then a sensation is over and above brain process.
2. A sensation is not over and above brain process
3. There is no correlation between a sensation and brain process.
4. If a sensation and brain-process are one thing, then there is no correlation between them.
5. A sensation is a brain process.
6. A sensation and a brain process are not two things.

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<sup>7</sup>J.J.C. Smart, 'Sensations and Brain Processes', in David M. Rosenthal (ed.), *The Nature of Mind*, (Oxford: Oxford University Press, 1991), pp.169 -176.

In short, we can put those propositions in Modus Tollens:

1. If there is a correlation between a sensation and a brain process, then a sensation is over and above brain process.
2. A sensation is not over and above brain process

Therefore,

3. There is no correlation between a sensation and brain process.

By these arguments, Smart attempts to prove his thesis that a sensation is a brain process. He claims that this thesis is true in empirical, contingent and synthetic senses. What does he mean by these kinds of truth?

Before we explain his argument, we look at these three distinctions: between a posteriori/empirical vis-à-vis a priori, necessary vis-à-vis contingent, analytic vis-à-vis synthetic.<sup>8</sup> A necessary truth is true no matter what the state of the world or if it is true, then it is true at all possible worlds. To know something a priori means to have knowledge of thing without investigation the world. Analytic expresses the truth of something from its meaning and concept. A contingent truth is truth that depends on the state of the world or if it is contingently true, then it is not true in all possible worlds. An empirical knowledge is acquired from investigation of the world. A synthetic truth can be determined by knowing how things stand in relevant portions of the world.

Now, we are back to Smart's arguments for his thesis. He maintains that there can be contingent statements of the form "A is identical with B", for example: in modern physical science, A lightning is a certain kind of electrical discharge. A flash of lightning and an electrical discharge are not two things, but they are one thing. Why does Smart call this statement contingent? He says that this account of lightning is believed to be true at the time, but it might not be true in all possible worlds. In other worlds, it is logically possible that this account might one day be given up. Its truth is based on he empirical fact that is revealed by physical science. If some times in the future new empirical fact says that

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<sup>8</sup>A.C. Grayling, *An Introduction to Philosophical Logic*, (Oxford: Blackwell, 1997), p. 33.

it might not be the case that a lightning is an electrical discharge, then the statement that a lightning is an electrical discharge is false or not true any more.

In epistemological context, Smart claims that a sensation is identical with a brain process, and a person may well know that something is a sensation without knowing his brain process. For example, we can talk about our sensations without knowing about our brain processes, just as like we can talk about lightning though we know nothing of electricity. Smart identifies these cases as the form of contingent identity. He argues that if A is identical with B, then it is possible that a person will know that something is A without knowing that it is B. Smart maintains that an "after-image" or an "ache" does not mean the same as "brain process of sort X" (where "X" is replaced by a description of a certain sort of brain process). If "after-image" or "ache" is a report of process, it is a report of a process that *happens to be* a brain process. The thesis does not claim that sensation statements can be *translated* into statements about brain processes. It does not claim that the logic of a sensation statement is the same as that of a brain-process statement. All it claims is that in so far as a sensation statement is a report of something, that something is in fact a brain process. Sensations are nothing over and above brain processes. The fact that the logic of A-statements is different from that of B-statements does not insure that A's is anything over and above B's.

However, Smart's arguments cannot accommodate the question whether we always know mental sensations by knowing brain states. When we inspect brains do we find the same qualities as we encounter when we undergo a conscious experience? If this is implausible, we could not suppose that our experience is just a process in our brain. And we will consider the objection to the contingent identity held by Smart when we look at a necessary identity in the final section of this essay.

We have examined the version of identity theories, namely the type-type identity theories. In what follows, we will look at the version of token-token identity theories put forward by Donald Davidson<sup>9</sup>. He iden-

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<sup>9</sup>Donald Davidson, 'Mental Events', in Davidson, *Essays on Action and Events*, (Oxford: Oxford University Press, 1980), pp. 20 - 227.



tifies his position as *anomalous monism*. He maintains that all events are physical (*monism*). Mental phenomena cannot be given purely physical explanation (to avoid *reductionism* e.g. not to reduce the mental properties to the physical ones). There is a possibility that not all events are mental (*anomalous*). That mental characteristics are in some sense dependent or supervenient on physical characteristics (e.g. there cannot be two events alike in all physical respects but differing in some mental respect, or that object cannot alter in some mental respect without altering in some physical respect).

He uses the term 'mental event' to describe the states of minds. What is a mental or physical event? An event is physical if it is describable in purely physical vocabulary. An event is mental if it is describable in mental terms. An event is mental if and only if it has a mental description. Physical events are those picked out by descriptions that contain only the physical vocabulary essentially. A mental has intentionality. A physical event which has been picked out by a mental description is a mental event.

Davidson arguments can be set out as follows:

1. At least some events interact causally with physical events (the Principle of Causal Interaction)
2. Where there is causality, there must be a law: events related as cause and effect fall under strict deterministic laws (the Principle of Nomological Character of Causality)
3. There is no strict deterministic law on the basis of which mental events can be predicted and explained (the Anomalism of the Mental)

Here are some of identity statements about individual events set by Davidson:

1. The death of Scott = the death of the author of *Waverly*
2. The assassination of the Archduke Ferdinand = the event that started the First World War;
3. The eruption of Vesuvius in A.D. 79 = the cause of the destruction of Pompeii.
4. These events happened only one time, they are individual events or tokens.

Davidson denies the assumption that mental states or events are distinct from physical states or events. He maintains that: (1) mental events are identical with physical events; (2) Causality and identity are relation between individual events no matter how described; (3) The principle of causal interaction deals with events in extension and is therefore blind to the mental-physical dichotomy. We can explain Davidson arguments in the following ways:

Principle (1) Mental events are identical with physical events.

1. A correlation exists between two distinct things.
2. There is no correlation between thing and itself.
3. If there is correlation between two things, there might be a causal interaction between them.
4. If there is no correlation between thing and itself, there could not be a causal relation between thing and itself.
5. A mental event and a physical event are not two distinct things.
6. A mental event and a physical event are one thing.
7. So, there is no causal interaction between a mental event and a physical event.

Principle (2) Causality and identity are relation between individual events no matter how described.

If a causal relation between individual events is an identity statement about individual events, then the cause statement is identical with the effect statement. For example, Davidson says, "The death of Scott = the death of the author of *Waverly*." If it is the identity statement, then 'The death of Scott' is the cause or the effect of "the death of the author of *Waverly*.' How about the examples he gives in? Are they identity statements too?

Principle (3) The causal interaction deals with events in extension and is therefore blind to the mental-physical dichotomy.

What are events in extension? The events exist outside our mental events or independent of our beliefs, desires, hope, knowledge, intention. For example: 'John wanted to turn on the light'. Whether the light is turning on or it is not the case, it is not caused by our desire. 'John

believes that it is raining'. "It is raining" is the event in extensional context. There is no causal interaction between John's belief and raining or raining is not caused by mental event, e.g. belief.

#### D. Necessary Identity

The identity theorists claim that the identity between mental and bodily events is contingent. Saul Kripke<sup>10</sup> argues that such identities would have to be necessarily true if they were true at all.

His arguments can be set as follows:

1. Identity is the relation between a thing and itself.
2. An identity statement between names, when true at all, is necessarily true, even though one may not know it *a priori*.
3. If A and B were identical, the identity would have to be necessary.
4. If A = B, then the identity of A with B is necessary, and any essential property of the one must be an essential property of the other.
5. If A = B, then A cannot exist without B, and B cannot exist without A.

We can use Kripke's law of identity to make arguments against Smart's contingent identity or other identity theorists. Identity theorists claim that the following proposition is true:

"Pain (i.e. experiencings of pain) = c-fibre firings"

Kripke's arguments against above claims are set as follows:

1. If a pain is identical to c-fibre firings, the identity would have to be necessary.
2. If pain = c-fibre firings, the pain as mental state cannot exist without a c-fibre firings as physical state.
3. If a pain is identical to c-fibre firings, then it is true in all possible worlds.
4. If I can imagine a world where pain and c-fibre firing are not identical, then it is not necessarily true.

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<sup>10</sup>Saul A. Kripke, *Naming and Necessity*, (Oxford: Blackwell, 2003), pp. 144 -155.

5. If the identity of a mental state  $x$  with a brain state  $y$  is necessary, then any essential property of  $x$  must be an essential property of  $y$ .

This argument applies equally to the type-type identity theories and token-token identity theories. If the term pain refers to c-fibre firings rigidly, they must be necessarily identical. Since they cannot be necessarily identical, they cannot be identical at all.

In other words, we can know the qualities of mental states by investigating the brain states. Unfortunately, identity theorists are unable to prove that physical sciences can give us true information of mental states by operating human brains and observing what is going on in the brain. If their thesis that a mental state is identical with a brain state is necessarily true, then the qualities of mental states are available at brain. If they are not available, then the thesis is false.

## E. Conclusion

In conclusion, I would argue that a mental state is not a brain state. The identity theorists who claim that a mental state and a brain state are identical, in my opinion, cannot accommodate both ontological and epistemological objections. I am persuaded by the arguments that we cannot know the qualities of mental states by only observing physical information given by physical sciences of bodies including brains.

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