

Is the Mind the Same as the Brain?

Marcello Di Bello

Lehman College CUNY

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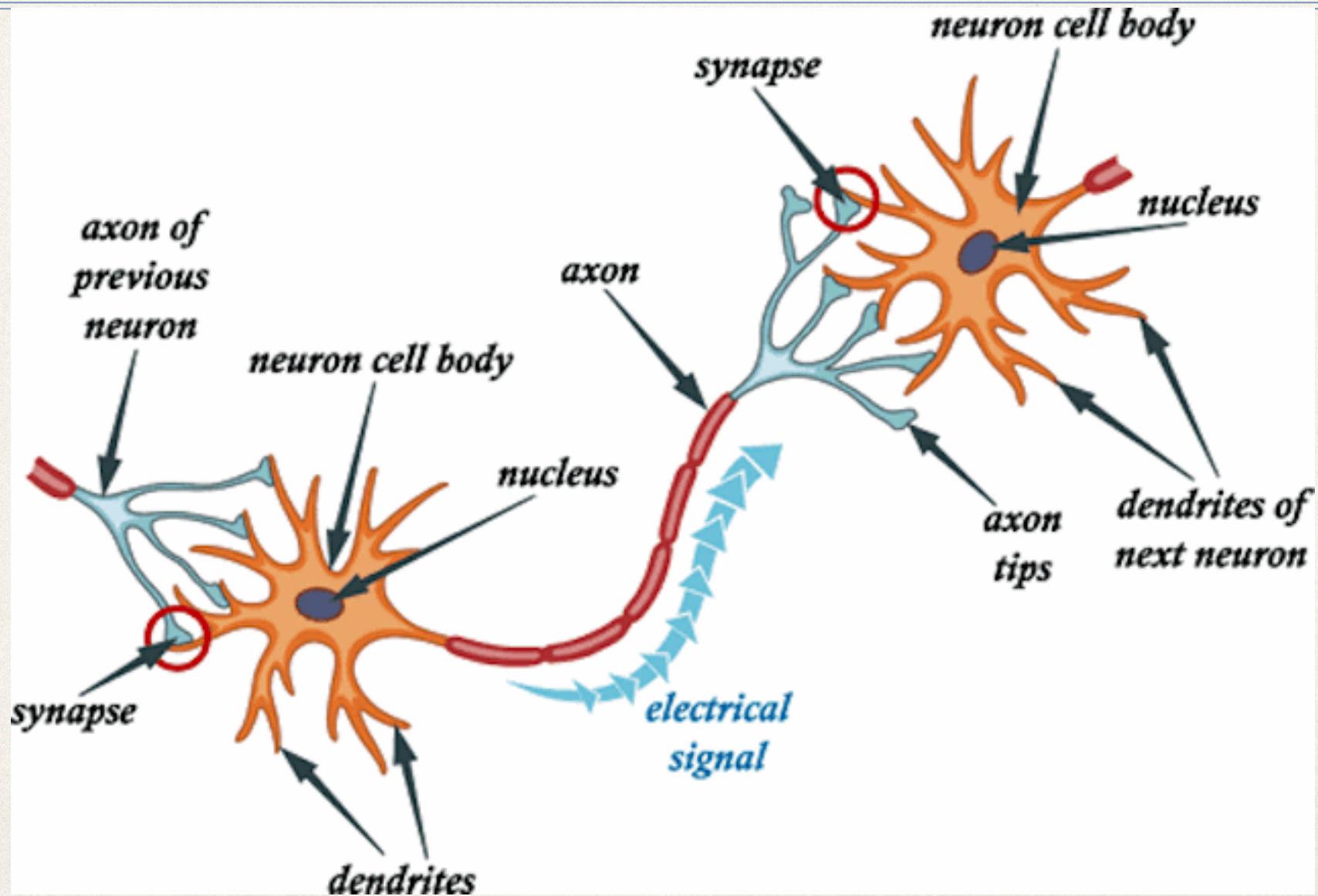
Brain, Mind, and Consciousness

Is our mind
just our brain?

Can
consciousness
be physical?

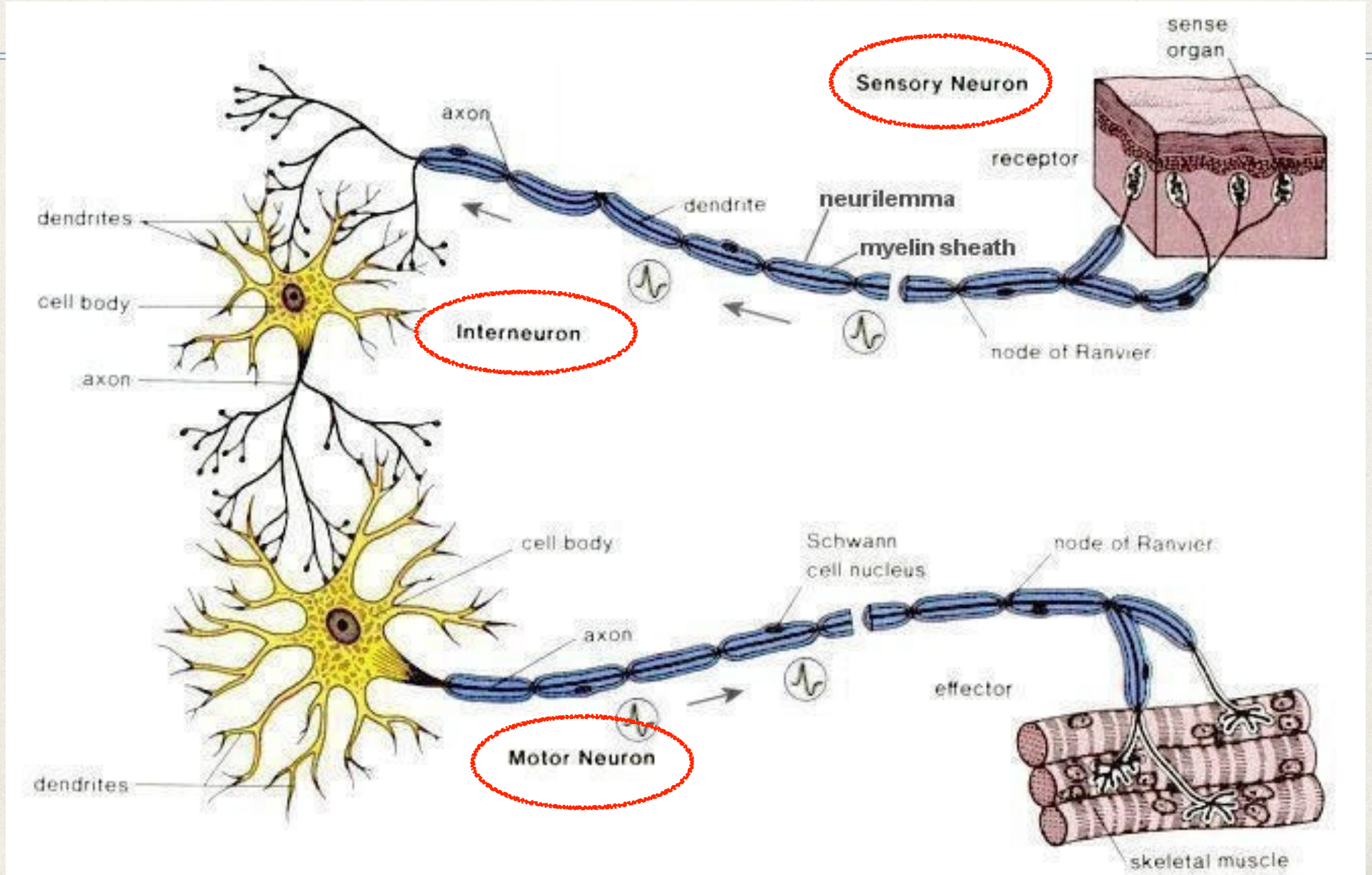


Brain Activity Consists of Electrochemical Signals Traveling From One Neuron to Another



Electrochemical Signals Traveling Across Neurons

Control our Perceptions (see *Sensory Neurons*) and Movements (see *Motor Neurons*)



The Philosophical Question

- Neuroscientists are telling us that **mental phenomena**, such as our feelings, thoughts, experiences, moral judgments etc. are associated with **brain activities** and electrochemical signals. (This means whenever we experience feeling or make conscious decision, there is a corresponding electrochemical activity in the brain that goes along with our subjective experience.)
- *Does this mean that the mind is nothing else than what goes on in the brain? Is the mind nothing else than the electrochemical activities of the brain?*

Terminology

Physical/brain state:

the electrochemical activation of certain neurons in the brain

Mental state:

the subjective experience of, for example,
*seeing red, feeling pain, being conscious of
being yourself, experiencing hatred, etc.*

The Peculiarity of Mental States

No one else except you knows what your mental states are really like. By contrast, physical or brain states can be studied and known by more than one person.

Physicalism *versus* Non-Physicalism

Some philosophers—called **physicalists**—believe that mental states can be entirely *reduced to* brain states. In other words, they believe that mental states are entirely physical.

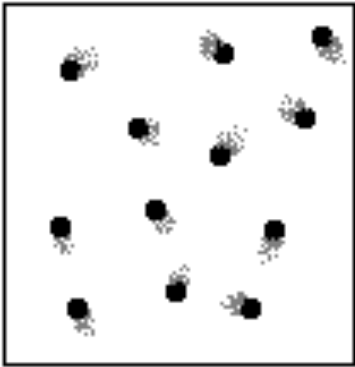
Other philosophers—called **non-physicalists**—think that it is *impossible to reduce* mental states to brain or physical states.

Whether mental states can be reduced to physical states or not is one of the central questions in philosophy of mind today.

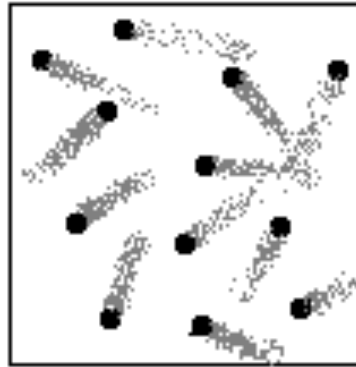
An Example of “Reduction”

Consider **heat** or **temperature**.

The more rapid the movement of the particles, the higher the temperature.



COOL



HOT



Since the movement of the particles can be entirely described in physical terms, we have a *reduction* of the notion of heat or temperature to physics.

The Goal of Physicalism

(also called, Materialism)

The goal of physicalism is to provide an *entirely physical* description or explanation of *mental phenomena*, such as our subjective feeling of pain, our conscious experience of being here, etc.

An *entirely physical* description or explanation is one that uses knowledge from the sciences, such as physics, chemistry and biology, and does not appeal to any non-physical entity.

Are You a Physicalist or Not?

An Argument Against Physicalism

Jackson's *Knowledge Argument* (1)



Mary is a brilliant scientist . . . forced to investigate the world from a black and white room via a black and white television monitor. She . . . acquires . . . all the physical information there is to obtain about what goes on when we see ripe tomatoes, or the sky ...

She discovers, for example, just which wavelength combinations from the sky stimulate the retina, and exactly how this produces via the central nervous system the contraction of the vocal chords and expulsion of air from the lungs that results in the uttering of the sentence 'The sky is blue'.

Jackson's *Knowledge Argument* (2)

What will happen when Mary is released from her black and white room or is given a color television monitor? Will she learn anything or not?

It seems just obvious that she will learn something about the world and our visual experience of it. But then . . . her previous knowledge was incomplete. But she had all the physical information. Ergo . . . physicalism is false.

