

# *Is the Mind the Same as the Brain?*

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# Final Thoughts About Determinism and Free Will

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The two issues on the table  
from last week

- Whether **everything** (the future, our actions, etc.) is **predetermined**
- Whether we have **free will** to act and choose



# Arguments for the Conclusion that Everything (Even our Decisions and Actions) is Predetermined

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Aristotle's sea battle argument

Findings from genetics showing that people with the warrior gene are more likely to commit violence

Findings from neuroscience showing that patterns of brain activity predict our actions before we make the conscious decision to act

If an all-powerful God exists, He knows our decisions before we make them, so that our decisions are set in advance



# Is Free Will Compatible with Determinism?

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Everything is predetermined

We have  
free will

We don't  
have free will



# What Does it Mean To Have Free Will? *An Attempt at a Definition*

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## **Free Will**

This is the power to act and do otherwise. It is the power to have made a choice other than the choice one actually made.



# Is Determinism Compatible With Free Will? *It seems Not*

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An argument that determinism is incompatible with free will:

Determinism means that all events—including our own actions—happen necessarily because they are caused by previous events. If so, we do not have the power to change them and act otherwise. *So, if determinism is true, we do not have free will.*



# Is Non-Determinism Compatible with Free Will?

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- ❖ Non-determinism means that some events happen by chance or by accident as opposed to everything happening inevitably or by necessity.
- ❖ But just as we do not have the power to change what happens by necessity, we do not have the power to change what happens by chance and accident either.
- ❖ We are powerless with respect to what happens by chance and accident. *If non-determinism is true, we do not have free will.*



# Can You Change the Outcome of a Random/Chancy Event?

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The outcome of a random / chancy event is something we cannot control...



# The Puzzle About Free Will

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- ❖ If everything is predetermined in advance, then we cannot have free will.
- ❖ If *not* everything is predetermined in advance and some events happen by chance and accident, then we cannot have free will either.
- ❖ *So either way, we lack free will.* How can that be?



Maybe We Should Think of Free  
Will in a Different Way. How?

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# A Definition of Free Will That Does Not Involve the Power to Do Otherwise

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*“free will [is] a set of capacities for imagining future courses of action, deliberating about one’s reasons for choosing them, planning one’s actions in light of this deliberation and controlling actions in the face of competing desires. We act of our own free will to the extent that we have the opportunity to exercise these capacities, without unreasonable external or internal pressure.”*

*Is Neuroscience the Death of Free Will?*

Eddy Nahmias, November 13, 2011, *NY Times*



# Three Definitions of Free Will

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## 1. Free Will

This is the power to act and do otherwise. It is the power to have made a choice other than the choice one actually made.

## 2. Free Will

This is the condition of being free from external or internal constraints (*see previous slide*).

## 3. Free Will

This is the awareness that everything is predetermined.

*These two definitions might render “free will” compatible with determinism. Do they?*



# Two Views

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## **Incompatibilism**

Determinism and free will are incompatible. If the everything is predetermined, we cannot have free will.

## **Compatibilism**

Determinism and free will are compatible. Even if everything is predetermined, we can still have free will.



You Decide Which Position Makes  
More Sense...

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# Turning to the Next Course Topic

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# Brain, Mind, and Consciousness

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Is our mind  
just our brain?

Can  
consciousness  
be physical?





# The Brain and the Mind

## Frontal Lobe

Planning  
Reasoning  
Problem solving  
Morality  
Personality  
Social Skills  
Recognising and  
Regulating Emotions  
Motor Functions  
Motor speech area  
of Broca

## Brain Mind Relation

## Parietal Lobe

Recognising sensation,  
body position and objects  
Sense of time and space  
Reading and Comprehension area  
Association between  
functions of other  
lobes

## Temporal Lobe

Understanding  
Language  
Hearing  
Speech  
Memory  
Learning  
Sensory speech area  
of Wernicke

## Occipital Lobe

Vision and Integrating  
visual information  
(colour, shape and  
distance)

## Brain Stem

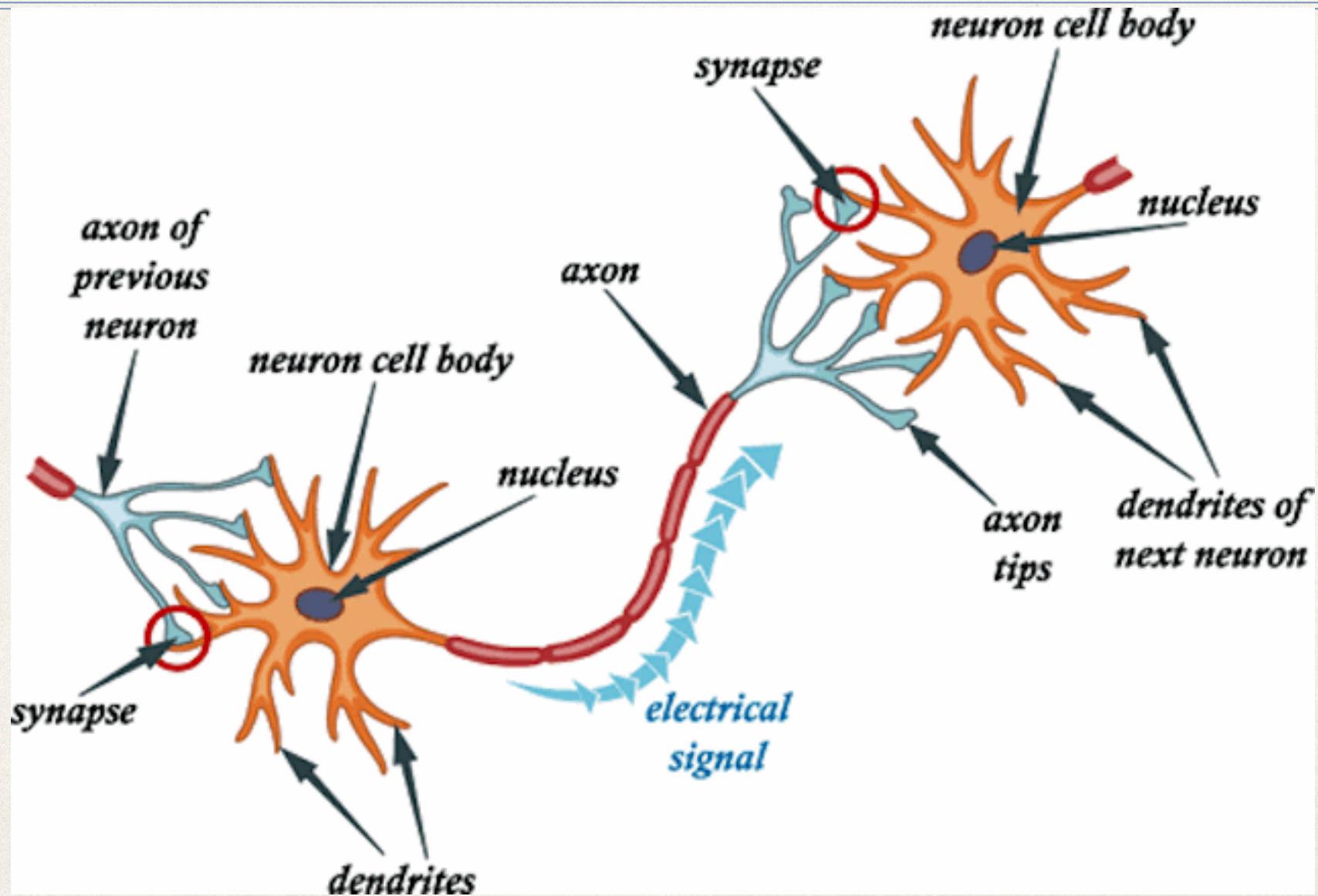
Regulation of heart  
beats, respiration,  
body temperature  
and other essential  
body functions

## Cerebellum

Balance  
Muscular co-ordination



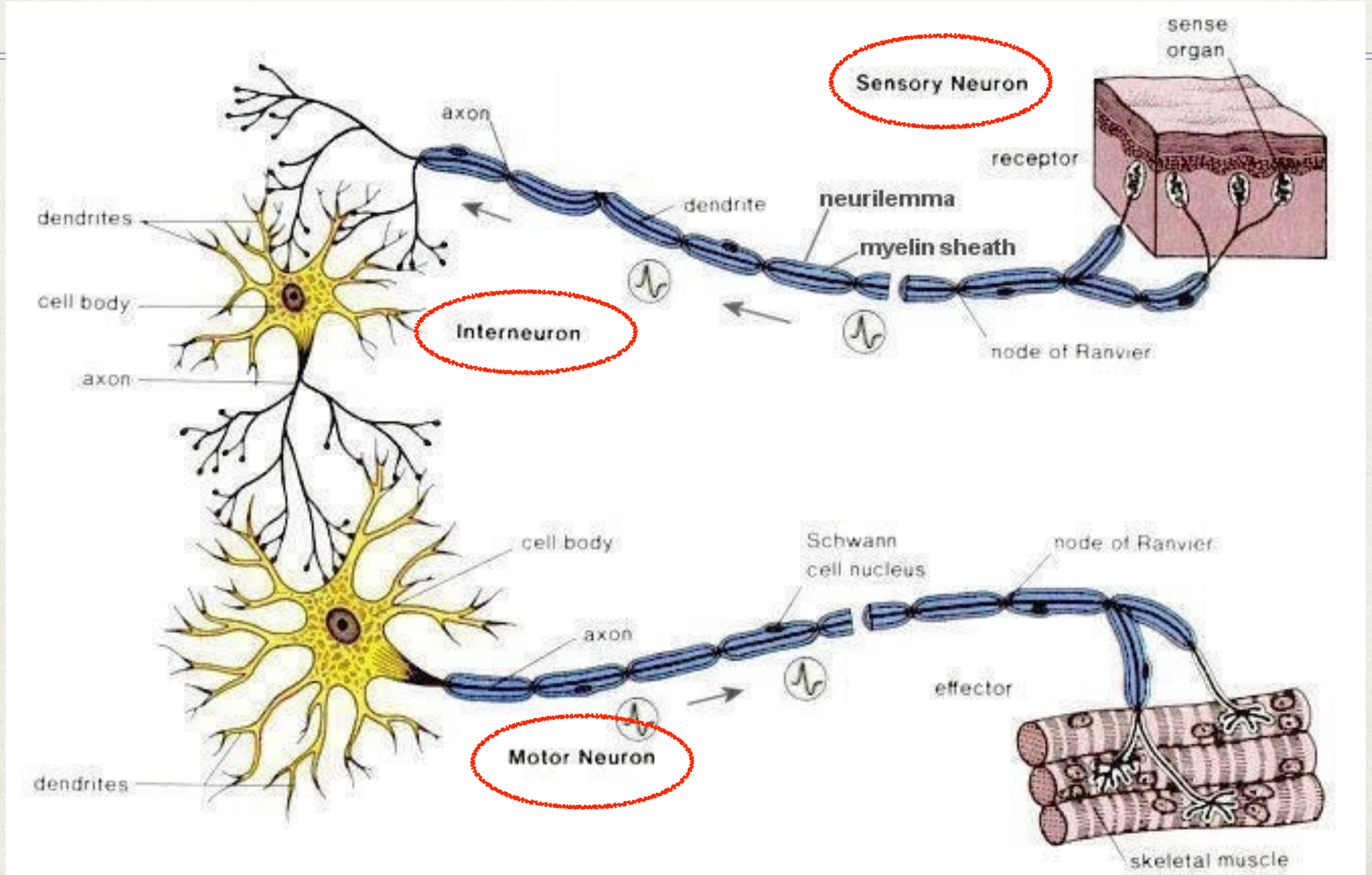
# Brain Activity Consists of Electrochemical Signals Traveling From One Neuron to Another





# Electrochemical Signals Traveling Across Neurons

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





# Do Electrochemical Signals Traveling Across Neurons Control Our Feelings and Emotions?

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<https://www.youtube.com/watch?v=haNoq8UbSyc>

Certain molecules are associated with feelings of pain or pleasure, sadness or happiness



# Do Electrochemical Signals Control Even our Moral Judgments?

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<http://thecolbertreport.cc.com/videos/fykny6/patricia-churchland>



# The Philosophical Question

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- Neuroscientists are telling us that our feelings, thoughts, experiences, moral judgments etc. are associated with brain activities and electrochemical signals.
- *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

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## **Physical/brain state:**

the activation of certain neurons in a certain area of the brain

## **Mental state:**

the subjective experience of, for example,  
*seeing red, feeling pain, awareness of ourselves*



# Physicalism *versus* non-Physicalism

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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 the philosophy of mind today.*