

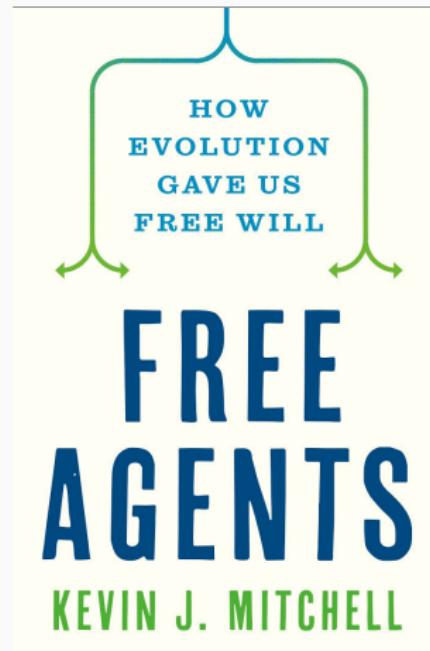
How evolution gave us free will

Or did it?

Esten H. Leonardsen
01.03.24

Overview

1. What is free will and why should we discuss it
2. Theories of free will
3. Empirical foundation
4. Main arguments of the author
5. Bonus: Why you should believe in free will (even though it doesn't exist)

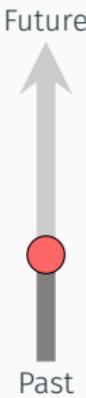


Background: What is free will?

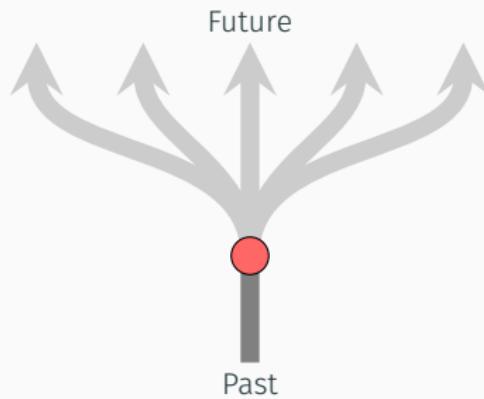
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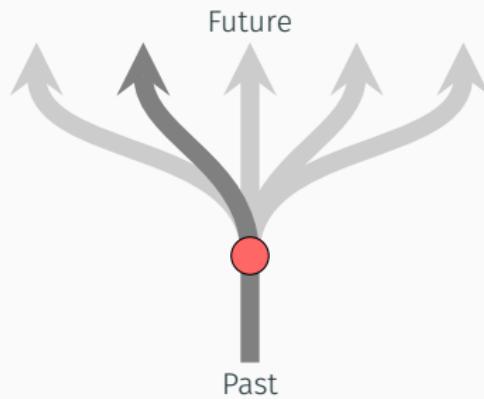
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Background: Why discuss free will

Why is it interesting to discuss whether we have free will?

- To understand what kind of creatures we are and the world we live in.
- To make moral and just decisions about accountability.

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Theories of free will

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Incompatibilism: Free will is incompatible with determinism.

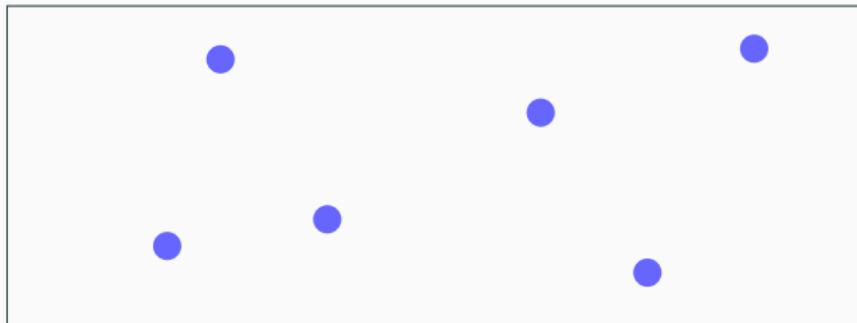
Theories of free will

Hard determinism ← → Libertarian free will

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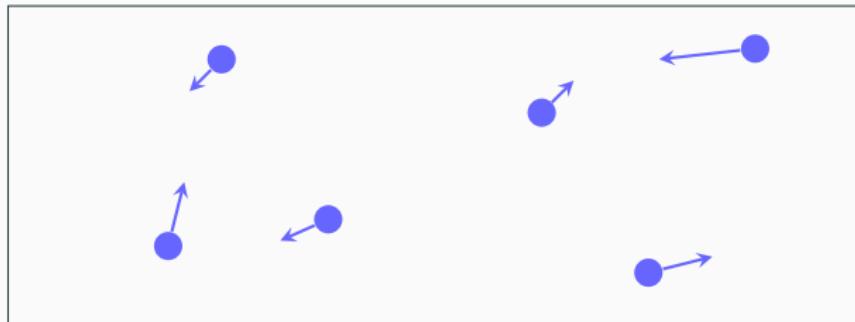
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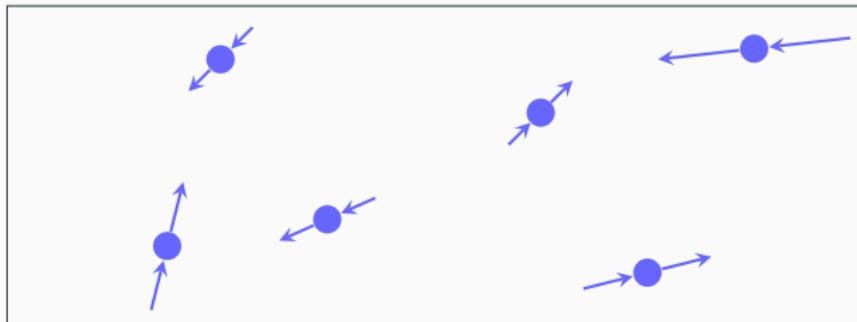
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Theories of free will



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- Inconsistent with subjective experience



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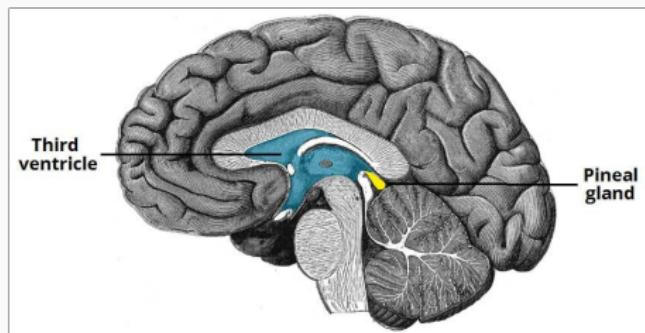
"I have a clear and distinct idea of the mind as a thinking, non-extended thing. I have a clear and distinct idea of body as an extended, non-thinking thing. Therefore, the mind is really distinct from the body and can exist without it."

Theories of free will

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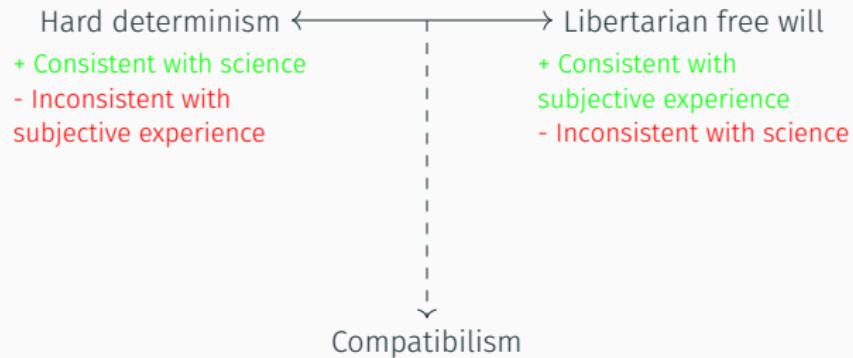
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Theories of free will



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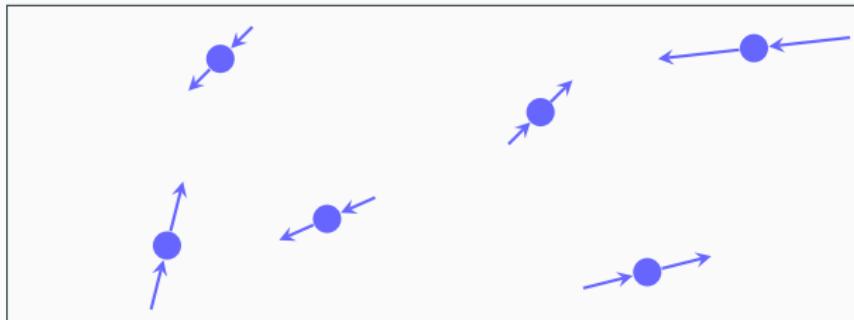
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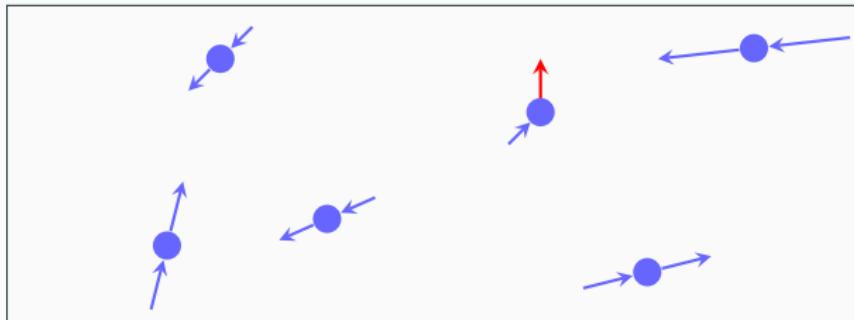
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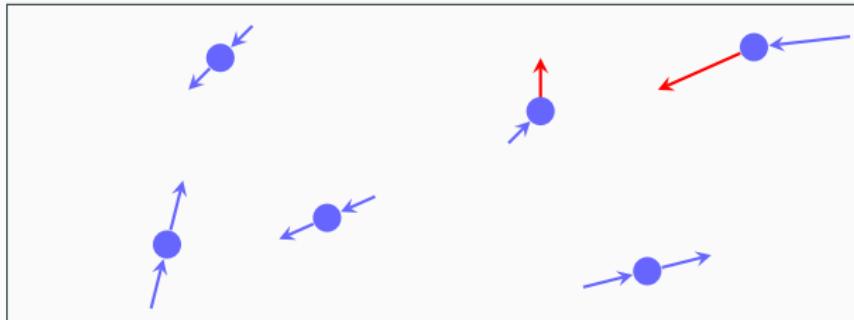
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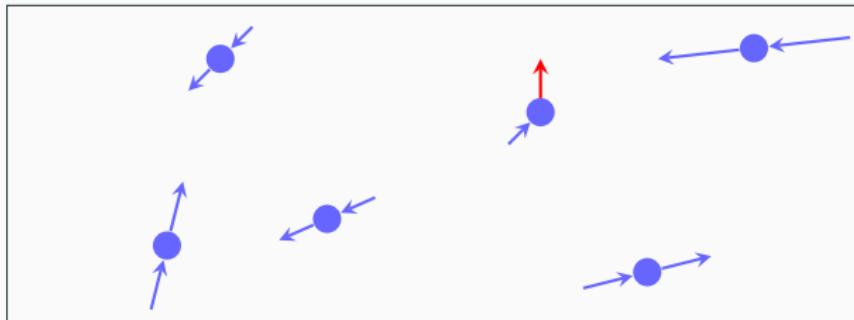
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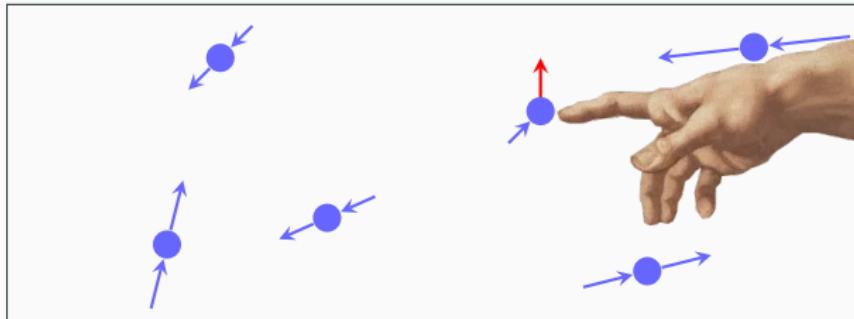
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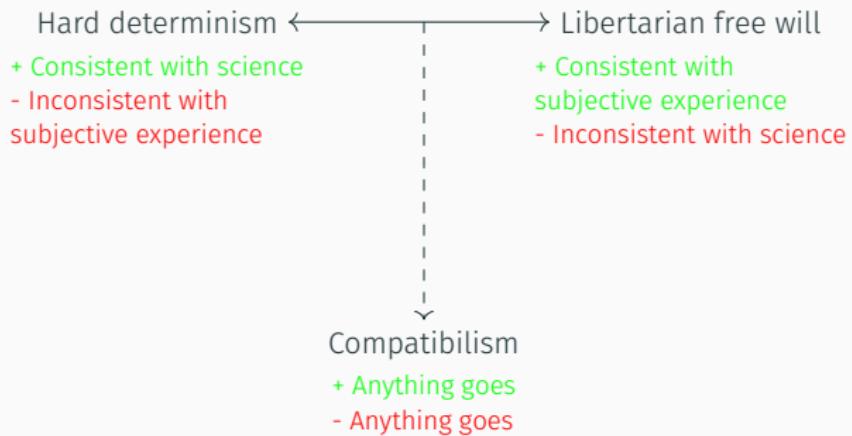
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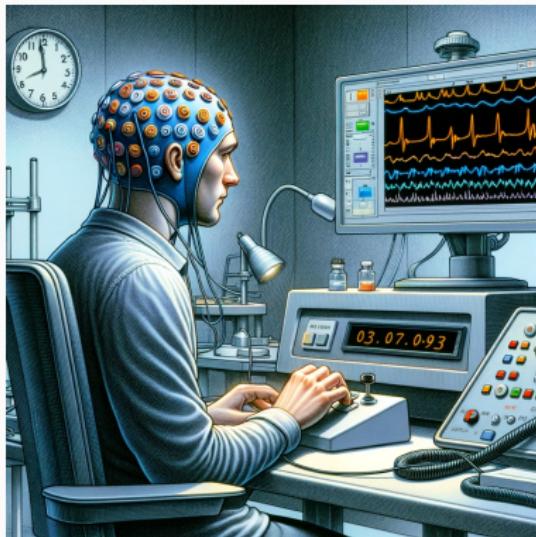
Empirical foundation

Empirical foundation: Libet experiments

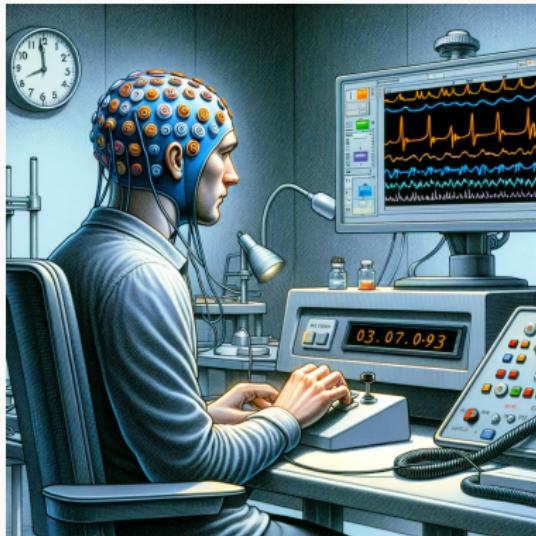
"The onset of cerebral activity clearly preceded by at least several hundred milliseconds the reported time of conscious intention to act."

*TIME OF CONSCIOUS INTENTION TO ACT IN RELATION TO ONSET OF CEREBRAL ACTIVITY
(READINESS-POTENTIAL), Libet et al. (1983), Brain*

Empirical foundation: Libet experiments

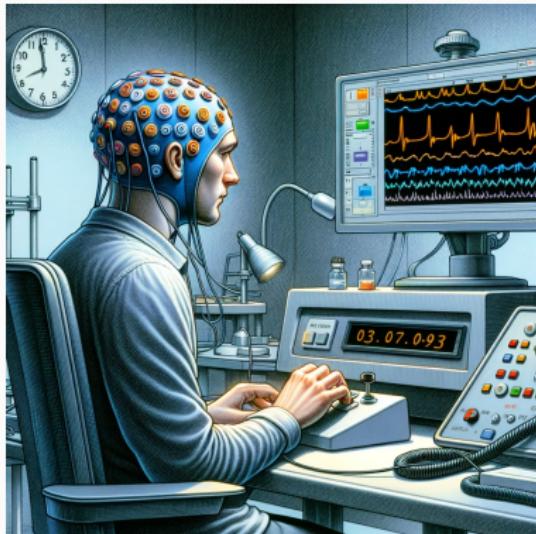


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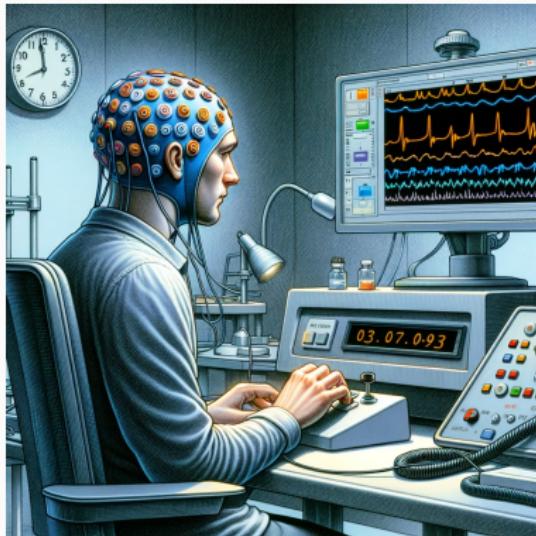
time

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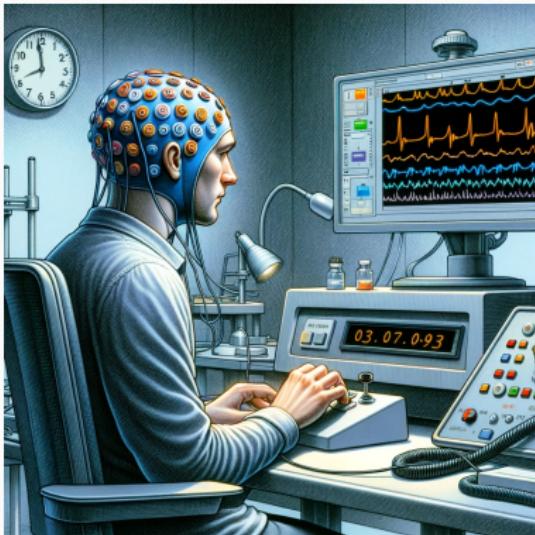
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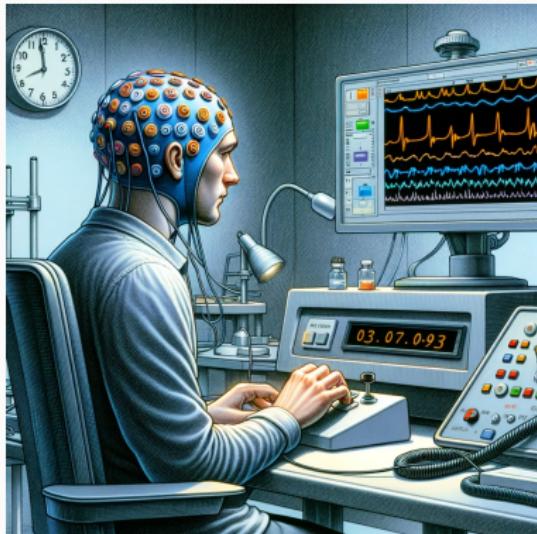


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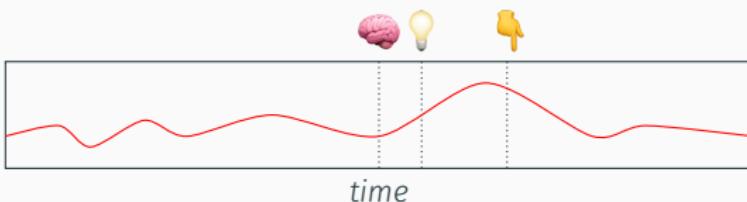
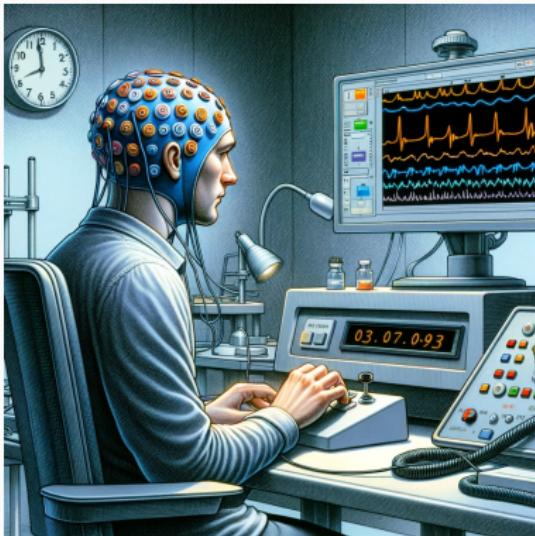
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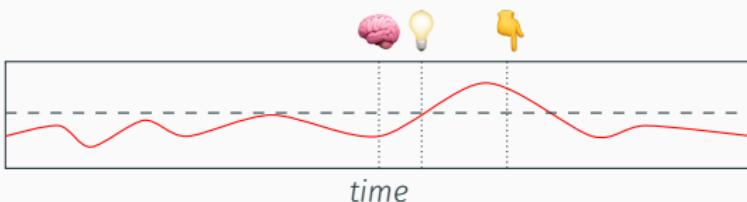
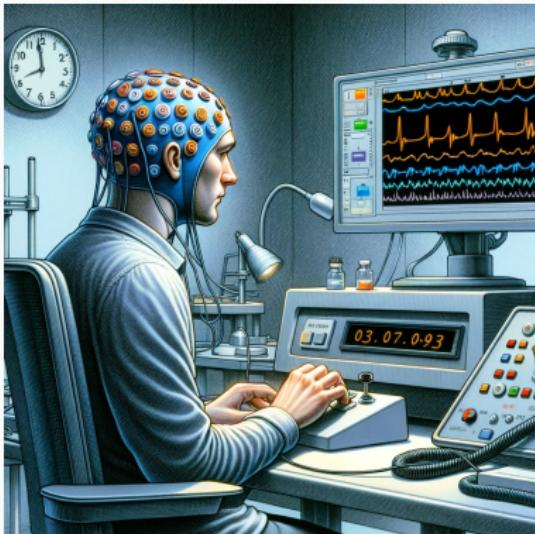
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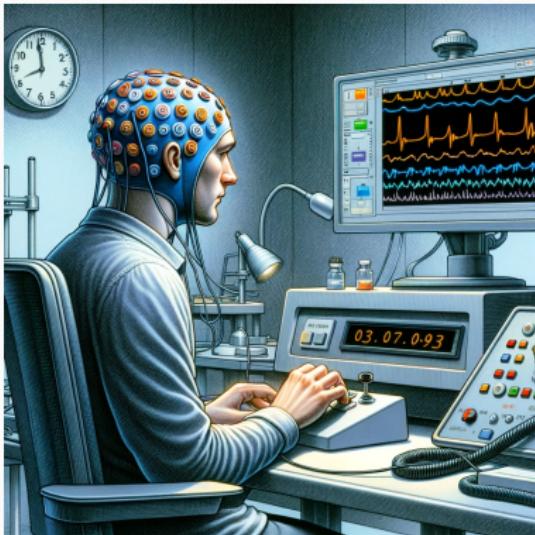
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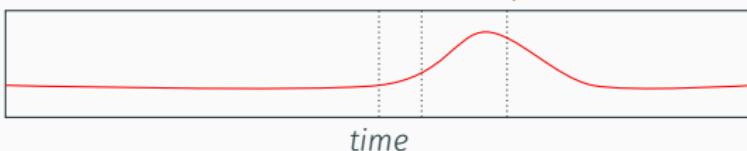
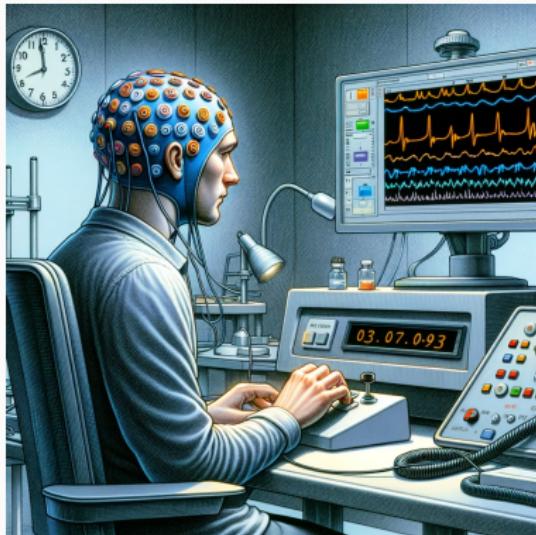
Empirical foundation: Libet experiments



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Empirical foundation: Libet experiments



Empirical foundation: Priming

"It is concluded that social stimuli of which people are not consciously aware can influence conscious judgments."

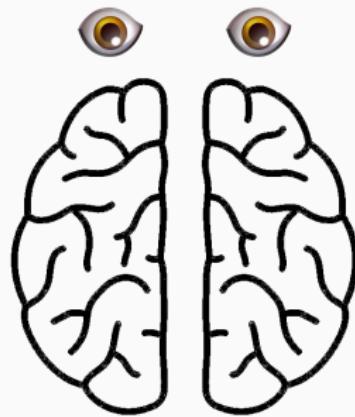
Automatic information processing and social perception: The influence of trait information presented outside of conscious awareness on impression formation.,
Bargh et al. (1982), *Journal of Personality and Social Psychology*

Empirical foundation: Explanations

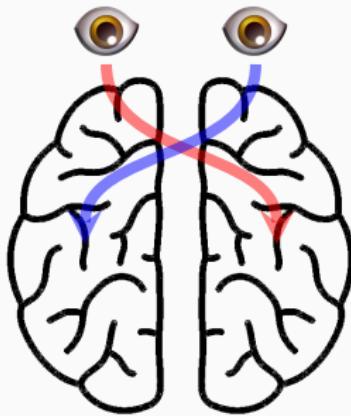
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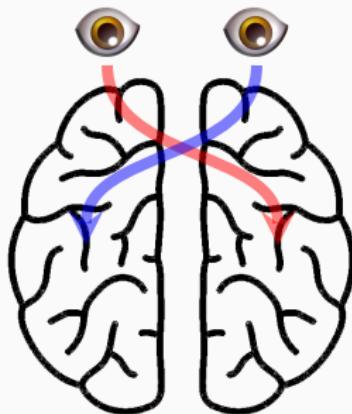
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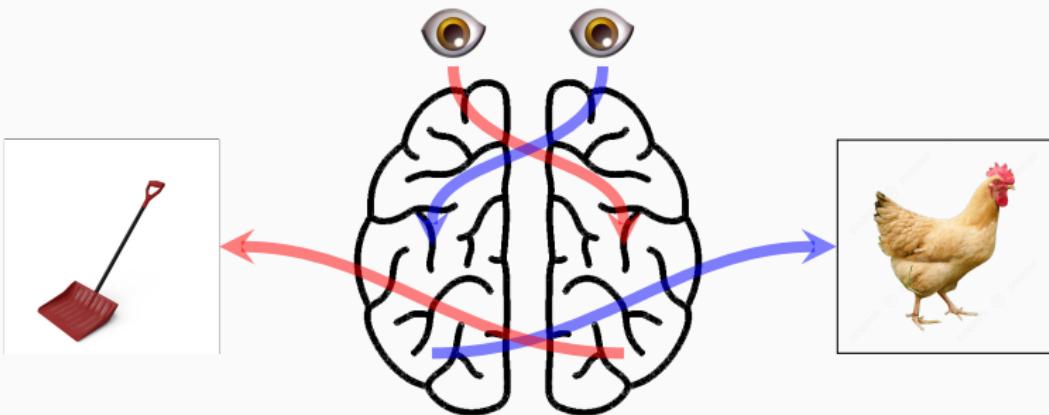
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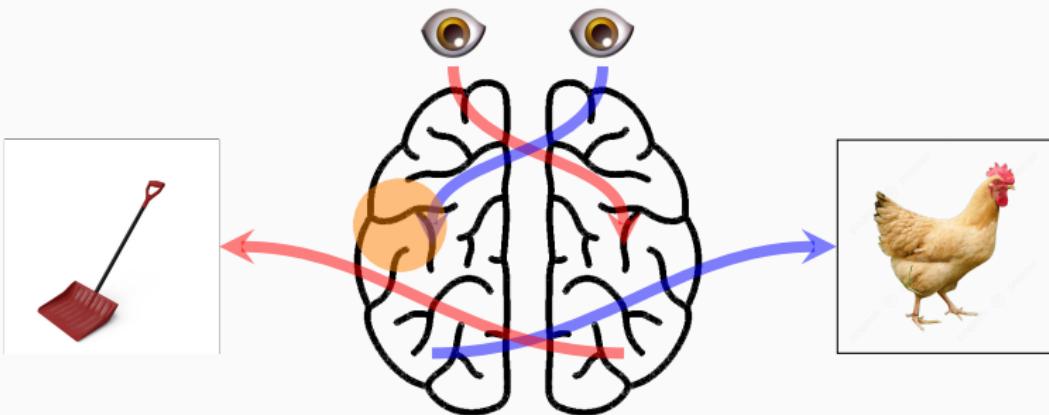
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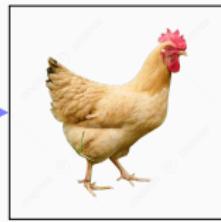
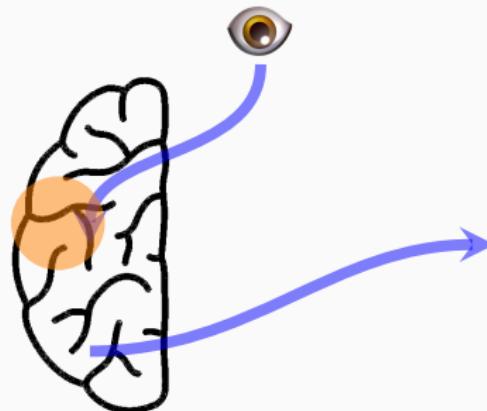
Empirical foundation: Explanations



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Empirical foundation: Explanations



Empirical foundation: Explanations

What did the left brain answer when asked why it pointed to a shovel?

- a. Because it can be used to shovel snow
- b. No idea
- c. Because it can be used to clean the chicken shed

The book

Argument one

1. An entity is a being which is shielded from the world.
2. Being alive means that your inside is more structured than the outside, and you strive to keep it that way.
3. Movement gives you options to harvest resources from the outside to retain your internal structure.
4. Sensors gives you the opportunity to move in a targetted manner.
5. Monitoring your internal states allows you to prioritize outcomes.
6. A nervous system that connects your sensors (both internal and external) to your moveable parts allows you to choose actions, based on your surroundings and needs.
7. The strategy that underlies these choices are shaped by evolution (through DNA) and learning (through the nervous system).

→ This is free will!

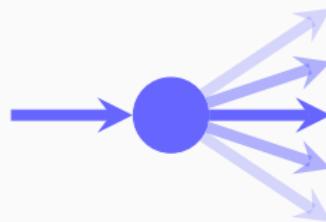
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- This is dogmatic compatibilism.

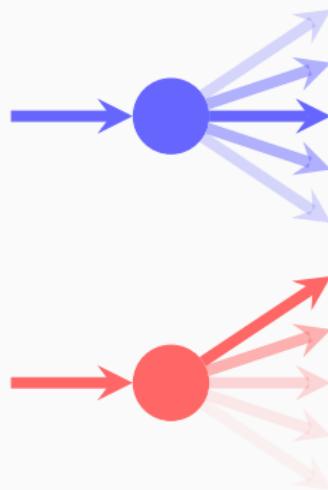
Argument two



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Argument two

- The low-level details of a nervous system and the laws of physics do not fully explain how a system evolves nor behaves.
- This lee-way allows agents to choose between equally probable next states.
→ This is free will!

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- This lee-way allows agents to choose between equally probable next states.
 - This is free will!
 - This is strong emergentism

My argument

My argument

Free will exists

Yes

No

--	--

My argument

		Free will exists	
		Yes	No
We believe in free will	Yes		
	No		

My argument

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		Yes	No
We believe in free will	Yes	$n_{0,0}$	$n_{0,1}$
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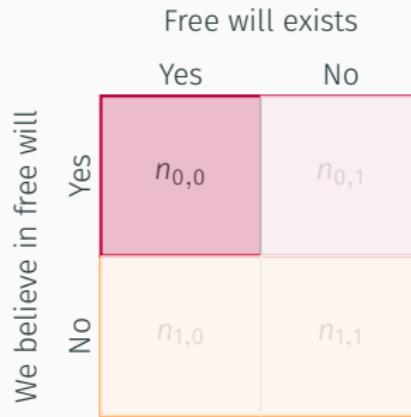
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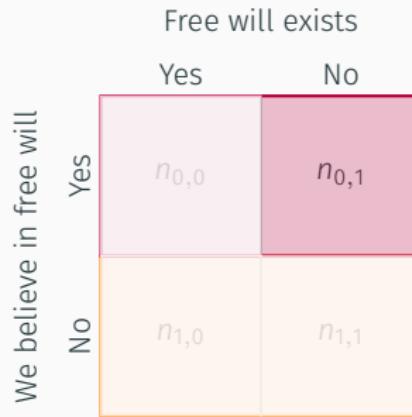
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My argument



$$p_f * n_{0,0}$$

My argument



$$p_f * n_{0,0} - (1 - p_f) * n_{0,1}$$

My argument



$$p_f * n_{0,0} - (1 - p_f) * n_{0,1} > p_f * n_{1,0}$$

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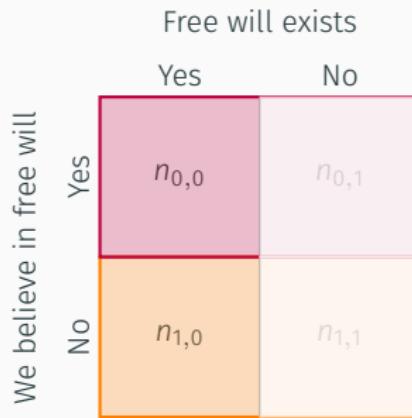
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My argument



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My argument

Stem rødt!



Summary

- Free will doesn't exist

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- Free will doesn't exist
- But you should pretend it does!

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- But not too much!!

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Thank you for coming to my TED-talk!