What is the place of the mind in nature?

Neil Barton

Slides available via the "Blog" section of my website

`https://neilbarton.net/blog/`

UNIVERSITETET
I OSLO

Forskningsrådet

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- "Marit Bjørgen won because she was determined"

Main aims for today.

1. Examine two views about the nature of the mind (materialism and dualism), and some arguments for and against each.
2. Talk a little about how our concepts can influence how we interact with the world.

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- But reducing all science this way is controversial.
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- But let's start by discussing some successes.

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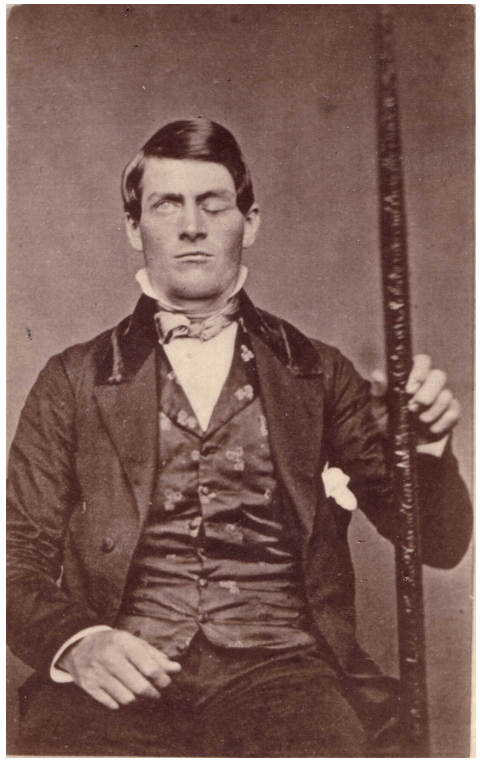

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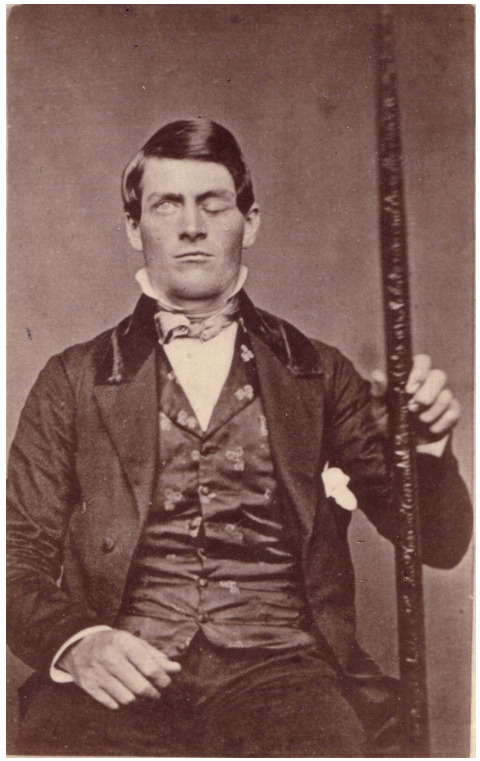

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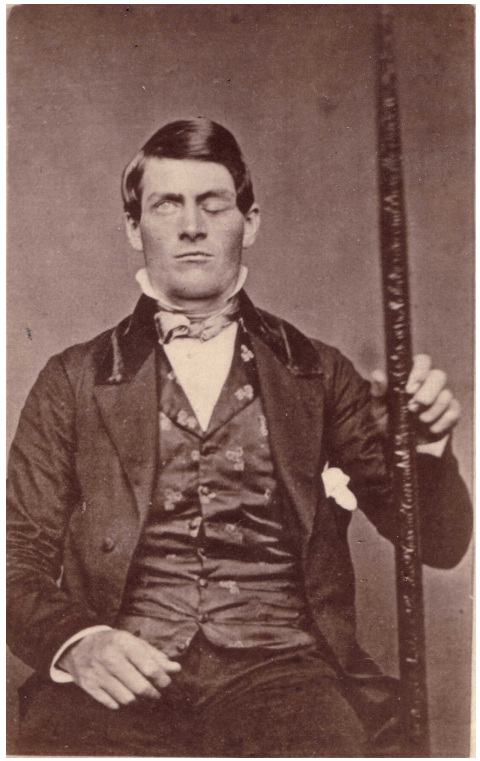

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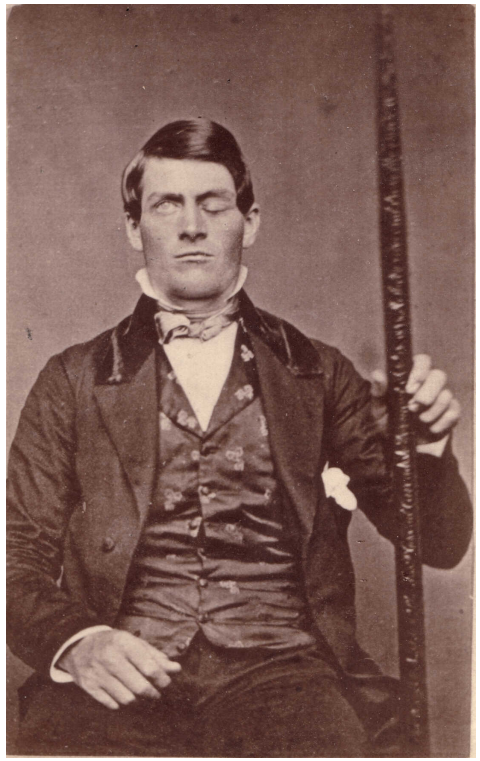
- Case where neurobiological change seems to have effect on personality.



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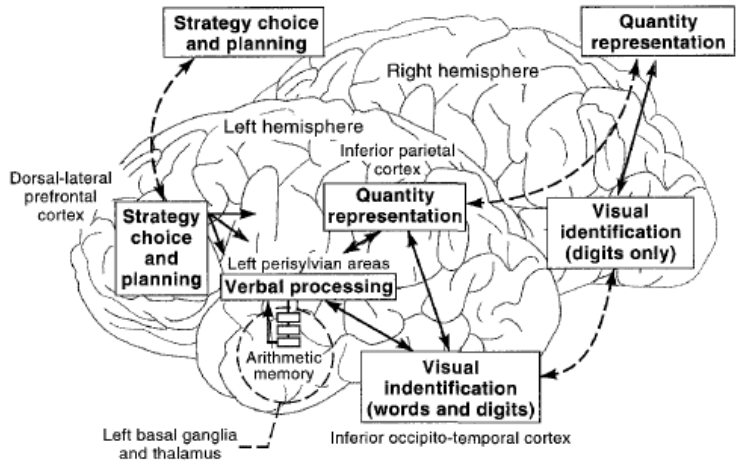

Figure 7.3. A partial and still hypothetical diagram of cerebral areas involved in number processing. Both hemispheres can manipulate Arabic numerals and numerical quantities, but only the left hemisphere has access to a linguistic representation of numerals and to a verbal memory of arithmetic tables. (After Dehaene and Cohen 1995.)

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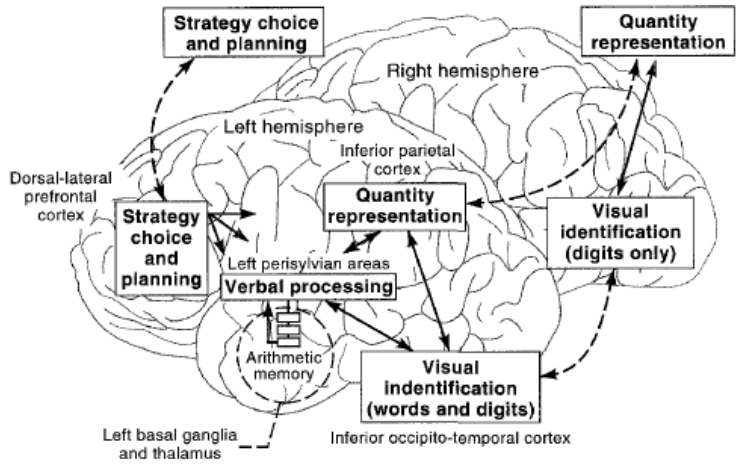

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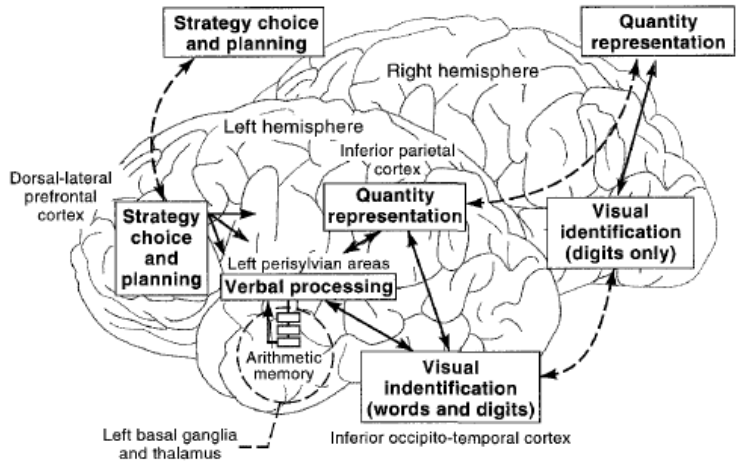

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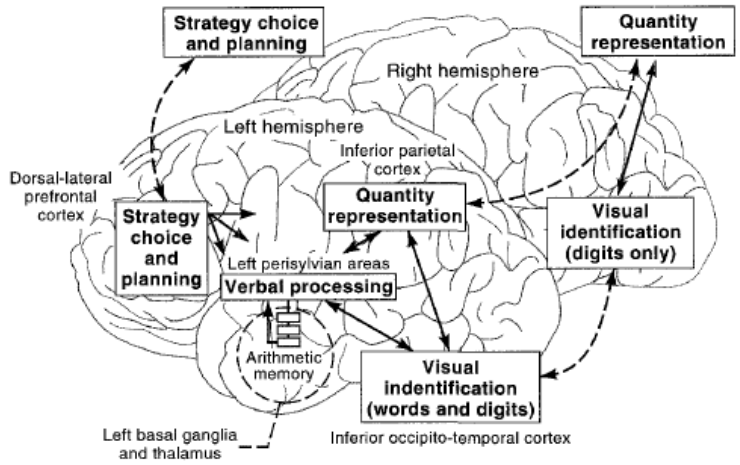
- Lots of interesting work to be done regarding this work and the epistemology of mathematics!



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- Found cells in two connected regions of the brain (hippocampus and the entorhinal cortex) that form a positioning system.
- These cells are often affected in patients with Alzheimers.
- This link between neurobiology and mental states, helps to explain why such patients struggle to navigate the world.

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- But it is far from obvious.

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- More needs to be done to show that everything about the mind can be explained in terms of what goes on in the brain.

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- **Note:** Philosophically controversial example!

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- **Note:** Dualism is the likely outcome of views that ascribe some immortal soul (e.g. religious views, Plato in the *Phaedo*).

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FaceApp

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- This includes the role of the brain, see *De Homine*.

RENATUS DES CARTES

DE

HOMINE

FIGVRIS

ET

LATINITATE DONATUS

A

FLORENTIO SCHUYL,

Inclytæ Urbis Sylvæ Ducis Senatore, & ibidem Philosophiæ Professore.

Lvgdvni Batavorvm,
Apud Petrvm Leffen & Franciscvm
Moyardvm.
clɔ lɔc lxii.

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- Note that we need to be able to latch on to the correct space of possibilities, and reason about them.

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- Her critique of Descartes anticipates many of the concerns held by later philosophers.

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- I wanted a cup of coffee, and I therfore set in motion a chain of events, now I have the cup of coffee, and it produces sensations of deliciousness in me.
- Given that, under Descartes metaphysics, the mind has no extension, how do we explain these interactions?

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- **Premise 4.** The mind is not a material object. (Dualism)

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- **Premise 1.** The mind causes changes in the body (datum).
- **Premise 2.** Causing changes in the body requires physical contact with the body. (Descartes' mechanics)
- **Premise 3.** Physical contact is possible only between two material objects. (Descartes metaphysics)
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- **Step 5.** The mind does not cause changes in the body. (from 2-4)
- **Contradiction!** So one of our premises must be wrong: Why not dualism?

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- Problems going the other way too; if the body can transfer thoughts to the mind, then there must be something mental in the body.

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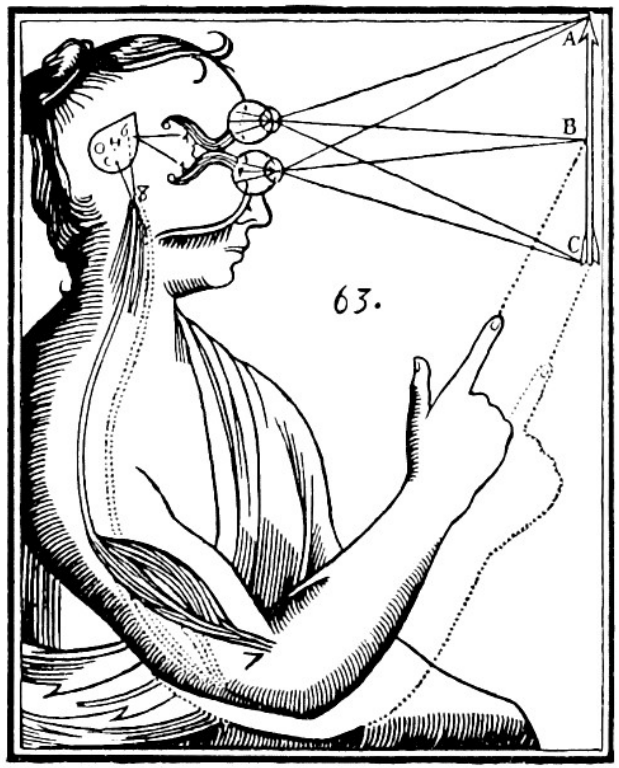
- He also provided a theory of how the mind and body interact (see depiction right); the body exchanges information with the mind via the pineal gland.

- **Question.** What do **you** think about the possibility (or actuality) of different kinds of dualism?
- **Note:** Various forms of dualism are still held by both philosophers and neuroscientists (it's an open issue!).



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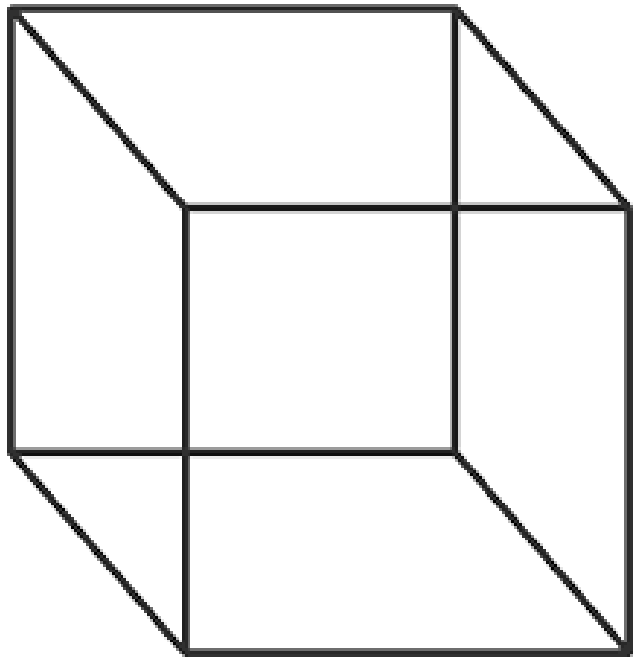
- Kuhn held that there is incommensurability between paradigms: Members of different paradigms literally mean different things and misunderstand each other when they talk.
- e.g. It might be that a proponent of heliocentrism and geocentrism mean different things and the world seems different when they talk about "planets" (Better but more complicated example: Moving from classical to relativistic physics.)

- Kuhn compares this to a gestalt switch (e.g. Necker cube/duck rabbit).



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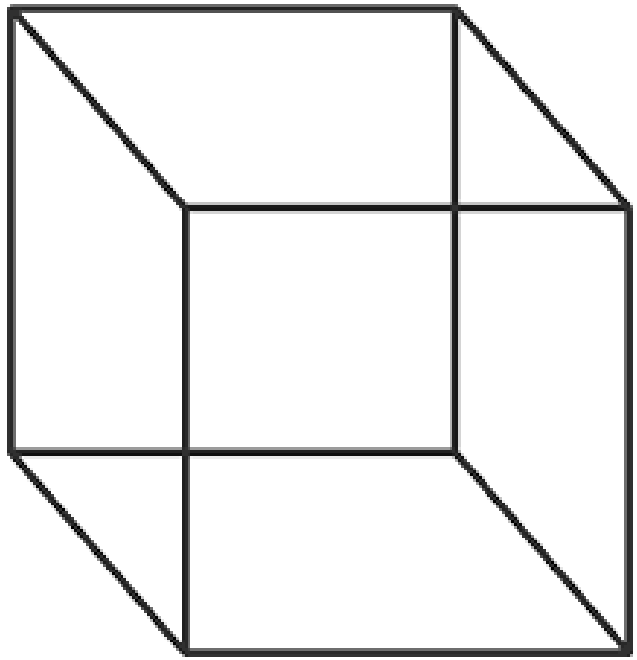
- **Moral:** The way the world seems might be an interaction between physical and mental entities (whatever you think of the reduction) and so we have to be careful when we communicate.



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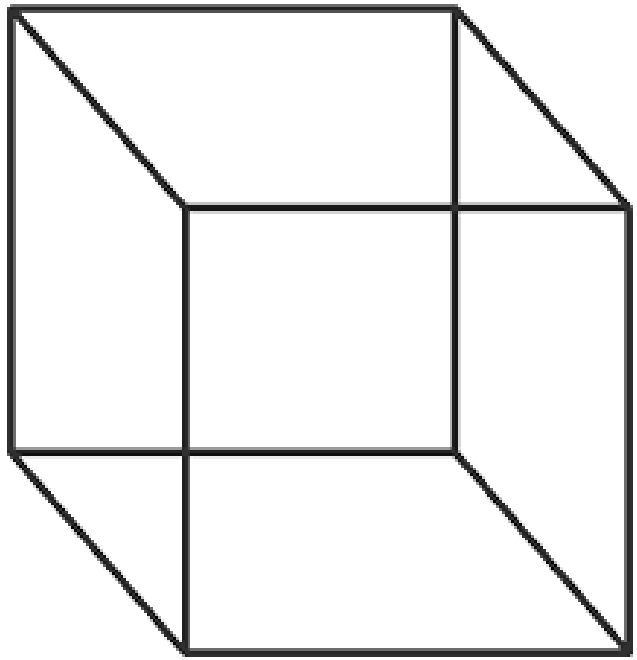
- How confident are you, when involved in an argument on a topic, that you and your interlocutor have enough shared semantic content to progress in the argument?



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- I've been very impressed with the student questions: **Keep at it**!

Tusen takk!