

COGS300

Situated Cognition

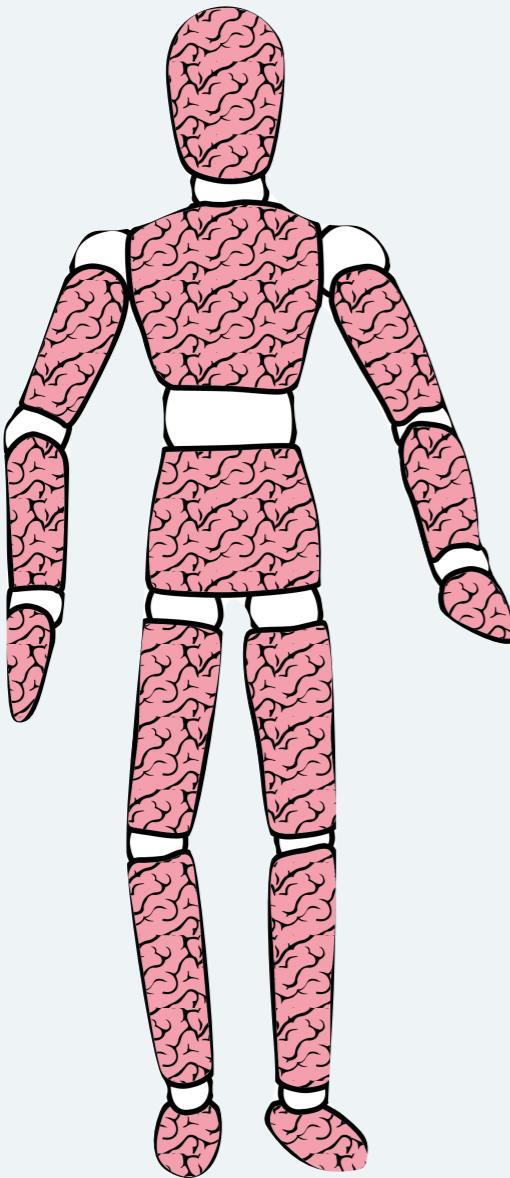
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situated: thinking extends beyond brain (inc. embodied)

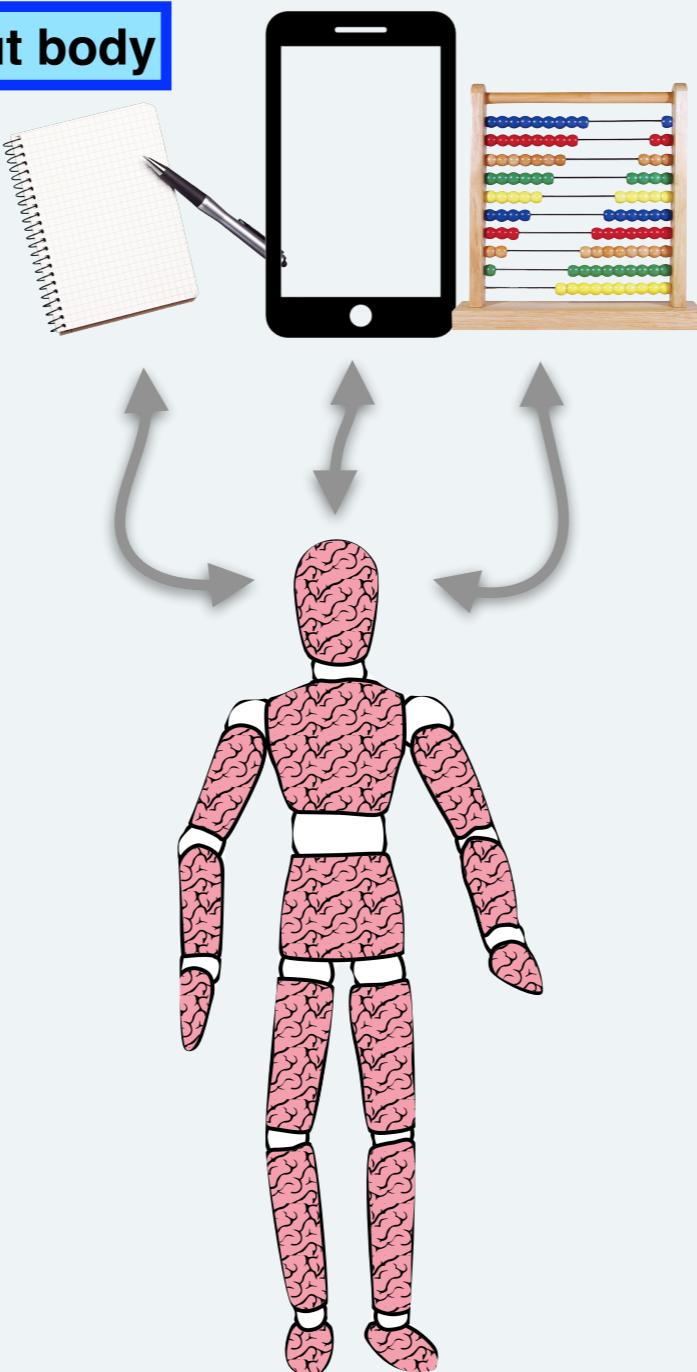
embodied cognition

embodied: thinking occurs throughout body



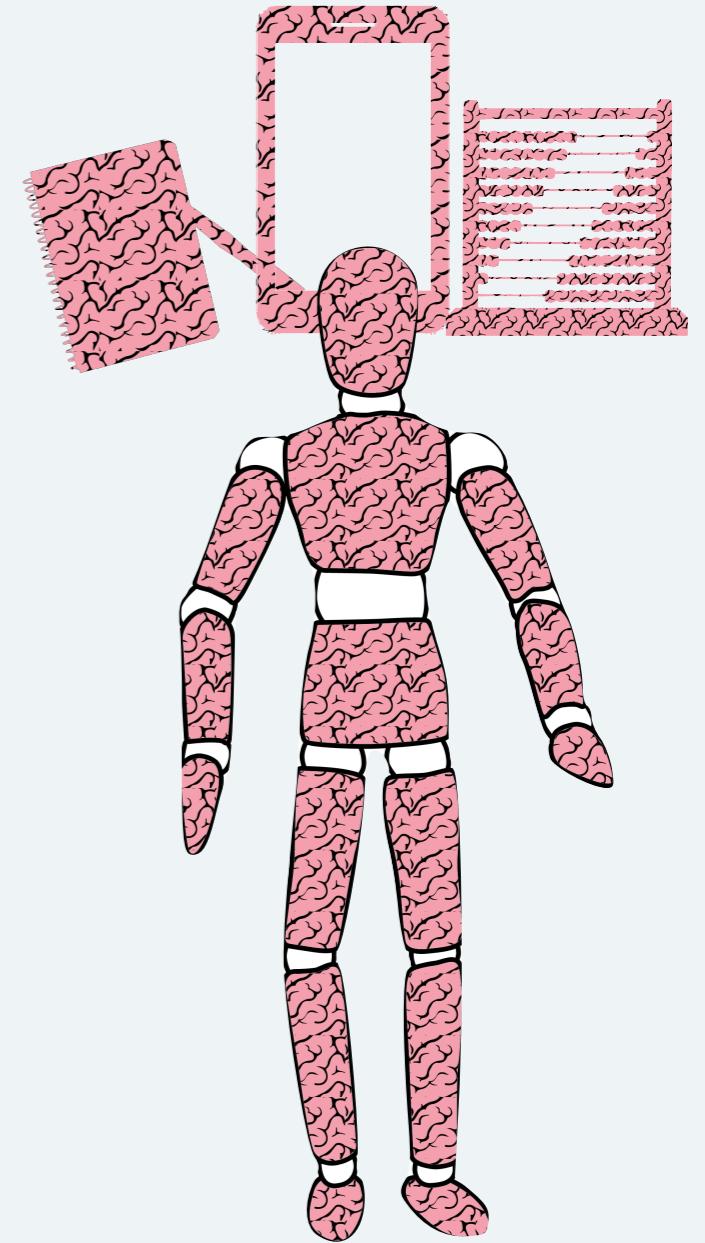
thoughts can be outside of body

embedded cognition



extended cognition

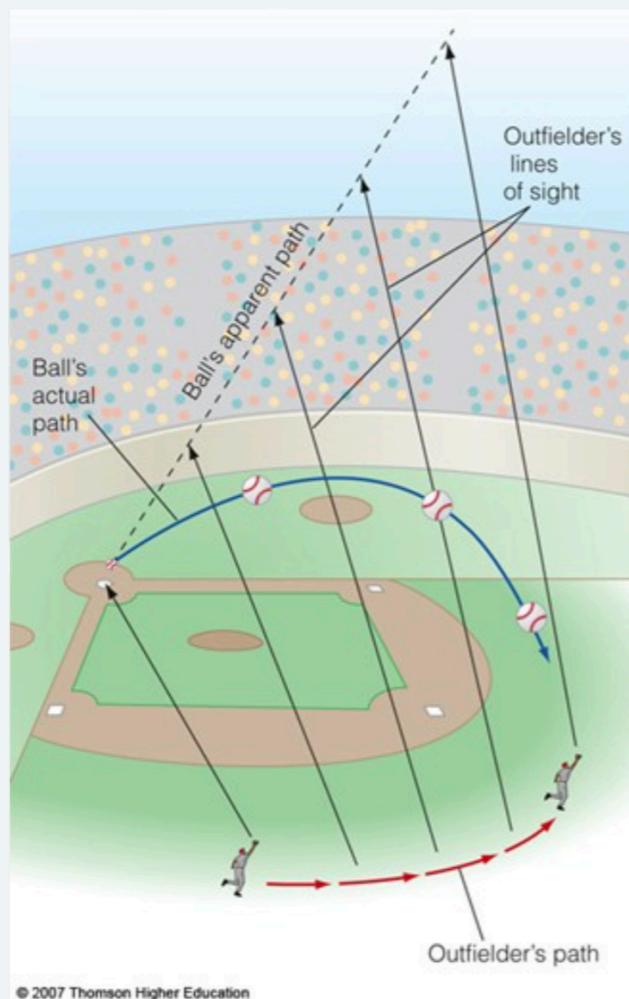
tools are brain



Online vs. offline embodiment

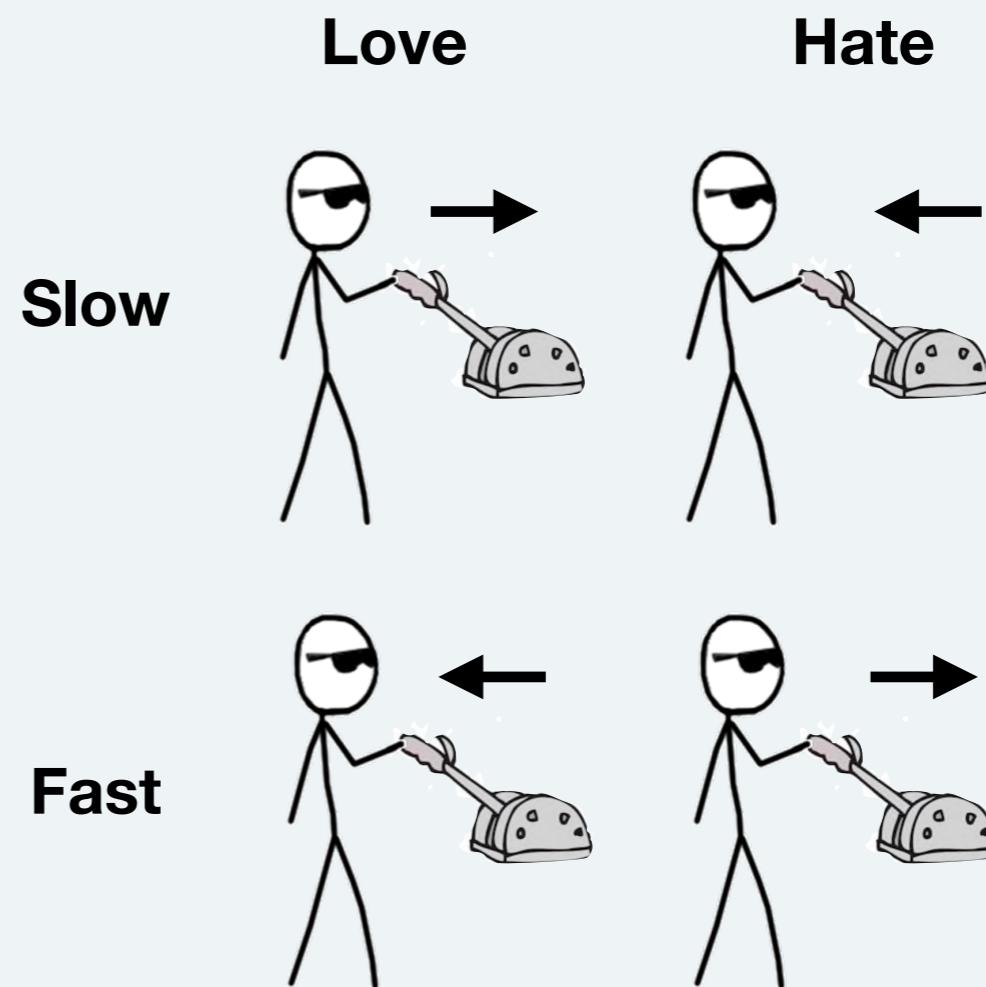
Online embodiment

Basically all the effects we have discussed so far: cognition depending on the body in an online fashion.

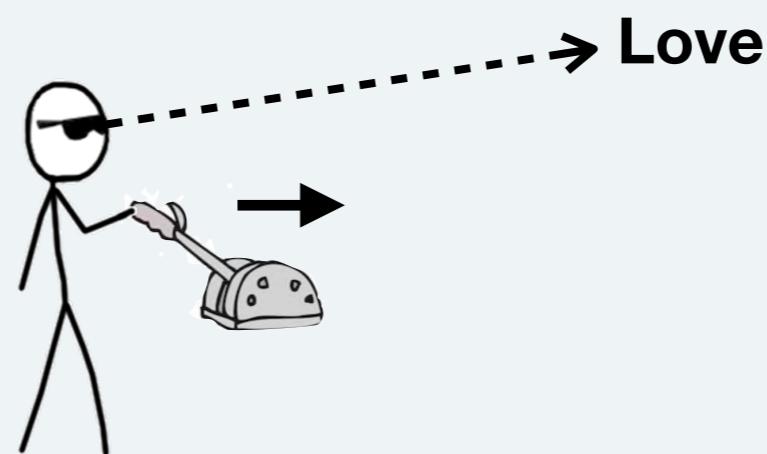
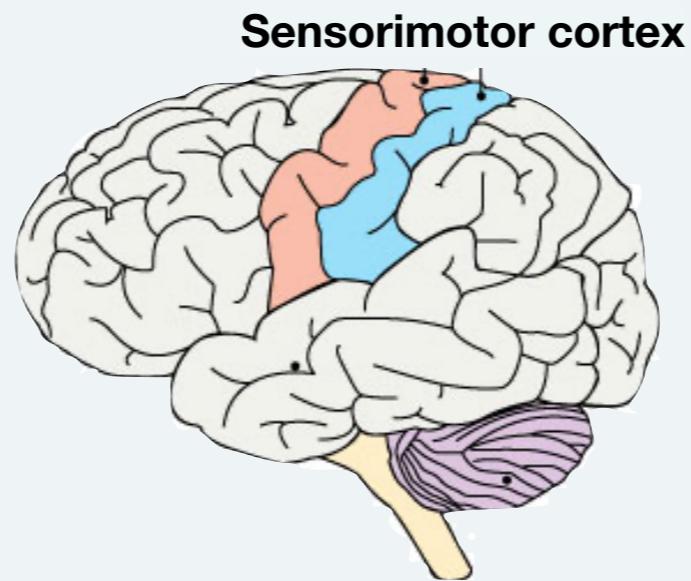


Offline embodiment

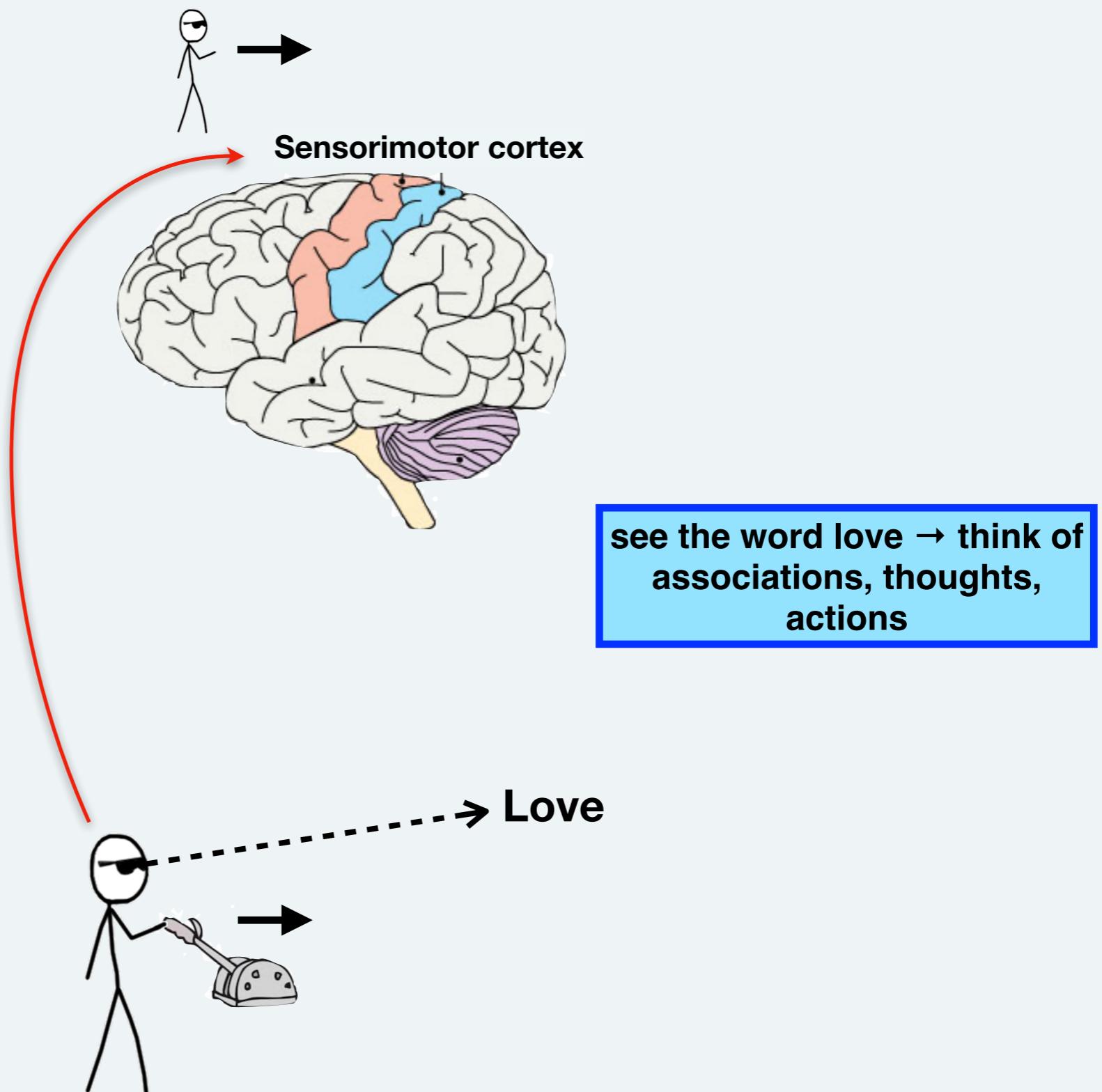
Cognition depending on sensorimotor areas of the brain in tasks that do not have a strong sensorimotor component.



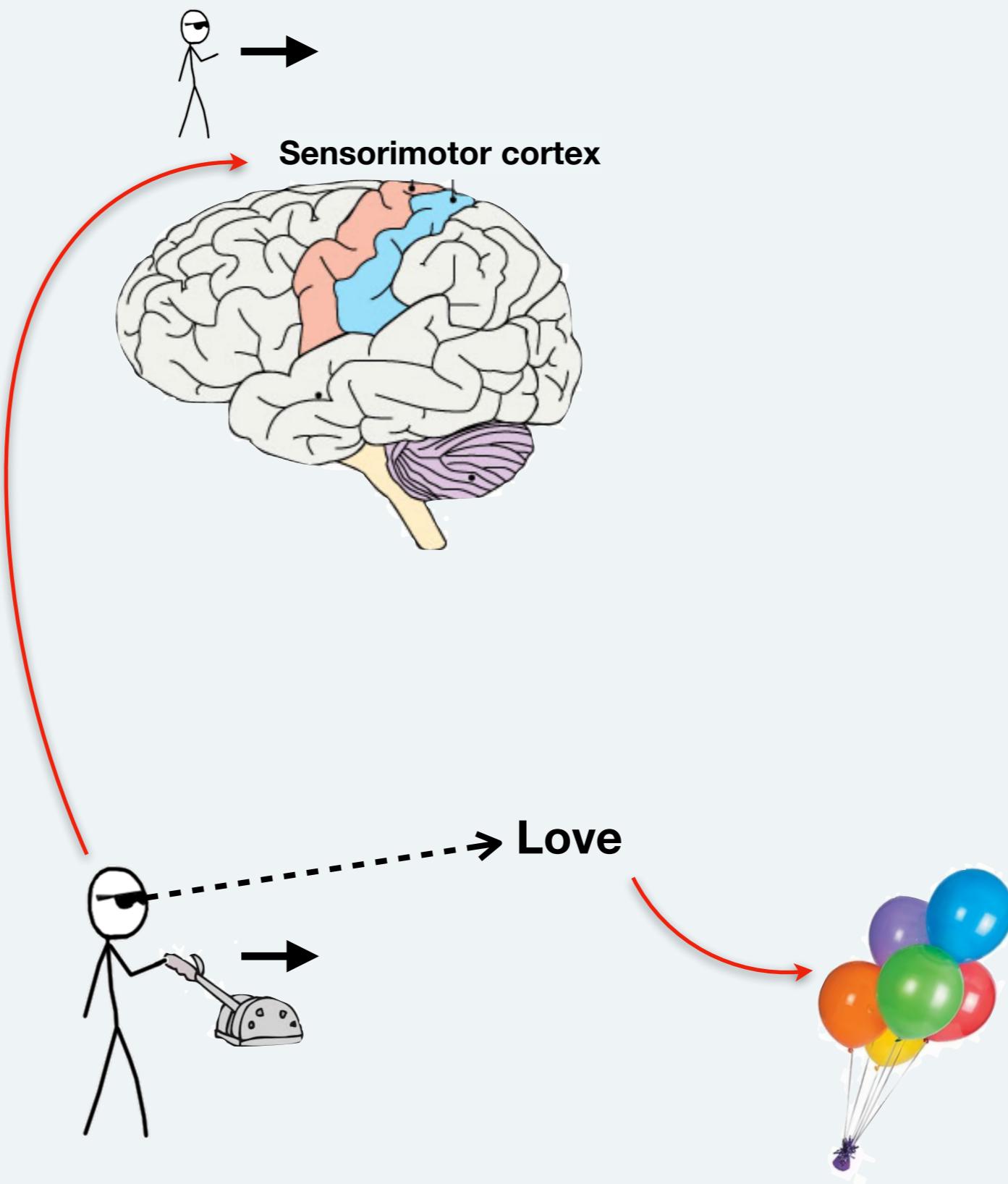
Offline embodiment



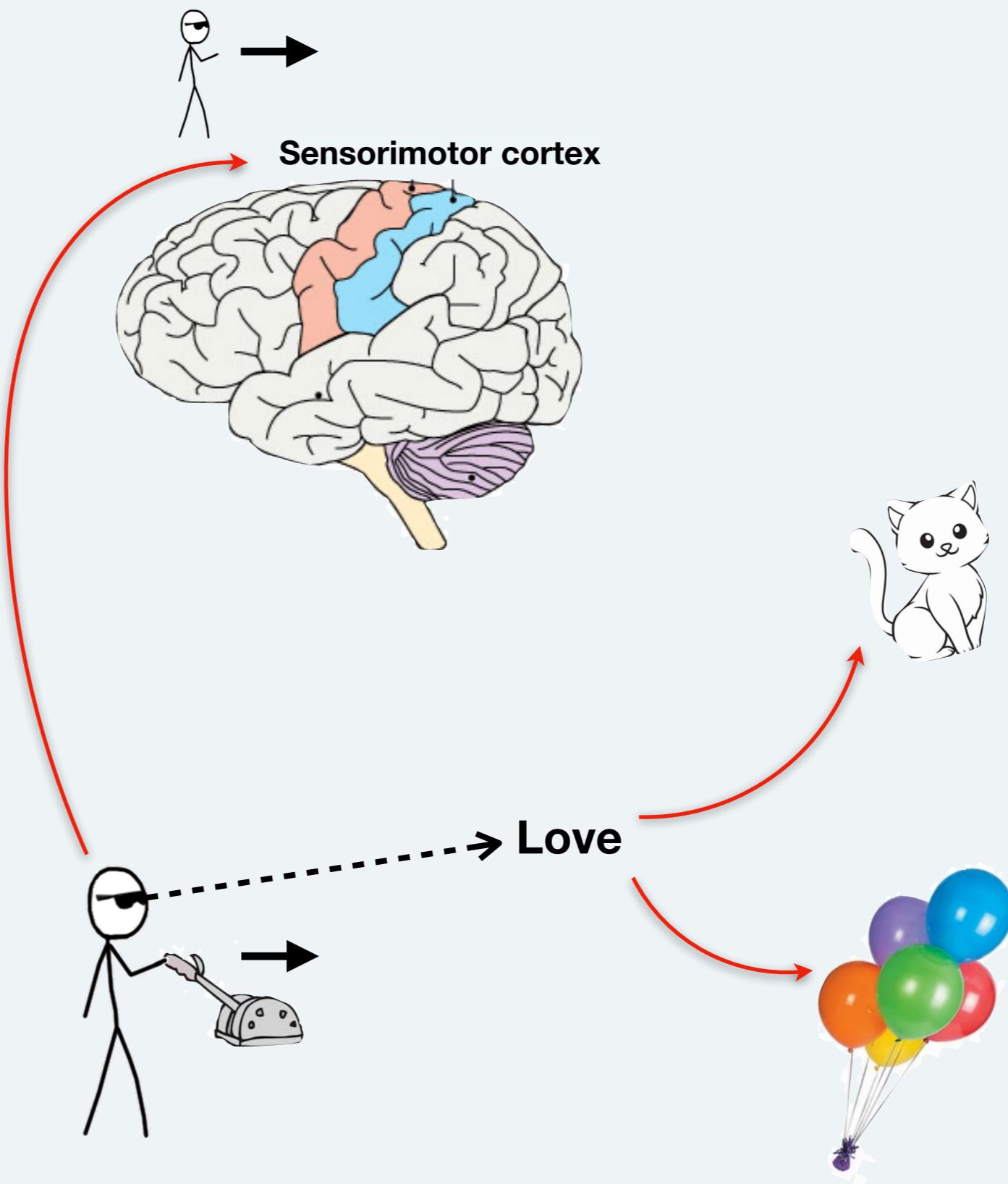
Offline embodiment



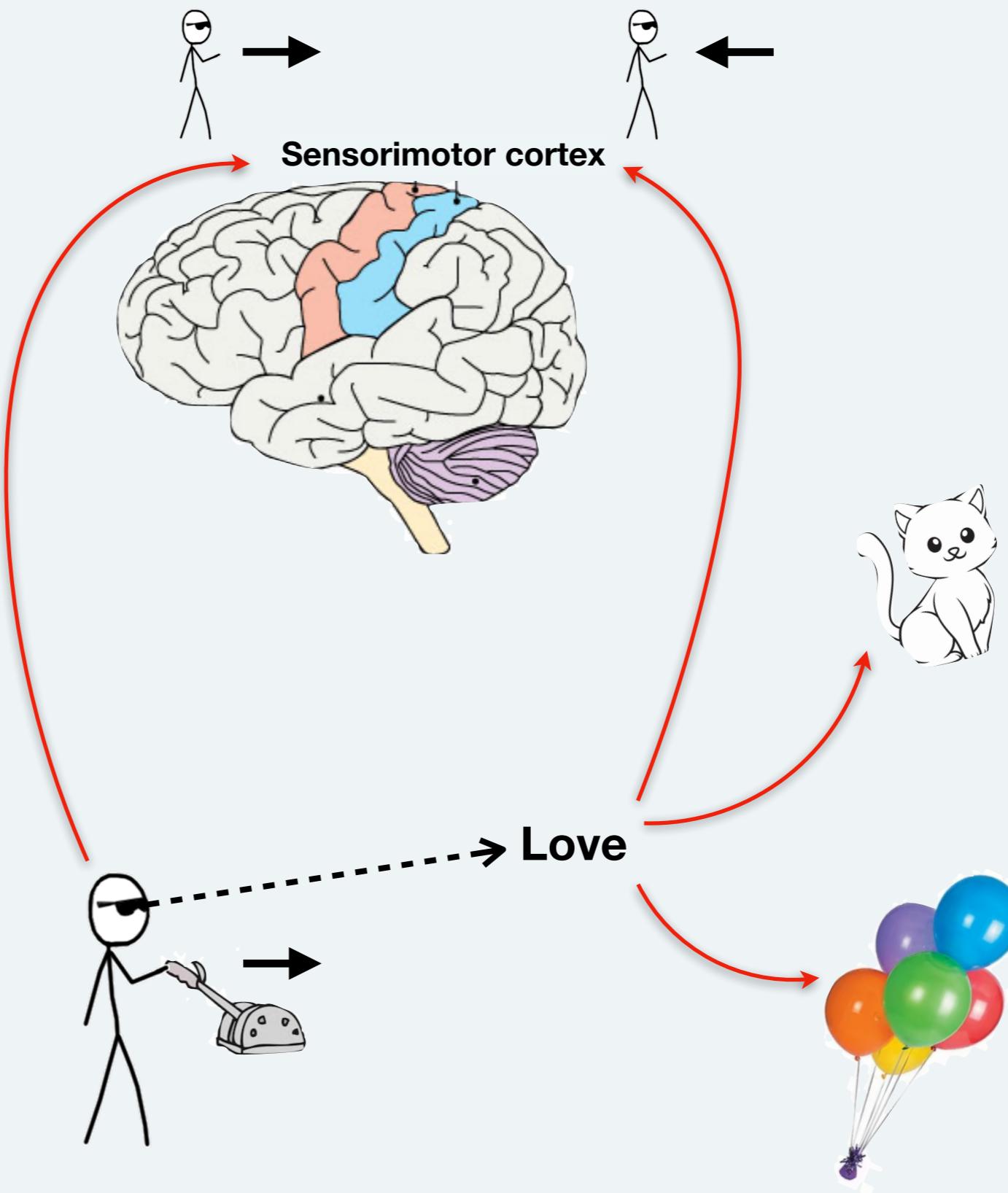
Offline embodiment



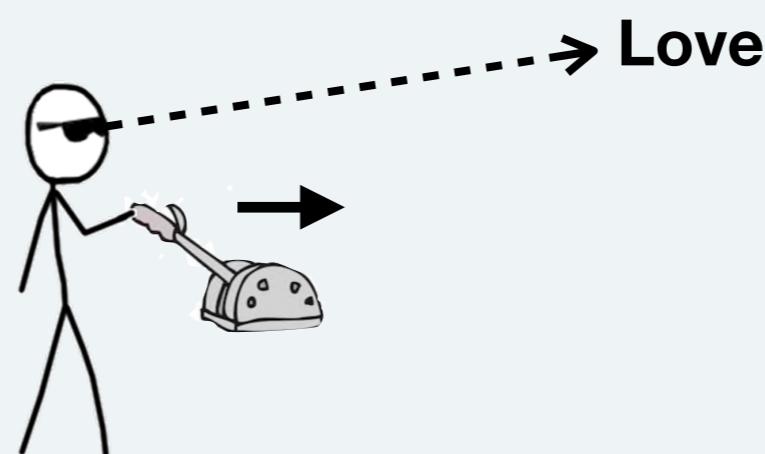
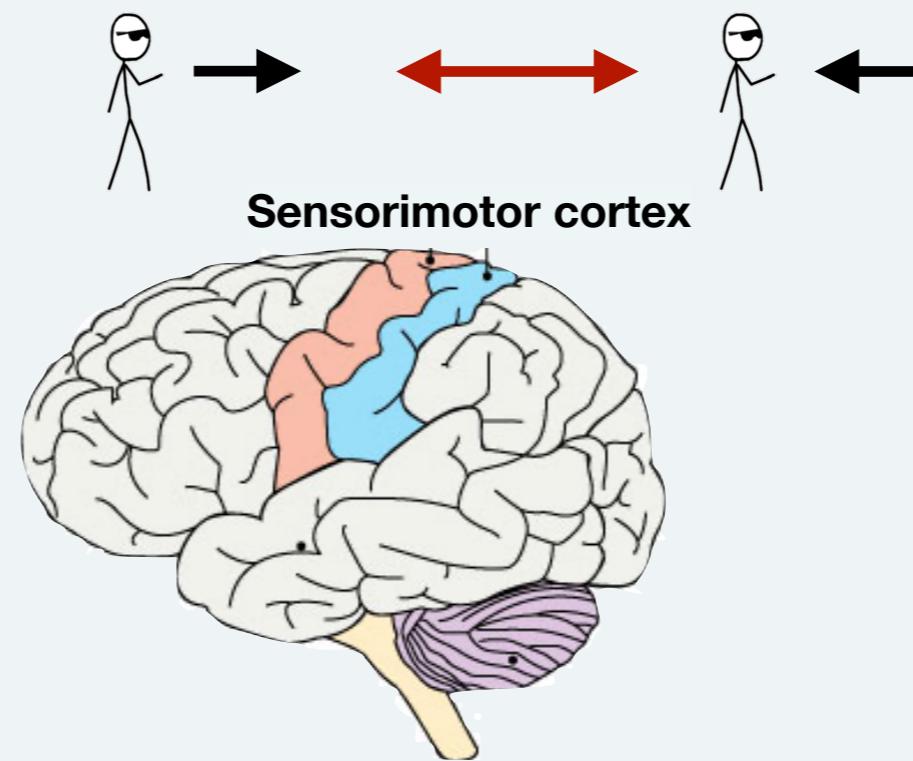
Offline embodiment



Offline embodiment



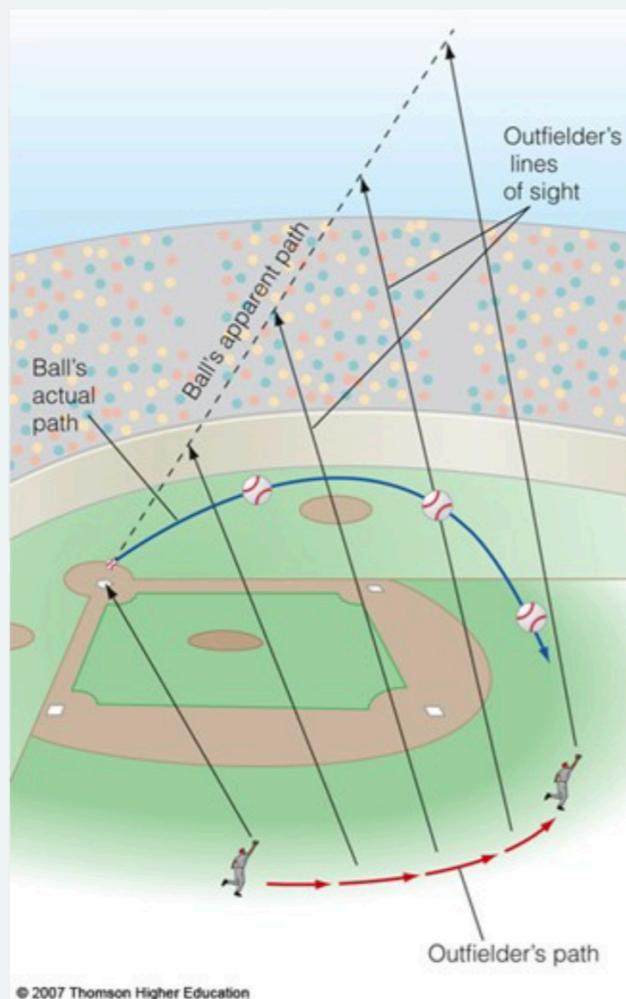
Offline embodiment



Constitutive vs. causal embodiment

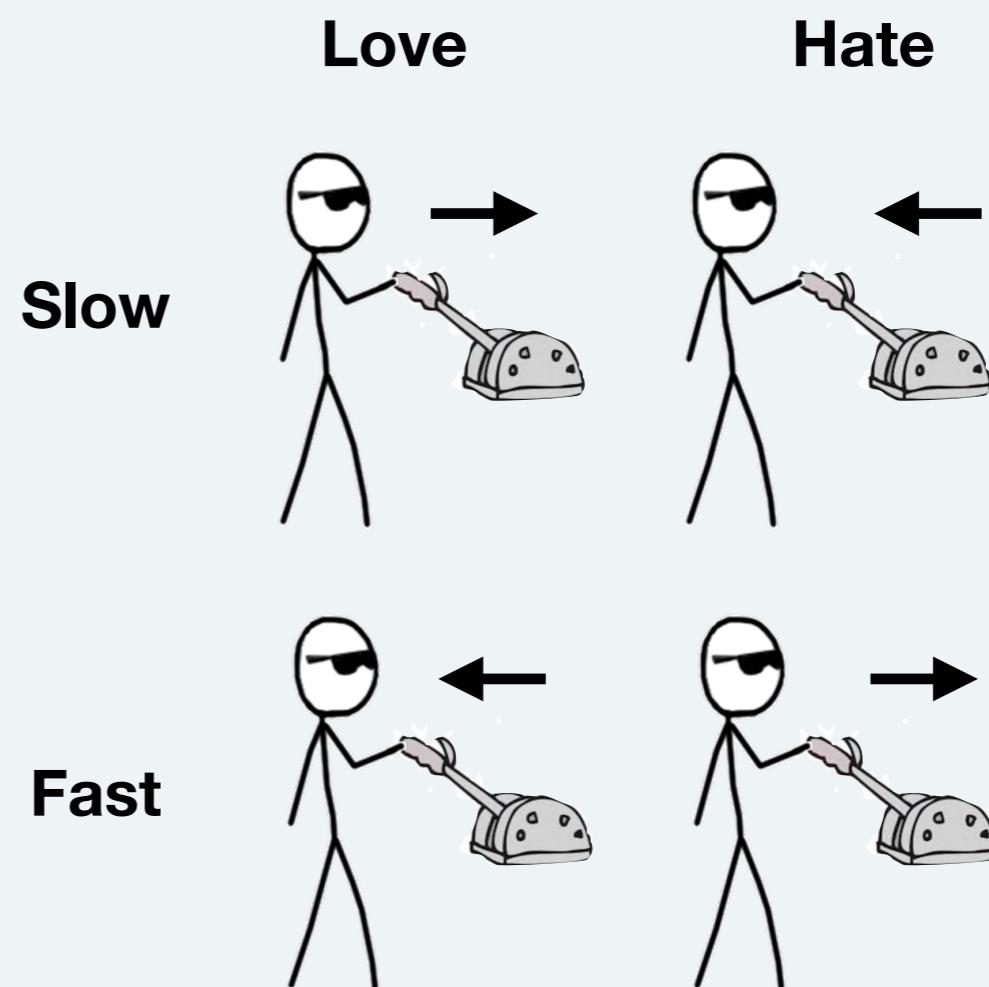
Constitutive embodiment

Cognition crucially depends on the body.



Causal embodiment

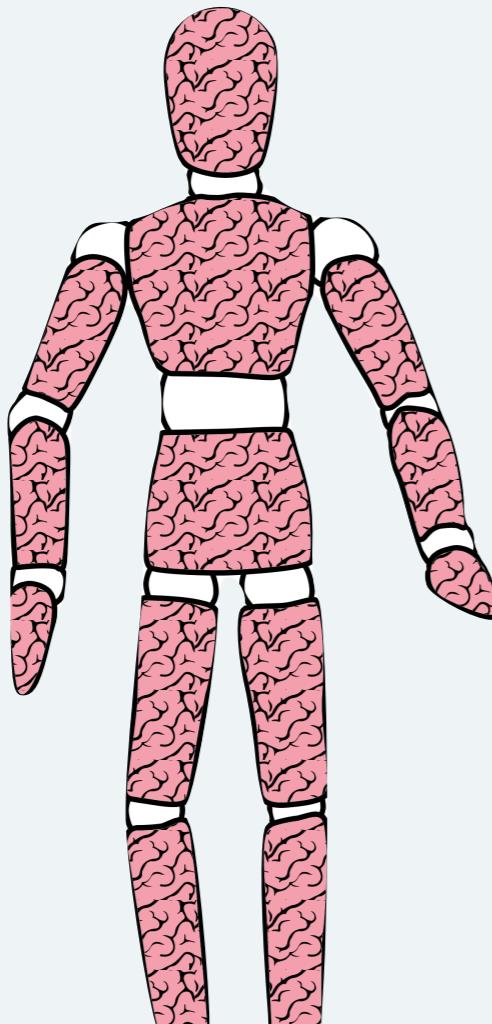
Cognition interacts with the body (but the task can be achieved without that interaction).



Constitutive vs. causal embodiment

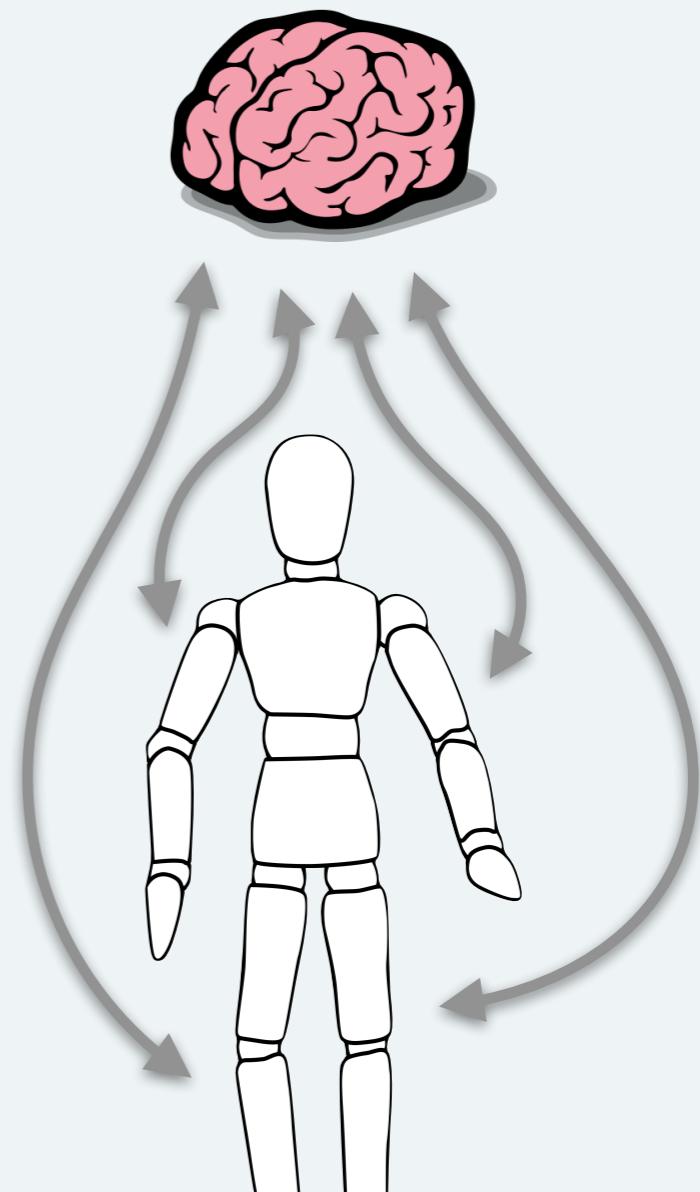
Constitutive embodiment

Cognition crucially depends on the body.



Causal embodiment

Cognition interacts with the body (but the task can be achieved without that interaction).



Embedded cognition

Imagine the desk that you usually study at. What does it look like? How does it support the activities that you perform at it?

Embedded cognition



We rely heavily on our environment to make cognitive tasks tractable!

“intelligent agents do best when they travel informationally light”
(Robbins & Aydede 2009, p. 11)

Embedded cognition

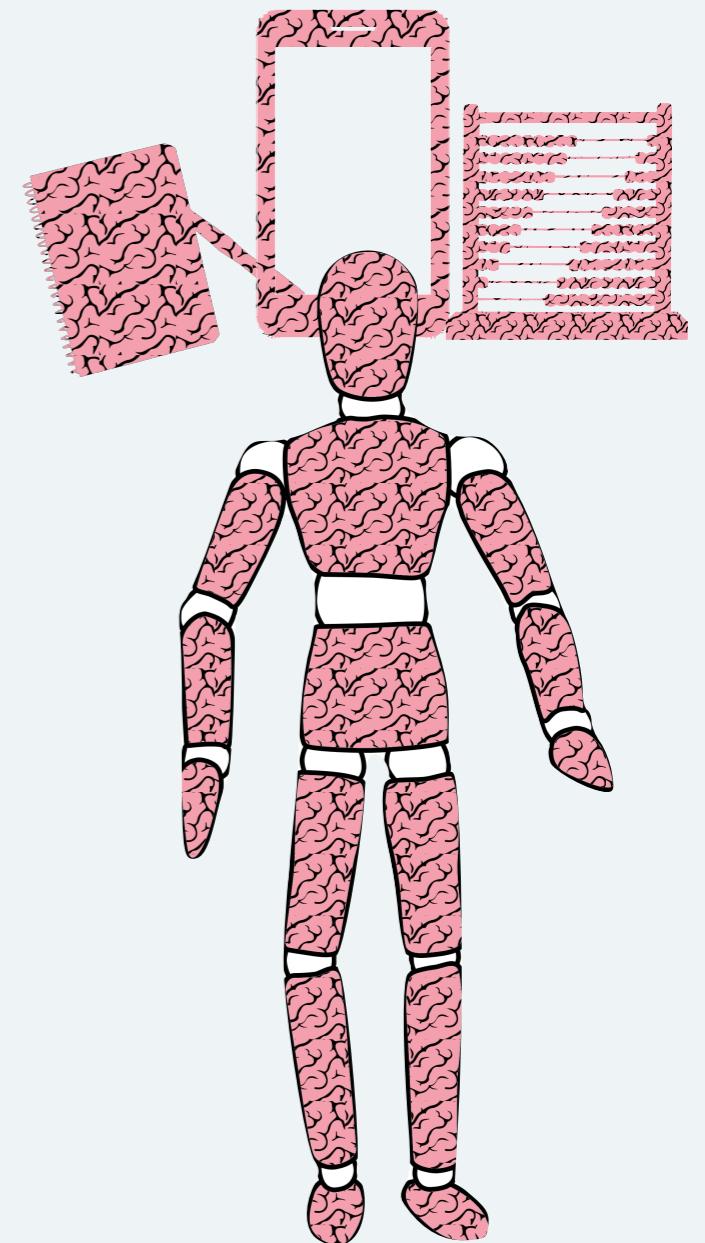
A bit of an aside (but a nice illustration of how *little* information we utilise from our environment):

Change blindness



Extended cognition

Our environment can actually be part of our mind – cognition does not stop at the skull, and cognitive processes can take place outside the brain.



The distinction between mind vs. environment is not a *principled* one.

Extended cognition

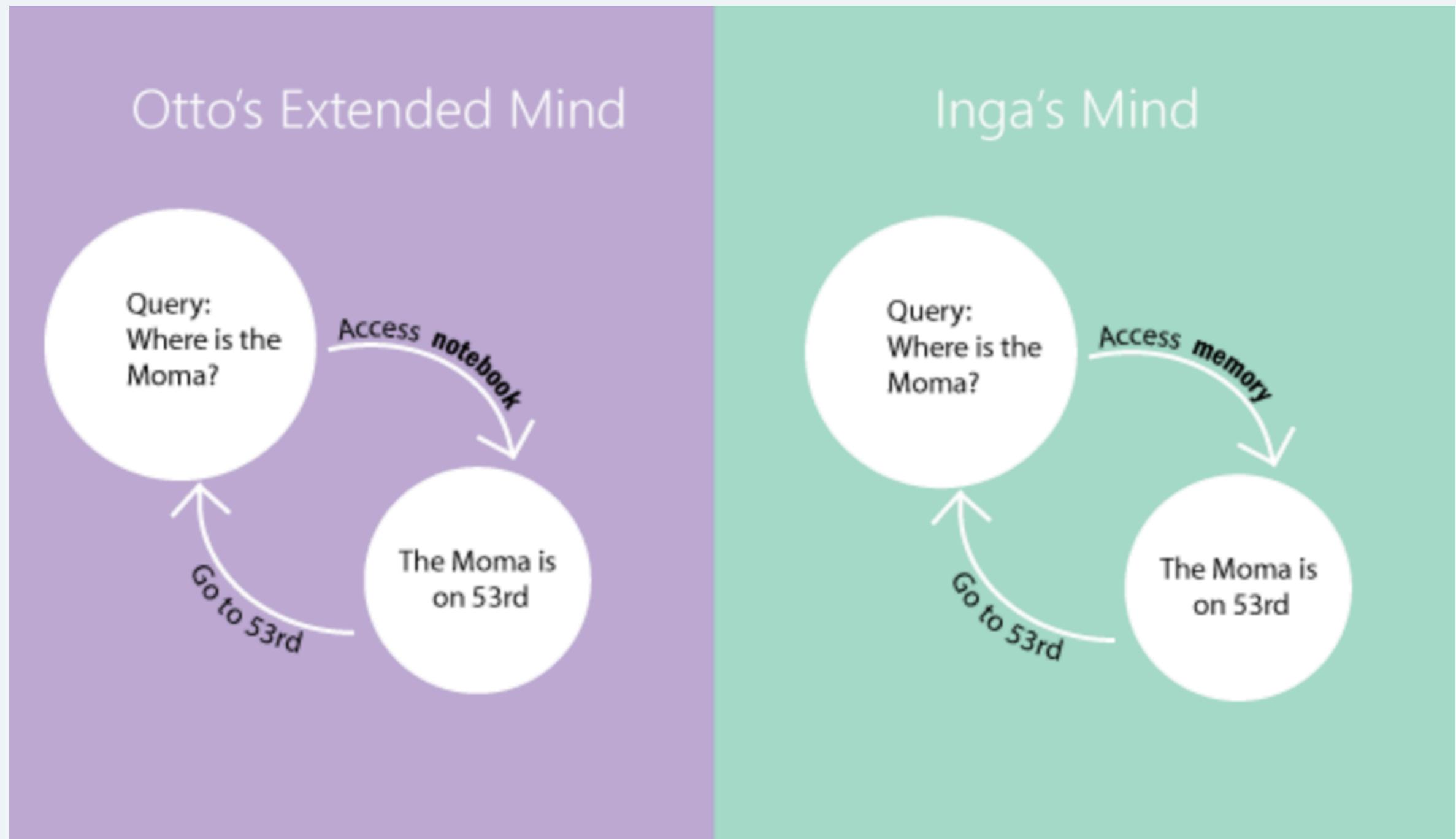


image credit: <https://medium.com/@wordsandsuch/prototyping-the-extended-mind-b522a145335e>