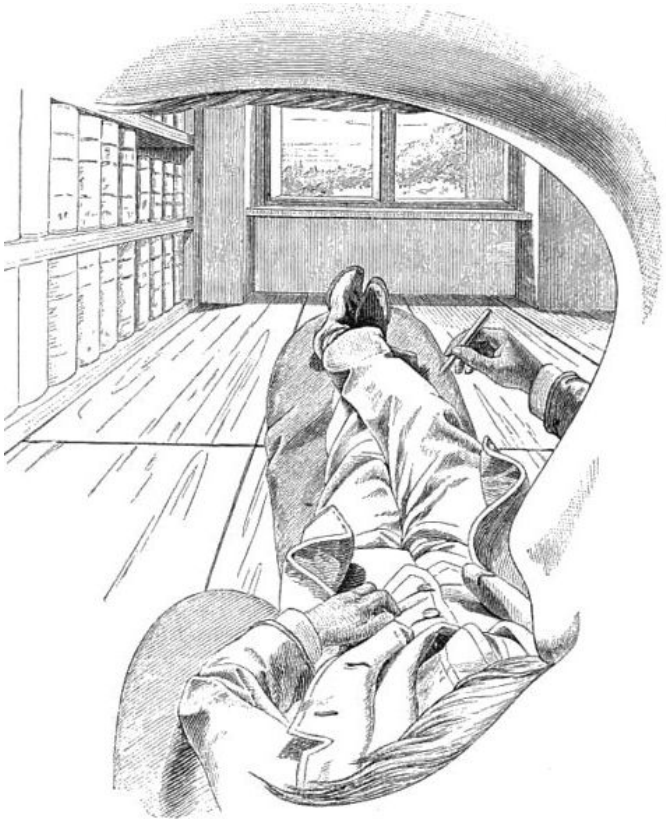
“The psychological origins of the Hard Problem: How our consciousness is shaping the neuroscience of consciousness”

- Psychology
- Philosophy
- Neuroscience

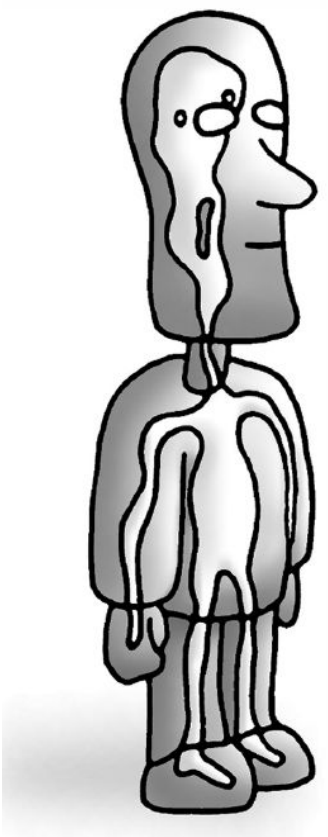
What do you mean when you say “consciousness”?

- Definitions vary among laypeople (e.g., Graziano & Christian, 2023)
- Attention, Perception, Understanding, Being alive?
- Awareness, Sentience, Mind, Subjectivity?
- *Experience*
- The *experience* of feeling, the *experience* of seeing (e.g., Chalmers, 2020)
- It is “something it is like” (Nagel, 1974)



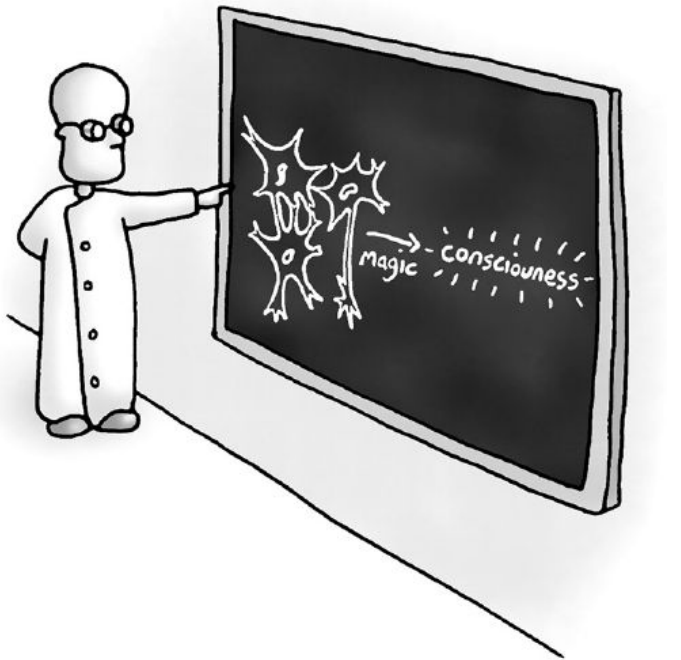
What's the problem with this definition?

- To each of us, it seems pretty obvious what it is
- "On the inside", "in our head", "to me"
- The *soul*? Not a scientific explanation!
- It "floats close by"?
- We need a theory of consciousness
- No theory has been widely accepted (Seth & Bayne, 2022; Yaron et al., 2022)



What are theories of consciousness?

- Usually, theories which attempt to explain consciousness in terms of the brain
- Establish a *connection* between brain-states and “what it is like”-states
- This connection is usually merely correlative
- We want to know the *specific* manner in which the brain gives rise to consciousness
- We know *that*.., but we want to know *why*..

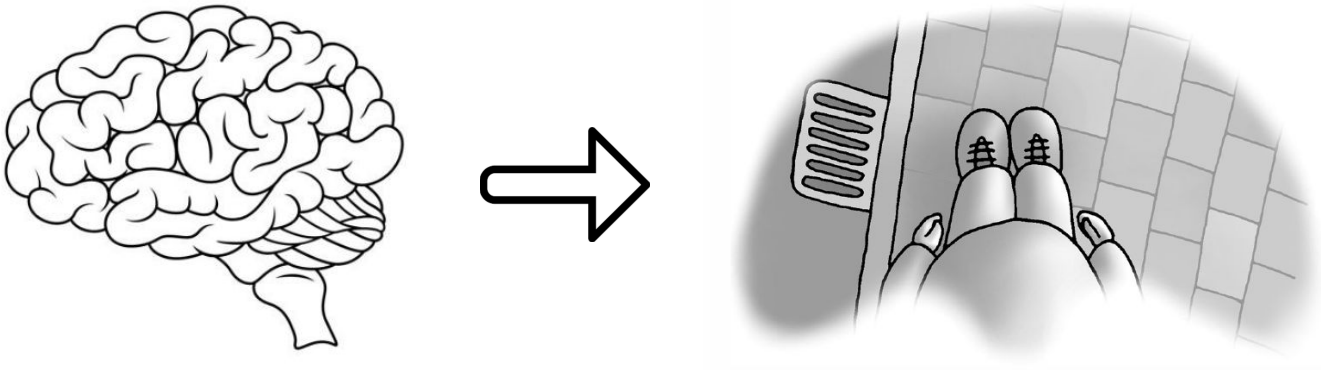


Issues with knowing “why”

“Mary is a brilliant scientist who is … forced to investigate the world from a black and white room via a black and white television monitor. She specializes in the neurophysiology of vision and acquires … all the physical information there is to obtain about what goes on when we see [e.g., the color red]. She discovers, for example, just which wavelength combinations … stimulate the retina, and exactly how this produces—via the central nervous system—the contraction of the vocal cords and expulsion of air from the lungs that results in the uttering of the sentence [“a rose is red”] … What will happen when Mary is released from her black and white room … 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 is it inescapable that her previous knowledge was incomplete. But she had *all* the physical information. *Ergo* there is more to have than that …” (Jackson, 1982, p. 130, emphasis in original)

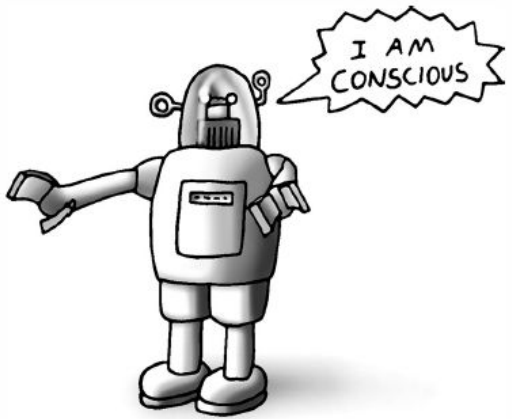
The explanatory gap

- Most people say “yes” (Bourget & Chalmers, 2023; Francken et al., 2022)
- But she had *complete* physical knowledge!
- Ergo, consciousness ≠ physical world
- This is called **the explanatory gap / hard problem of consciousness**
- How do we go from “third-person” observations to a “first-person” perspective?



Disagreements on the explanatory gap

- "What it is like" = unscientific
- There is not "something more" to consciousness
- Once we have explained all related functions we have explained consciousness
- Should we clarify consciousness' purely third-person *physical* and *functional* aspects, or also its exclusively first-person *phenomenal* aspects?



Premise 1: Science is an exclusively *third-person* endeavor

Premise 2: Consciousness is an exclusively *first-person* phenomenon

Premise 3: First-person and third-person endeavors cannot be united

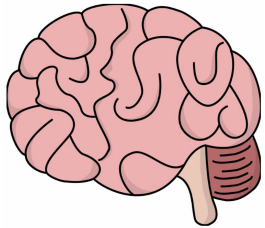
Premise 4: Science is unitary

Conclusion: Therefore, there cannot be a science of consciousness

(e.g., Dennett, 2018)

Camp 1 (first-person science)

Camp 2 (third-person science)



Attempts to move beyond the explanatory gap

- We need consensus
- Disagreements make it reasonable to doubt the other camp
- Chalmers' (2018) move: pose the ***meta-problem***:

  The problem of why we think or feel that there is a hard problem of consciousness
- Demonstrates a psychological component of the hard problem
- Has not moved beyond the two camps (Sękowski & Rorot, 2022), and cannot (White, 2021)
- Already buy the hard problem? = objective source
- Don't buy the hard problem? = illusory source

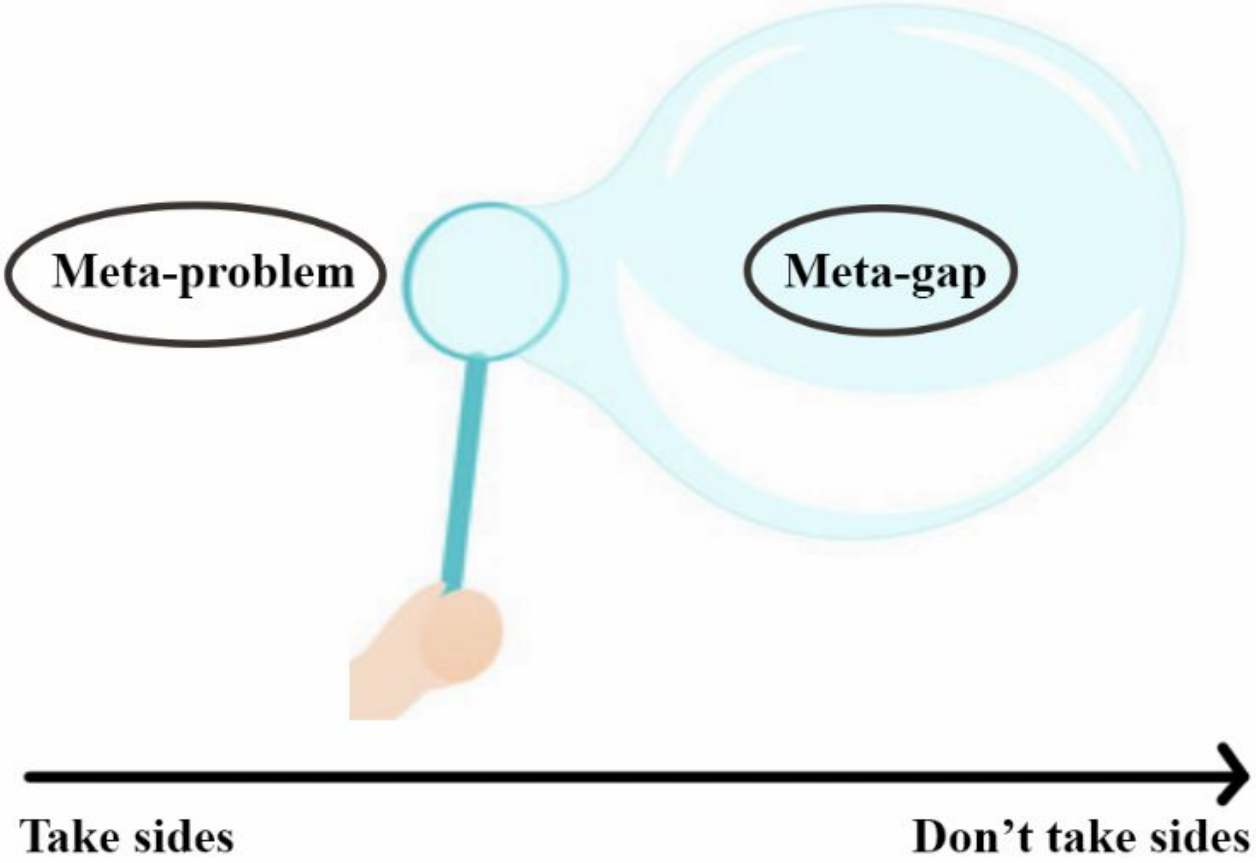
David J. Chalmers

The Meta-Problem of Consciousness

The meta-problem of consciousness is (to a first approximation) the problem of explaining why we think that there is a problem of consciousness.[1]

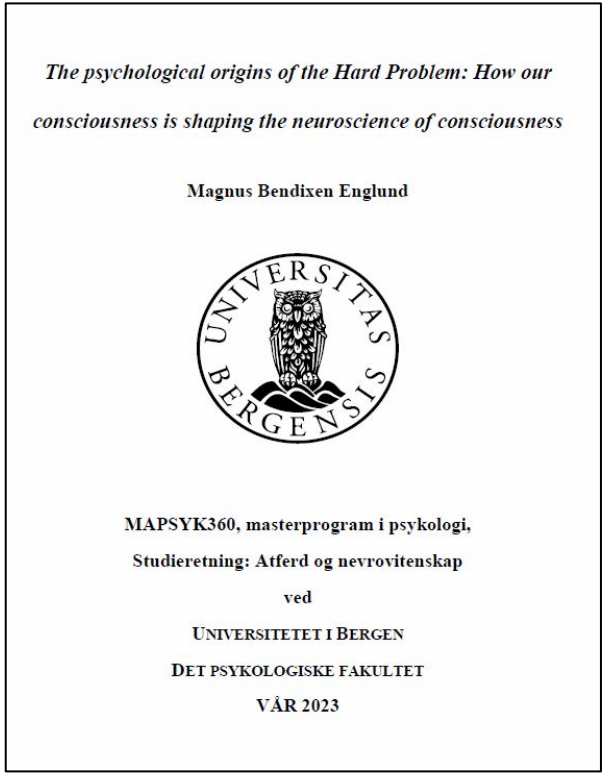
My contribution to move beyond the explanatory gap

- Why do positions vary along the lines of the two camps?
- There appears to be an explanatory gap between *our very positions on this explanatory gap*
- That is, a difficulty in explaining and bridging the gap between opposing positions on the explanatory gap
- I dubbed this phenomenon the ***meta-gap***
- "... the problem of explaining why it seems (to many of us) to be so hard to explain consciousness and why there is so little agreement on both substantive and methodological questions concerning its explanation." (List, 2023, p. 1)


Meta-problem
Meta-gap
Take sides
Don’t take sides

My thesis

- Accommodate both camps in the explanation
- Make it feasible for *individual differences psychology* to explain:
  - ..the meta-gap
  - ..our intuitive conceptions of consciousness
  - ..why these things matter
- Individual differences >> the hard problem >> empirical science



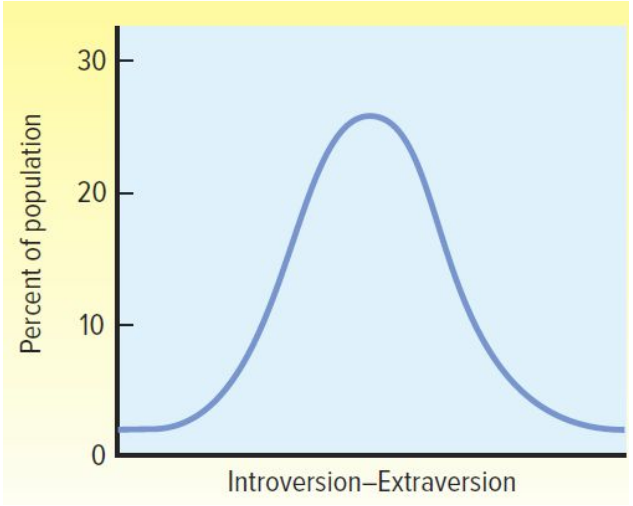
The psychological origins of the Hard Problem: How our consciousness is shaping the neuroscience of consciousness

Magnus Bendixen Englund

MAPSYK360, masterprogram i psykologi,
Studieretning: Atferd og nevrovitenskap
ved
UNIVERSITETET I BERGEN
DET PSYKOLOGISKE FAKULTET
VÅR 2023

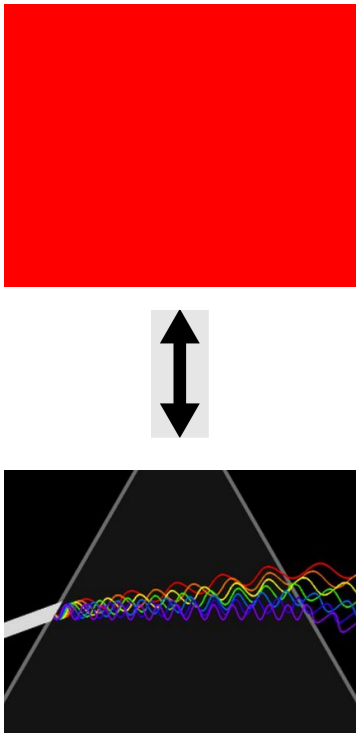
Part 1: Individual differences

- Individual differences affect the way we view reality
- They affect the point from which we begin our explanations
- Physical reality >> Subjective experience
- Subjective experience >> Physical reality
- Inside vs. outside
- Cognitive bias, but only when exposed to *trait-relevant problems* (e.g., as with introversion-extraversion)



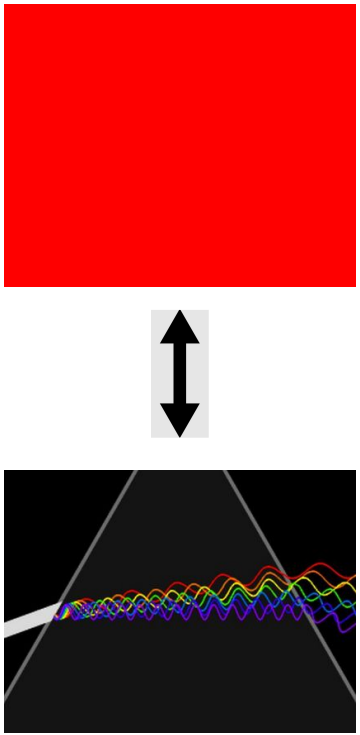
Internalism-externalism

- They disagree on trait-relevant problem: The hard problem
- Biases us to begin on the inside or outside



Internalism-externalism

- They disagree on trait-relevant problem: The hard problem
- Biases us to begin on the inside or outside
- Begin on inside and work our way to the outside?
    - We don’t know how; no connection
    - **Accept** the hard problem



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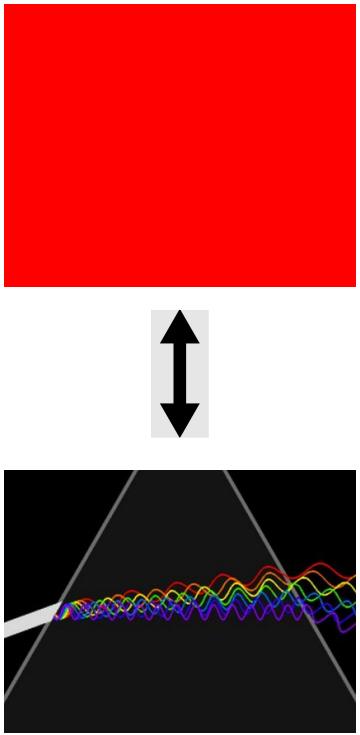
- Begin on inside and work our way to the outside?
  - We don’t know how; no connection
  - **Accept** the hard problem
- Begin on the outside and work our way to the inside?
  - We apparently need to add something non-physical; no deal
  - **Reject** the hard problem



Part 2: The hard problem

- Seems unintuitive?
- What *counts* as solving?
  - Objective criterion
  - Subjective criterion
- Solving problems require a *shared understanding*
- Subjective criterion = **degrees of freedom**
- Hard problem has a high degree of freedom

The hard problem and “knowing”

- Hard problem arguments are “knowing-arguments” (epistemological arguments)
  - Does Mary **know** all of the physical knowledge?
  - Can Mary **know** more than physical knowledge?
    - Internalist says “yes”; externalist says “no”
- But knowing-arguments cannot on their own state what *counts* as knowing
  - “Can we know if there are aliens?”
  - Depends what you mean by “know”; no objective criterion stated

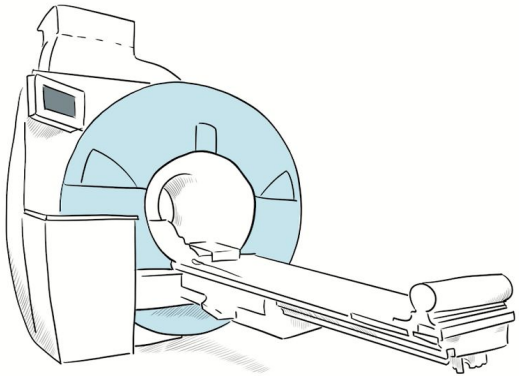
The hard problem and “knowing”

- “Problem of other minds”
- Are there other minds besides my own?
- I cannot literally experience things from their point of view to find out
- Inverted color spectrum?
- What counts?
    - Verbal reports? fMRI-imaging? Evolutionary arguments?

“Knowing” has degrees of freedom

- Should we agree or disagree with third-person methods?

  Well, we have a high degree of freedom..
- Two ways of knowing?
  - First-person perspective (immediate experience)
  - Third-person perspective (scientific methods)
- What counts as learning e.g., to “Mary the super-scientist”?
  - First-person fact vs. Third-person fact

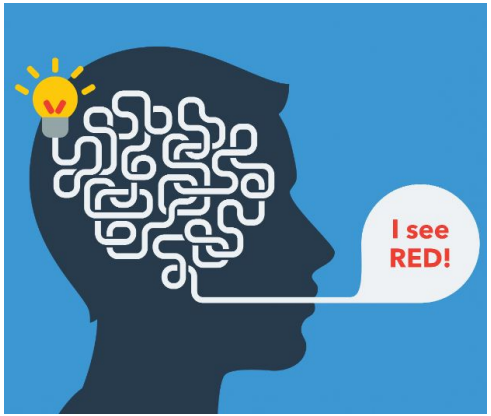


“Knowing” has degrees of freedom

- The hard problem = knowing-arguments = degrees of freedom = possibility of individual differences
- Normal responses to trait-relevant problems:
  - Incredulousness
  - Begging the question
    - “I just can’t see how consciousness can be physical.”

Part 3: Empirical science

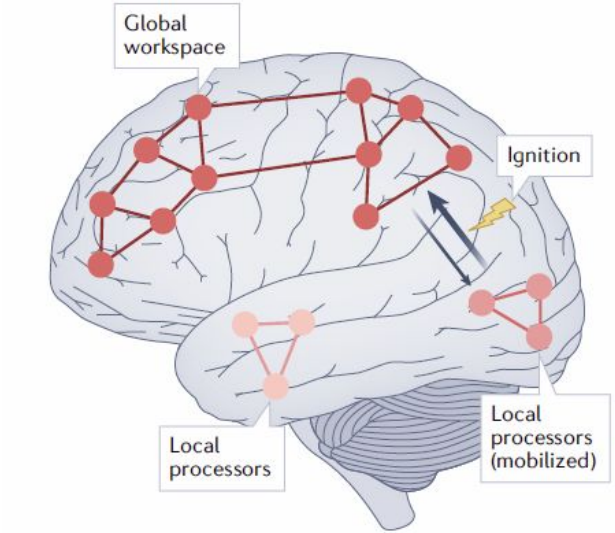
- Why does any of this matter?
- Positions on the hard problem drives our explanatory target
- **Access consciousness (A) vs. Phenomenal consciousness (P)**
    - Access for use in speech vs. “What it is like”
- To P-consciousness, or not to P-consciousness?
- This extends to empirical theories of consciousness
- Everybody disagrees but everybody is studying “consciousness”



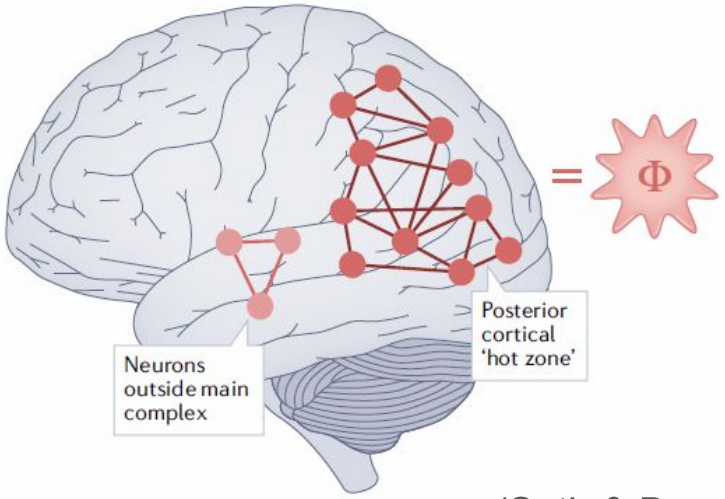
Consciousness and the brain

- Does a brain state correlate with *consciousness*? Depends on your definition

Global Neuronal Workspace Theory

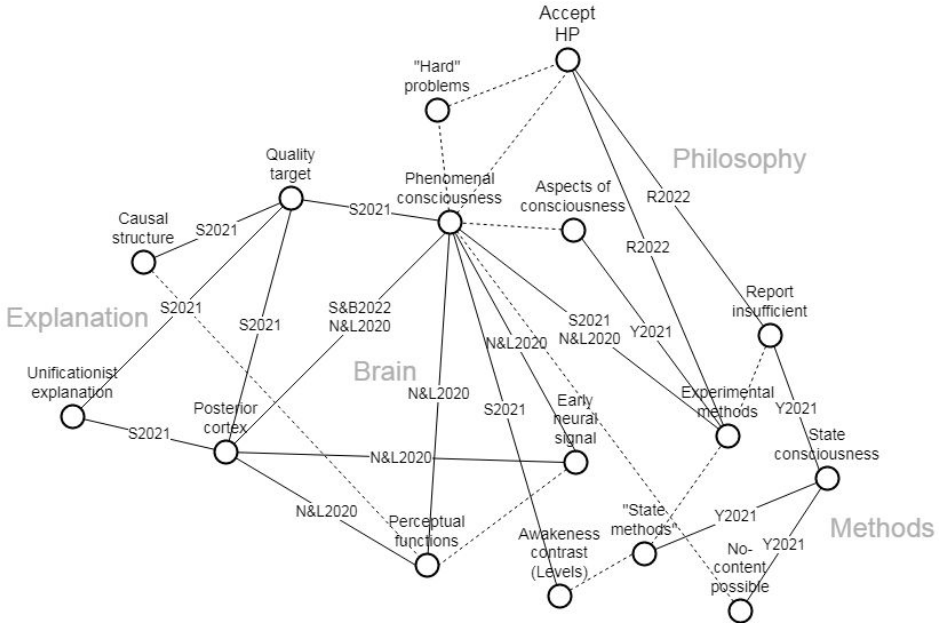


Integrated Information Theory



(Seth & Bayne, 2022)

Internalist



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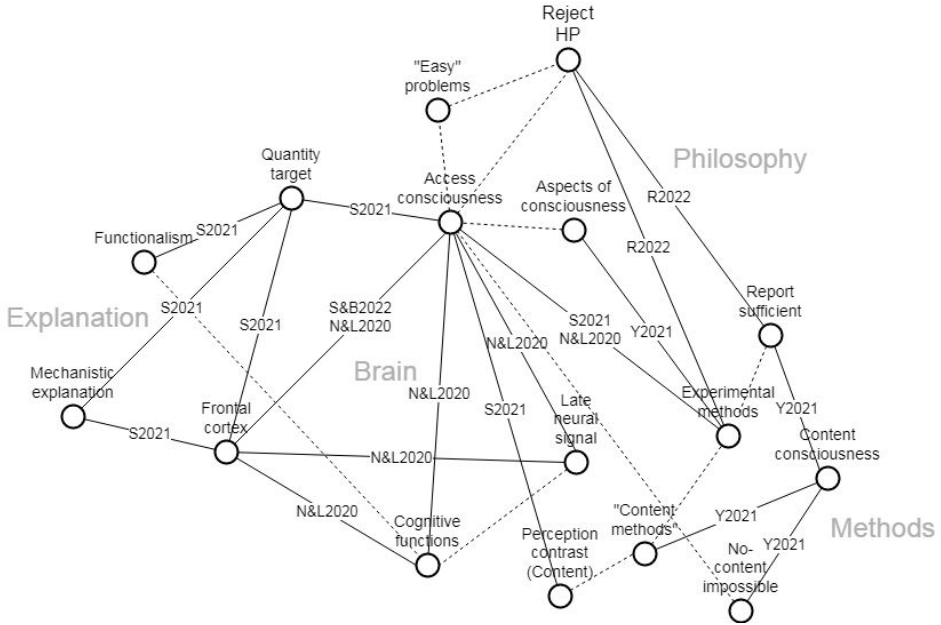

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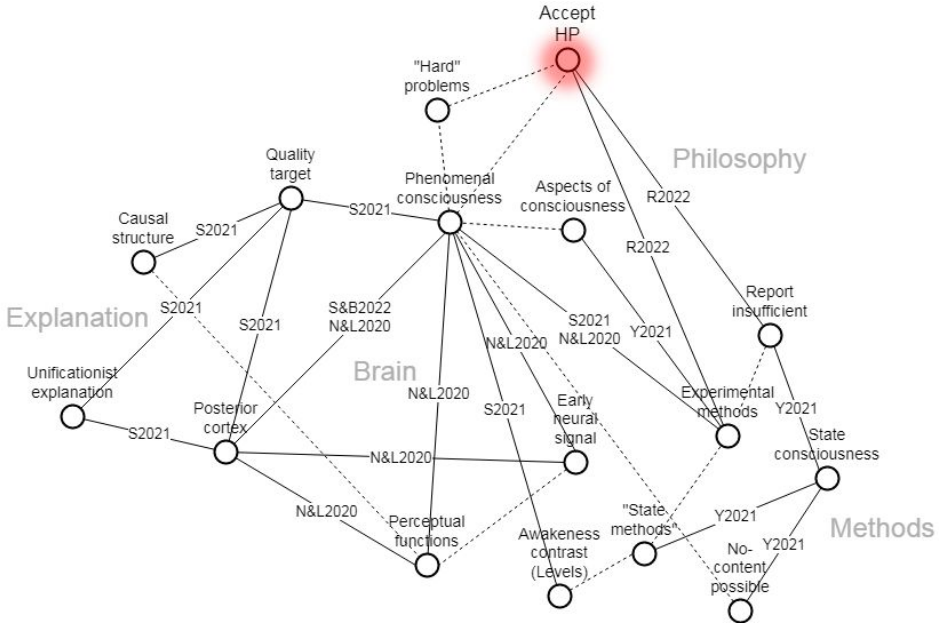

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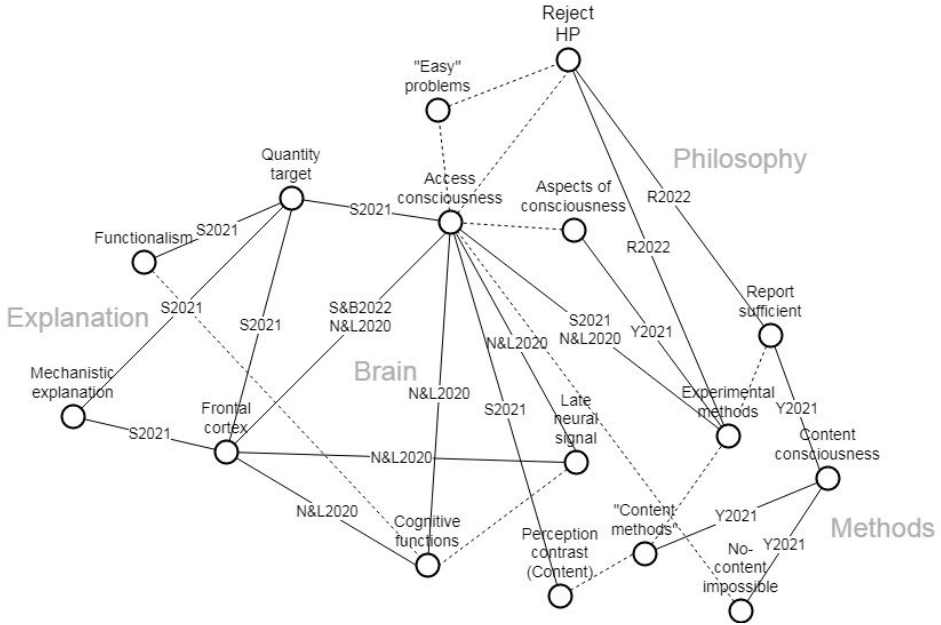

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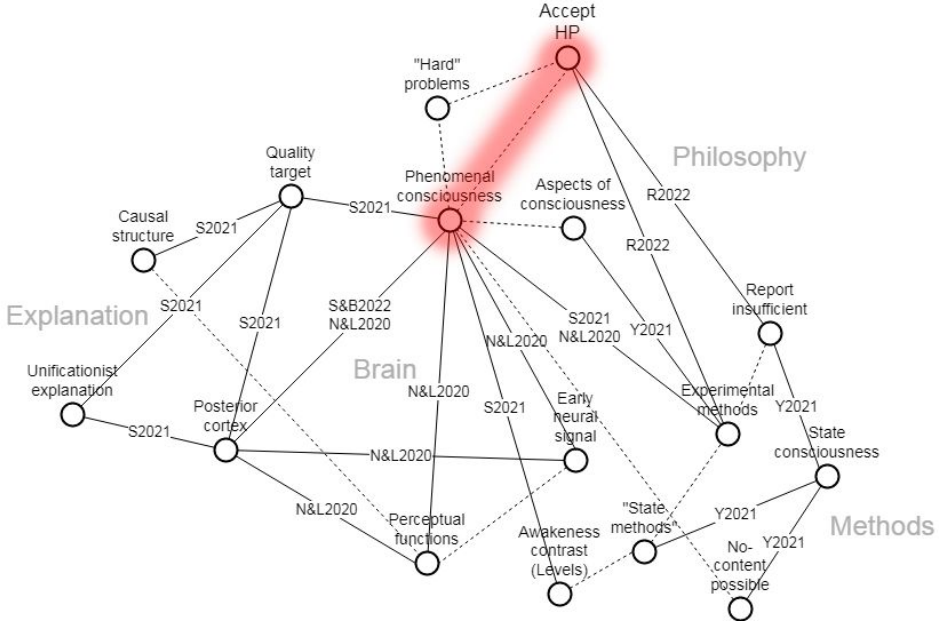

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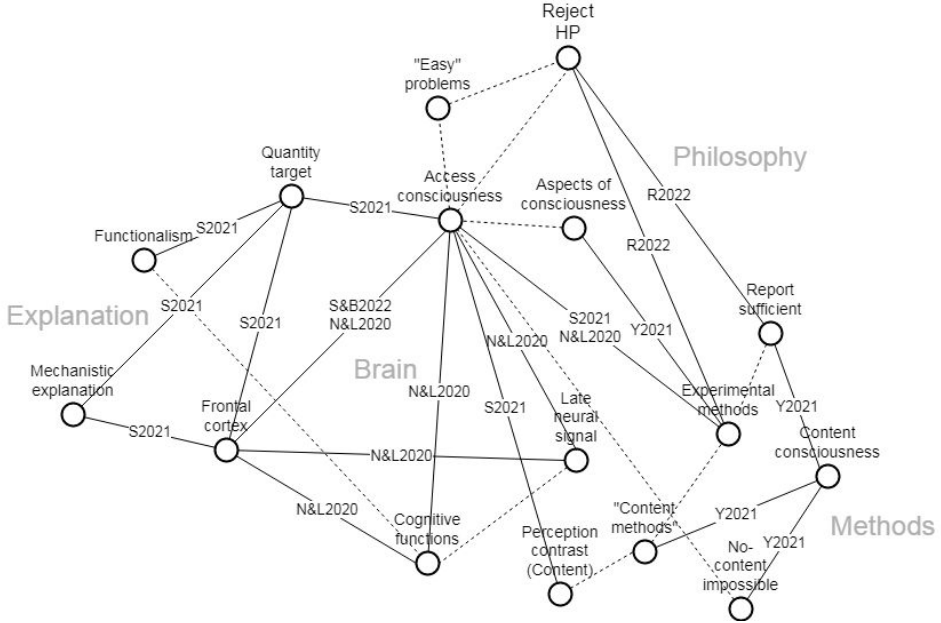

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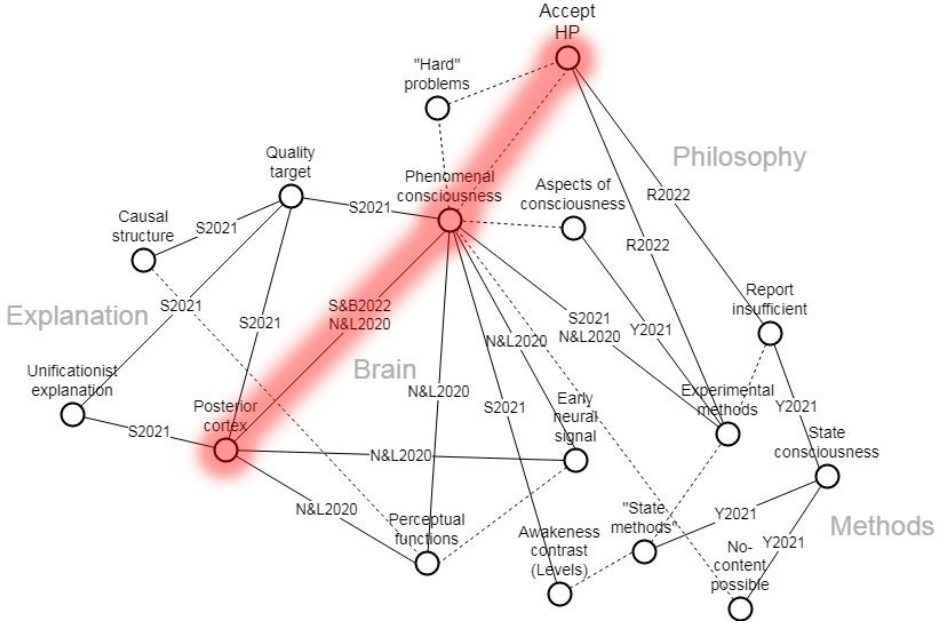

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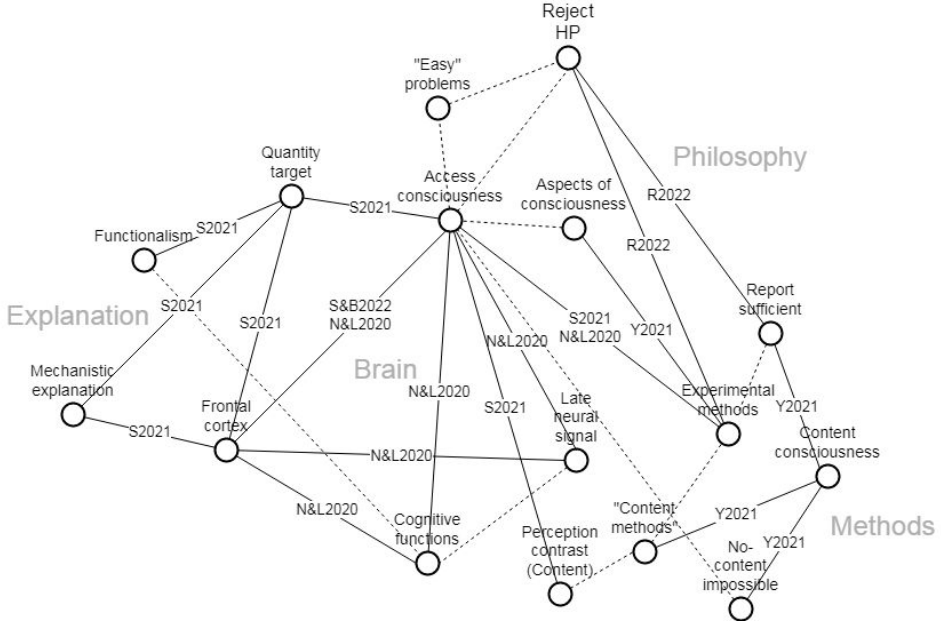

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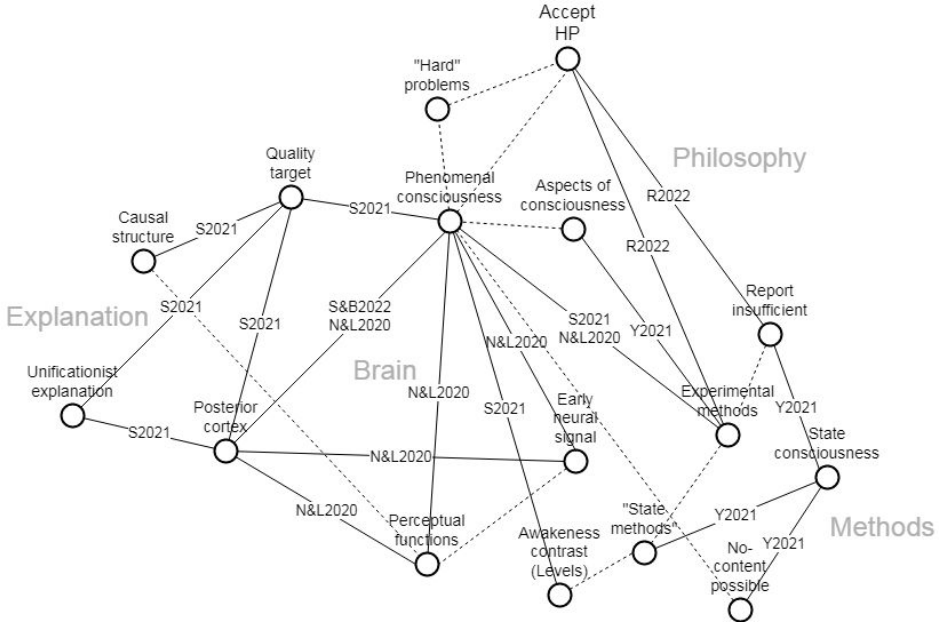

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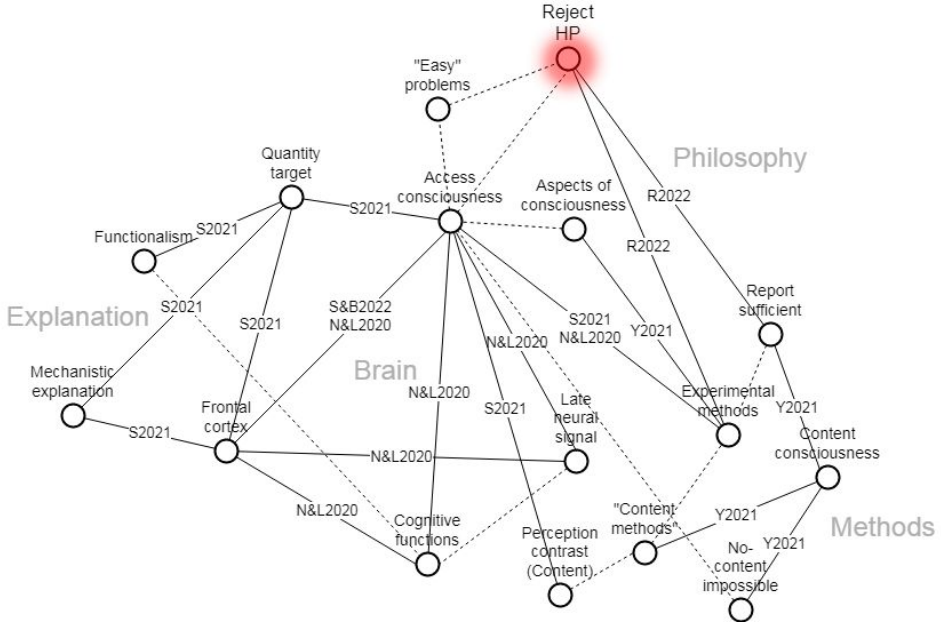

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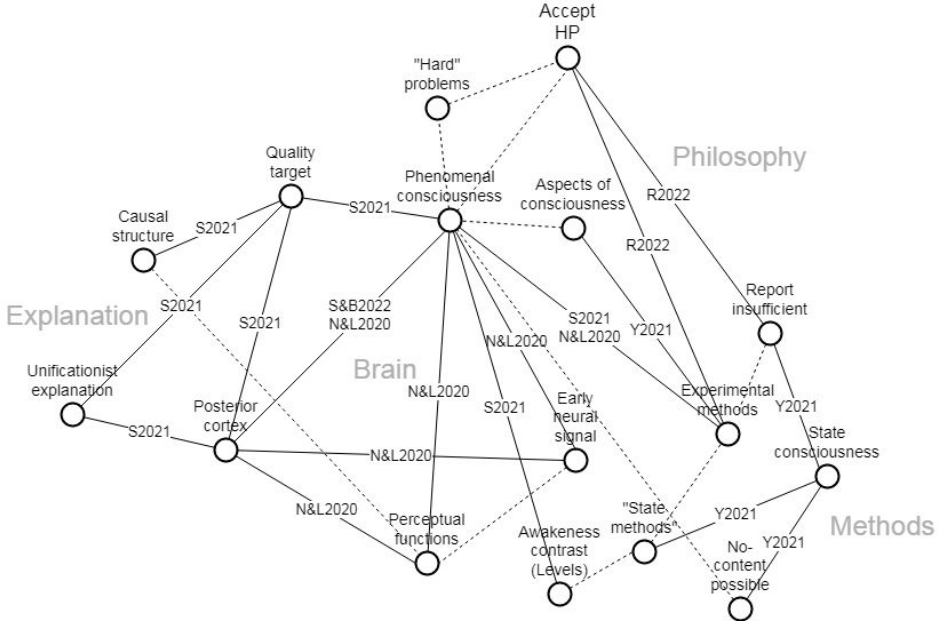

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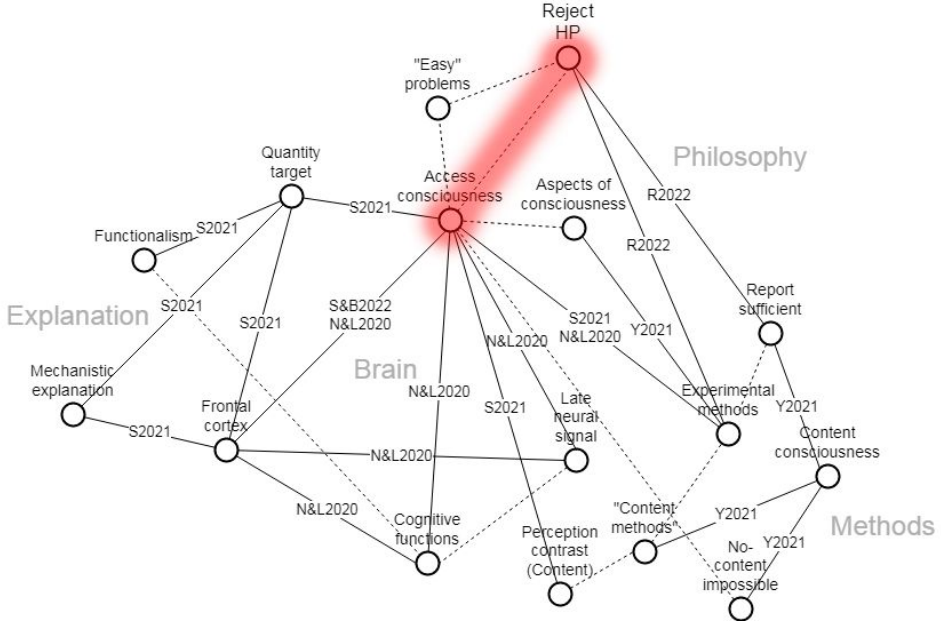

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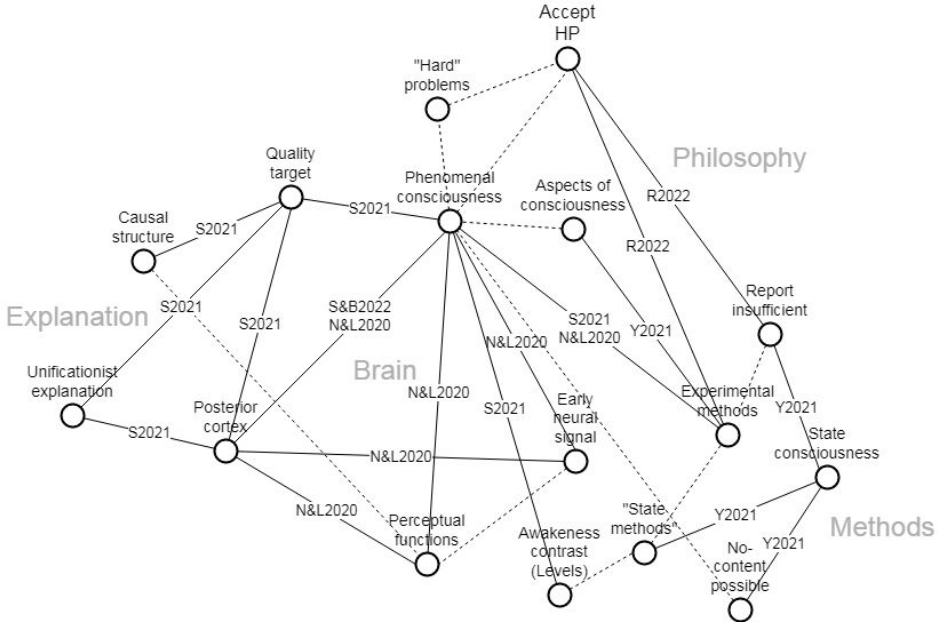

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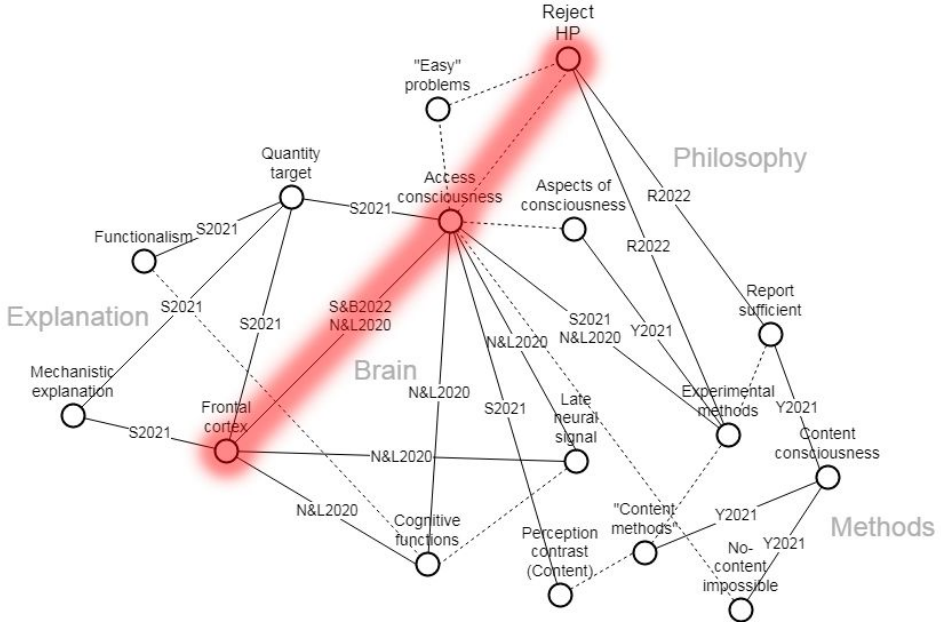

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- Without a compromise we cannot have a common science of consciousness

Thank you for your attention

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The full thesis on BORA (Bergen Open Research Archive):

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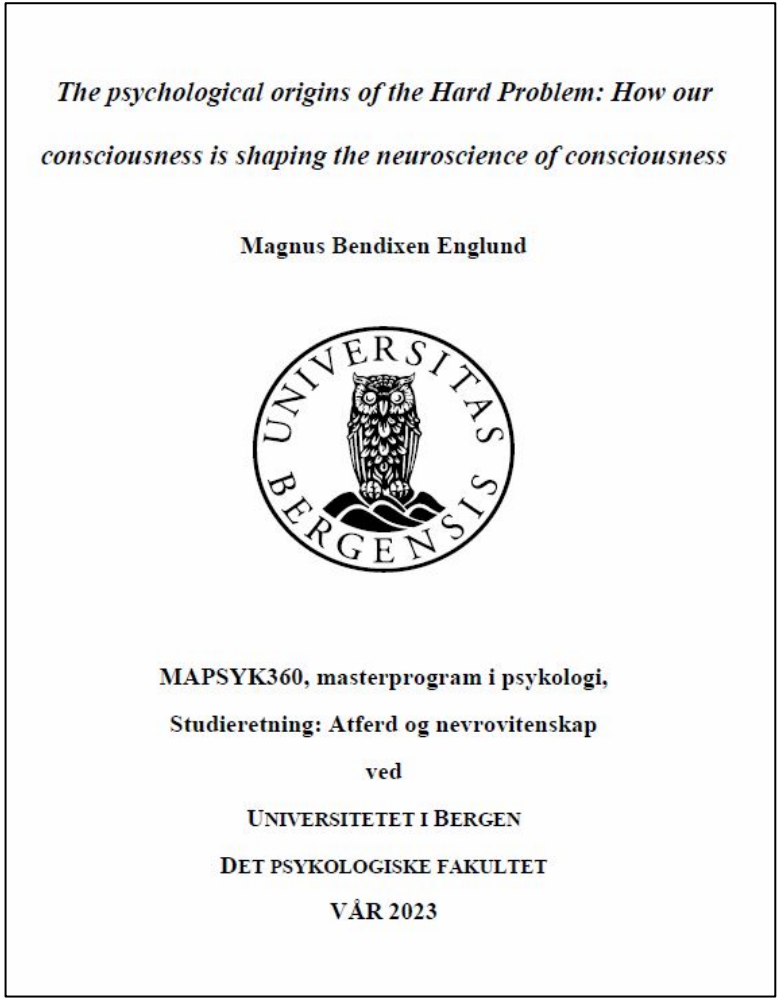

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