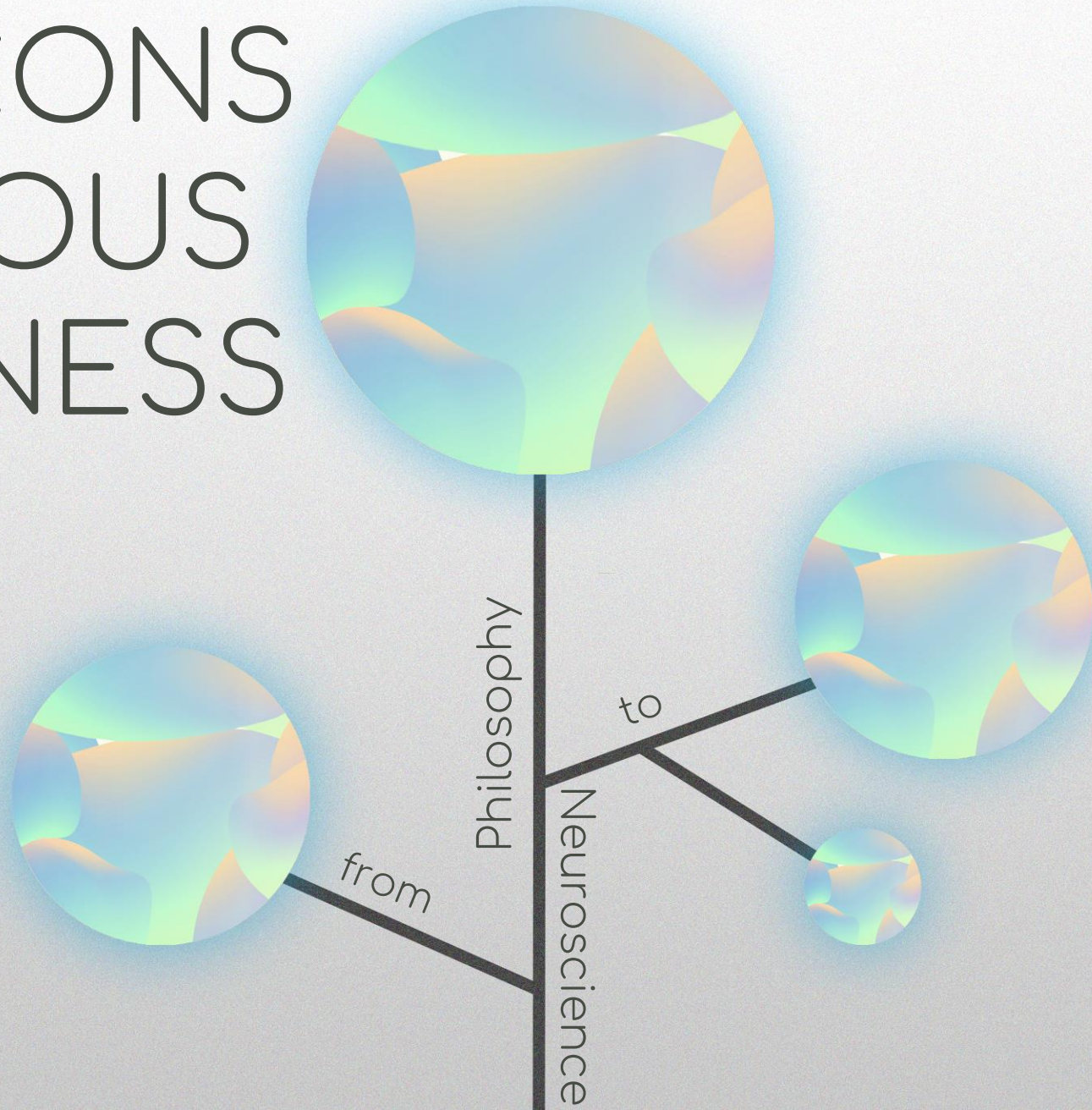


CONSCIOUSNESS



Inspired by:

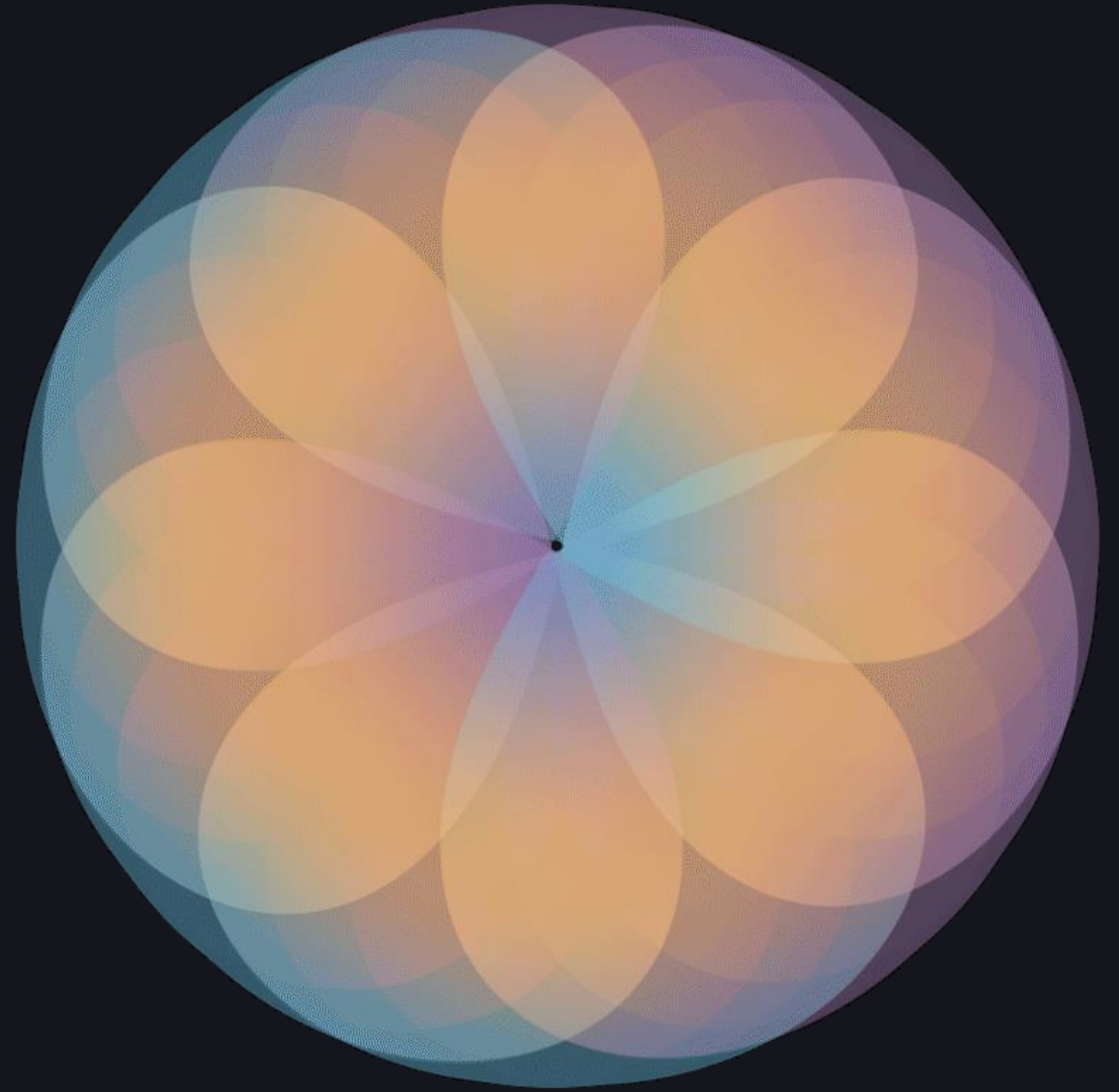
Michel Bitbol
Is consciousness primary?

Antoine Lutz and Evan Thompson
Neurophenomenology

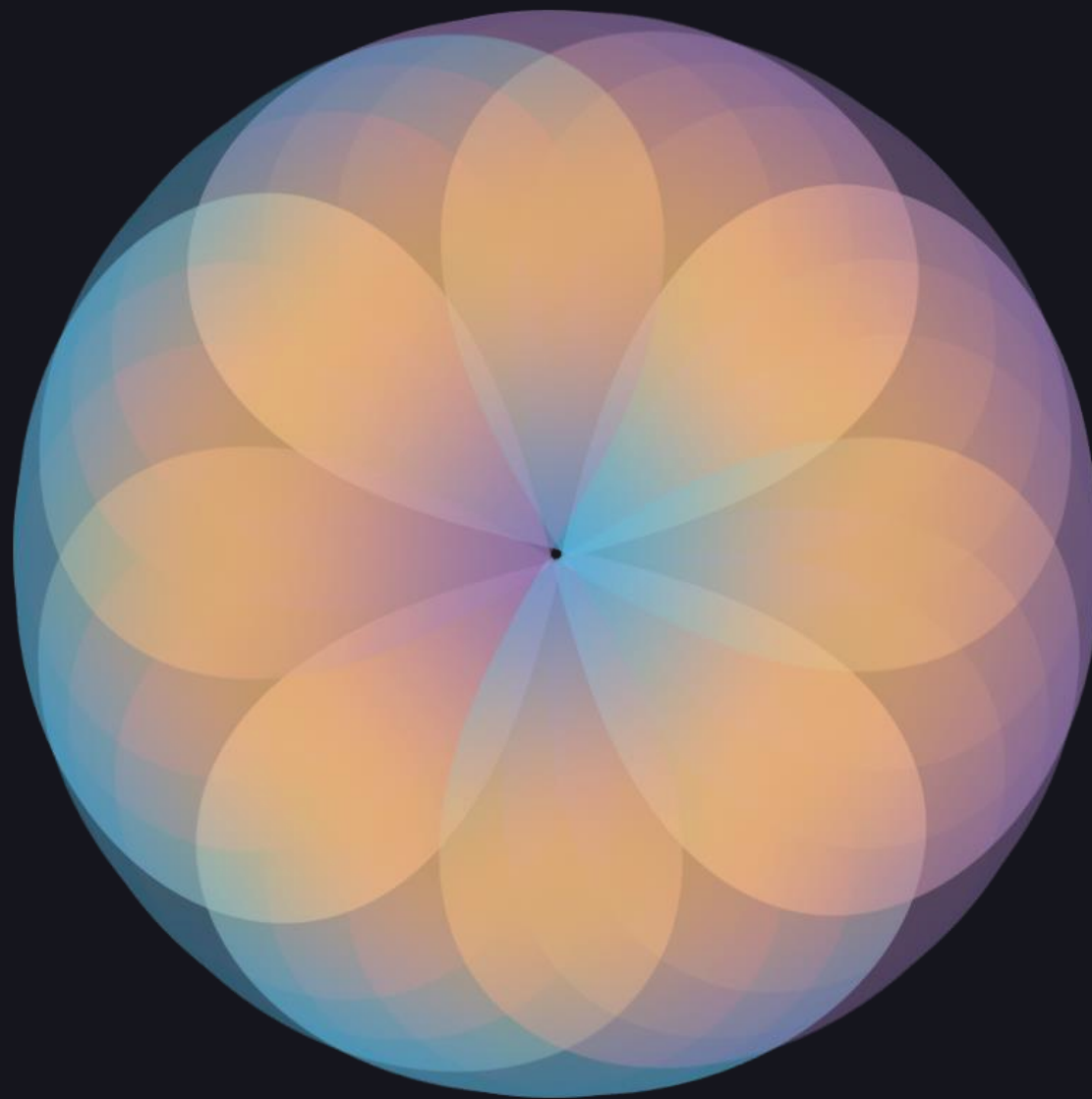
goes back to:

Edmund Husserl, Francisco Varela and
many eastern traditions

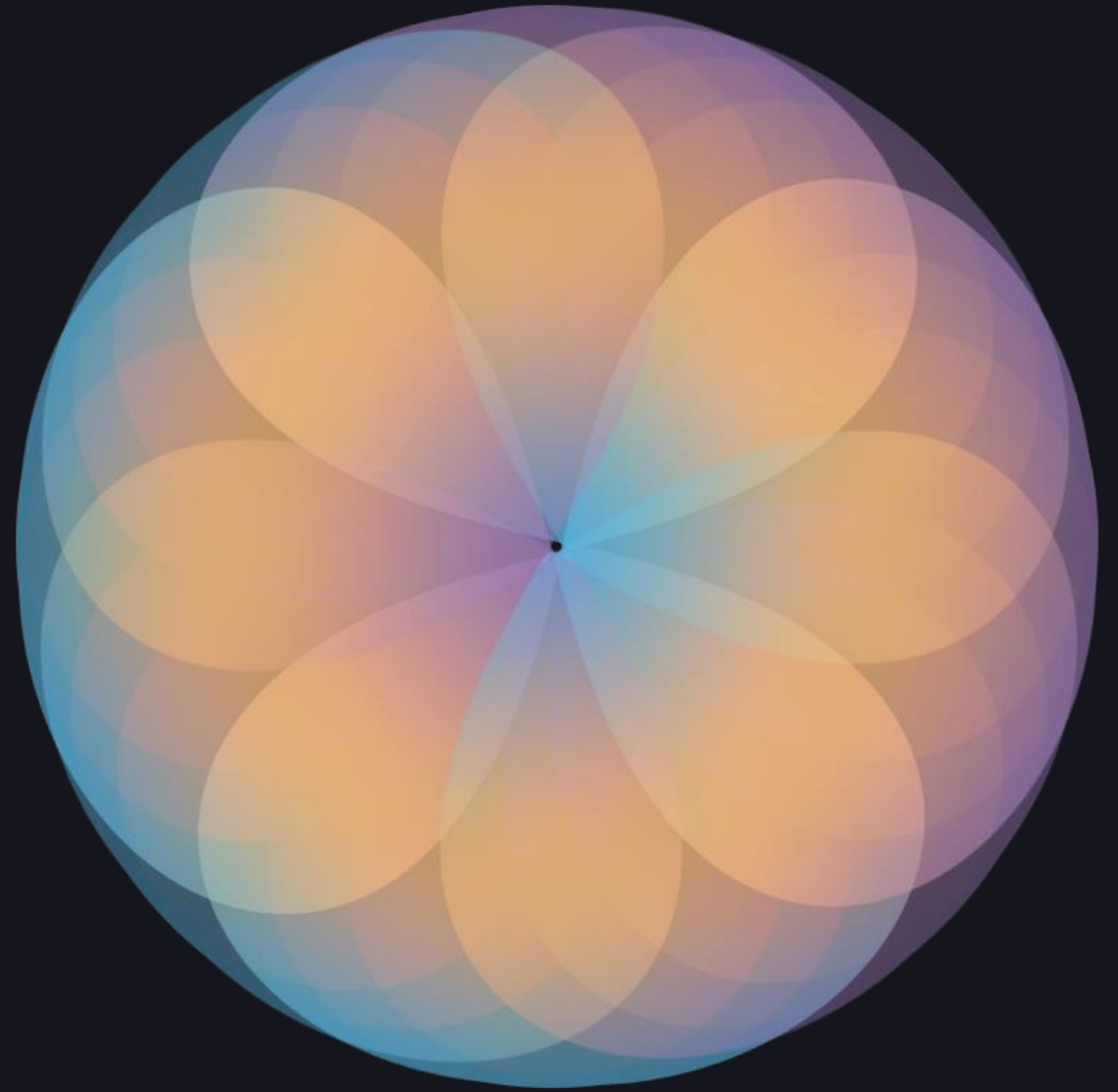
„[Consciousness] is not a
something, but not
nothing either!“
Ludwig Wittgenstein



Something?
more the very act of
percieving than the
percieved



Nothing?
it is here right now

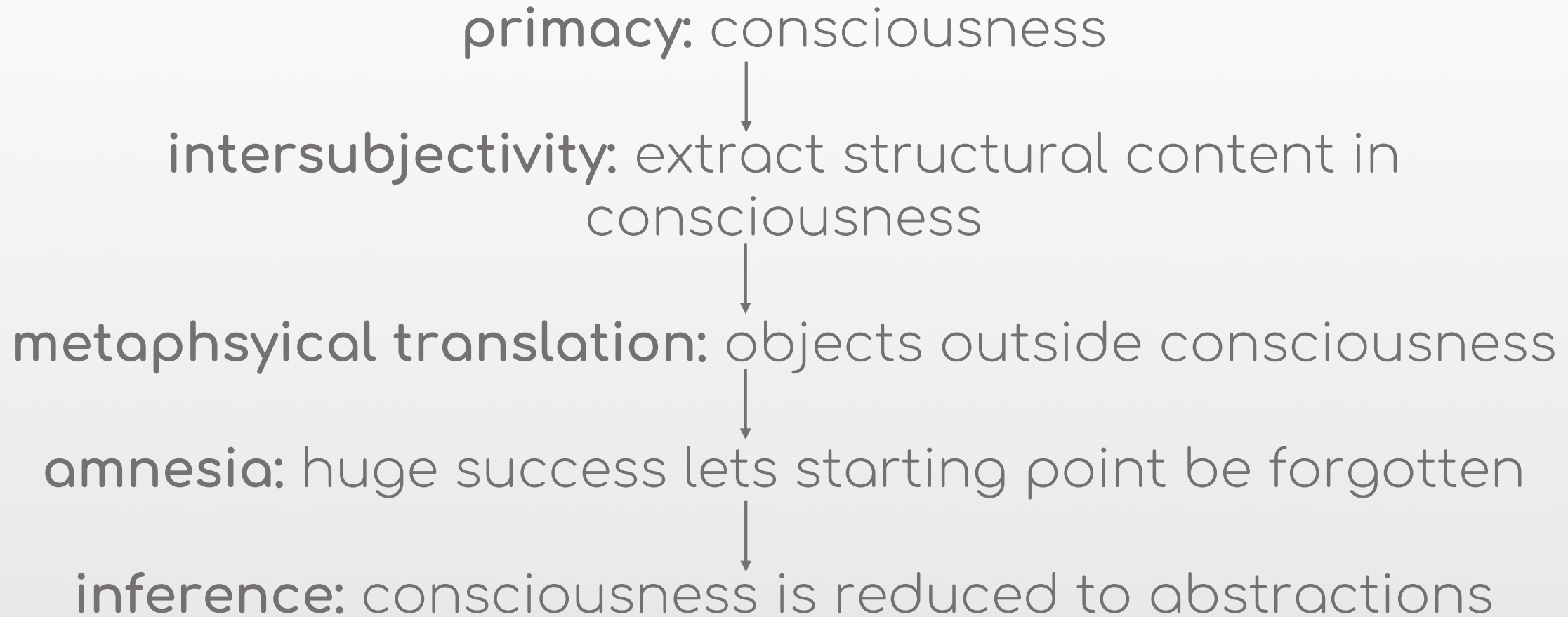




“You are the
changeless
background,
against which
changes are
perceived.”

Nisargadatta Maharaj

Process of objectification



Methodological

not a view against the scientific method
more a remembrance
of its origin

the method
does not give a
metaphysical idea of a world out there

Hard Problem

Why should the structural / relational derivations gained from the method be able to explain its starting point

?

Existential

„Cogito ergo sum“ René Descartes

natural objects are
incomplete
science refines itself

subject to doubt

17th century physicalism is
not the same as 21th
century physicalism

experience is lived
and self-evident

cannot be doubted later

category mistake Gilbert Ryle



“All division is in the mind (*chitta*);
there is none in reality (*chit*).”

Nisargadatta Maharaj

Existential

“Consciousness cannot be accounted for in physical terms. For consciousness is absolutely fundamental. It cannot be accounted for in terms of anything else.”

Erwin Schrödinger

Hard Problem

How to go from something doubtable to something that is self-evident

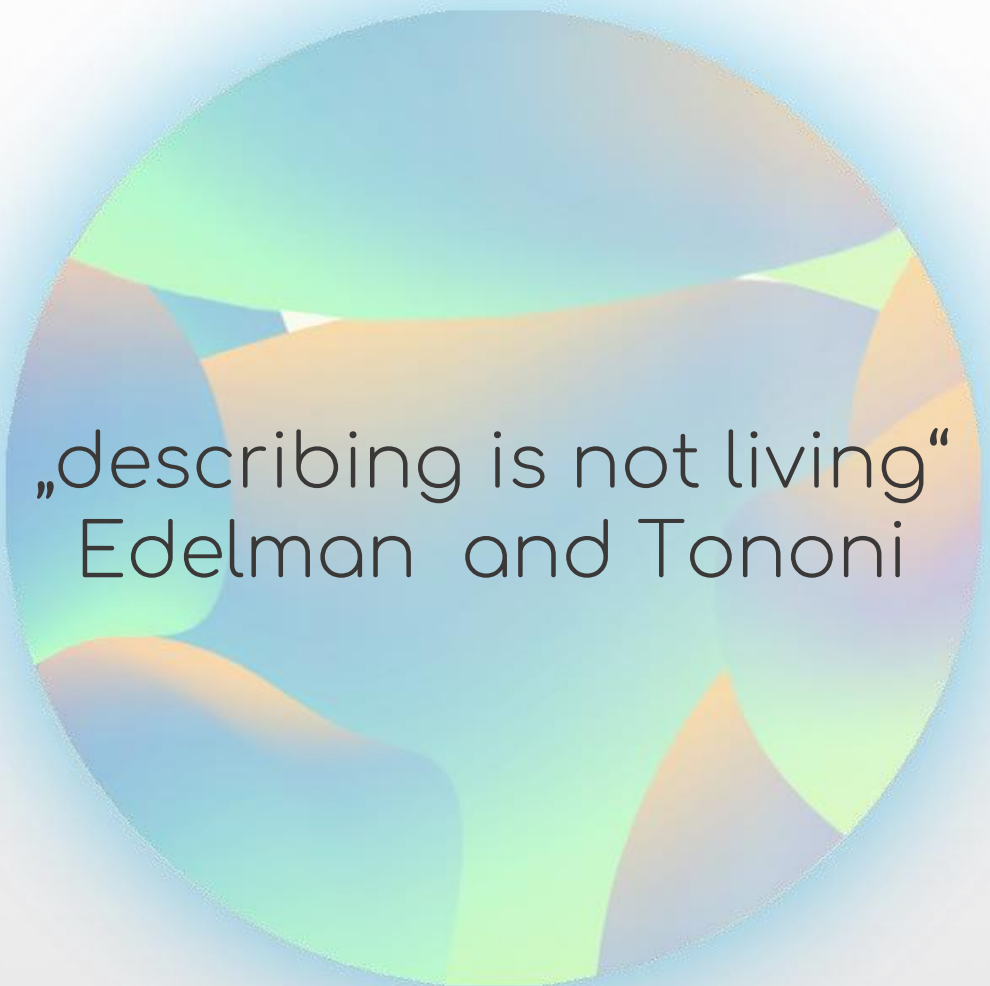
?



Belief: solving enough easy
problems will solve hard
problem of physical origin of
consciousness

Problems:

- i. Open-ended progress
towards closer
correspondance
- ii. No conceptual passage
between numerical value
of wavelength and what it
is like to experience
redness



„describing is not living“
Edelman and Tononi



Regressus ad Infinitum



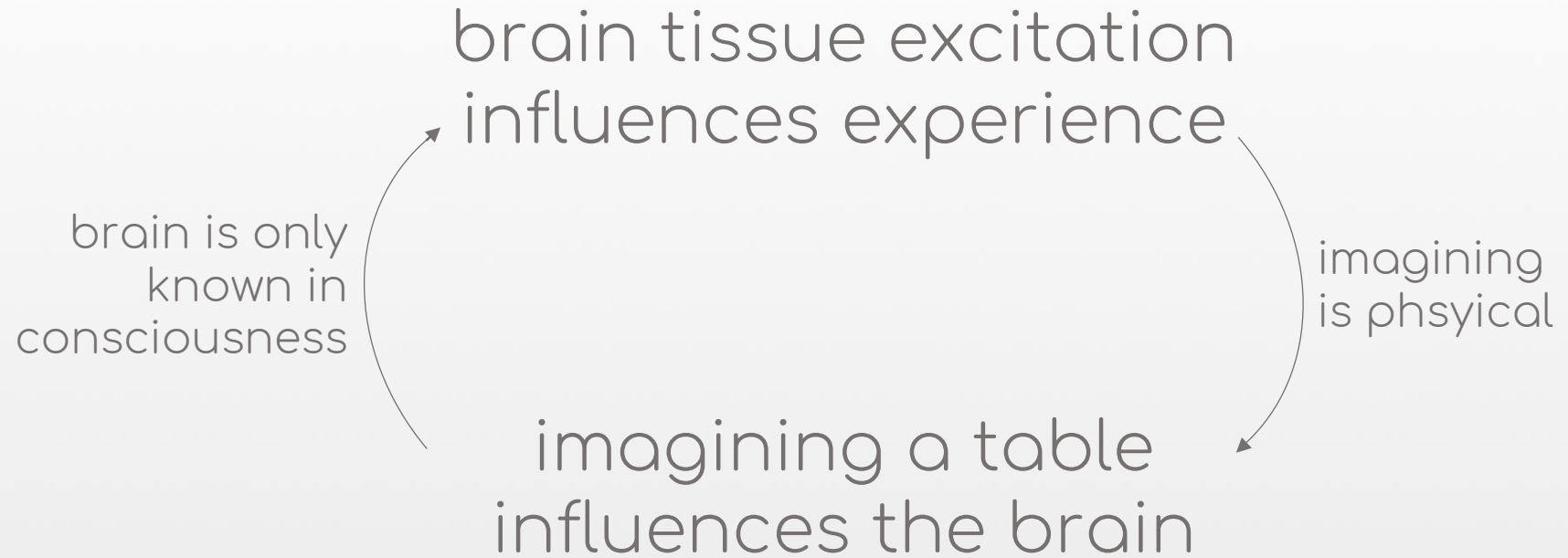
Hard Problem

Where to close the gap from
mathematical formulation to qualia

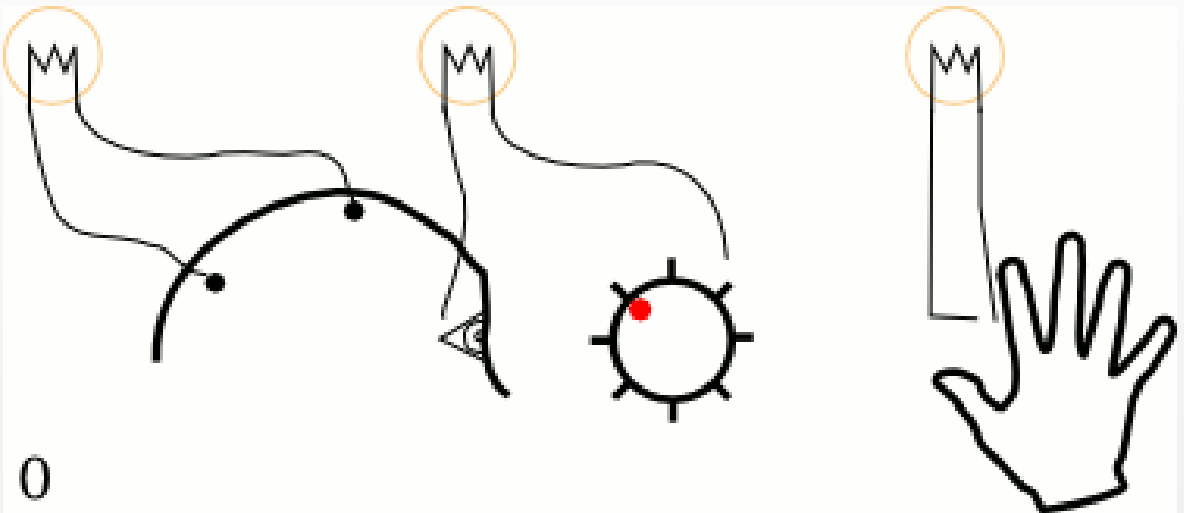
?

Δ Causality

matter
interventions ?



mind
interventions ?



- 1 -500ms readiness potential RP in motor cortex
- 2 -200ms urge to act
- 3 0ms press button



Causality

Environmental Enrichment

environment modulates brain injury

Bondi C.A. et al. Environmental Enrichment as a Viable Neurorehabilitation Strategy for Experimental Traumatic Brain Injury

Colser to Truth: Stephen Chorover: <https://www.youtube.com/watch?v=U-FGeSHBX8E>

rat park: environment modulates cocaine addiction

Solinas M. et al. Reversal of cocaine addiction by environmental enrichment

Kurzgesagt: <https://www.youtube.com/watch?v=ao8L-0nSYzg>



Causality

Post hoc, ergo propter hoc

David Hume

there is **qualia 1** followed by another **qualia 2**



thought „this causes that“ is **qualia 3**

causality relies on arbitrarily chosen agents

hidden variables

Causation on different levels

How can one establish a causal link from something measurable by instruments to something that is not?

Stevan Harnad

Δ Causality

Hard Problem

In which direction goes the causal flow
?

Neural Correlates of Consciousness rely on:

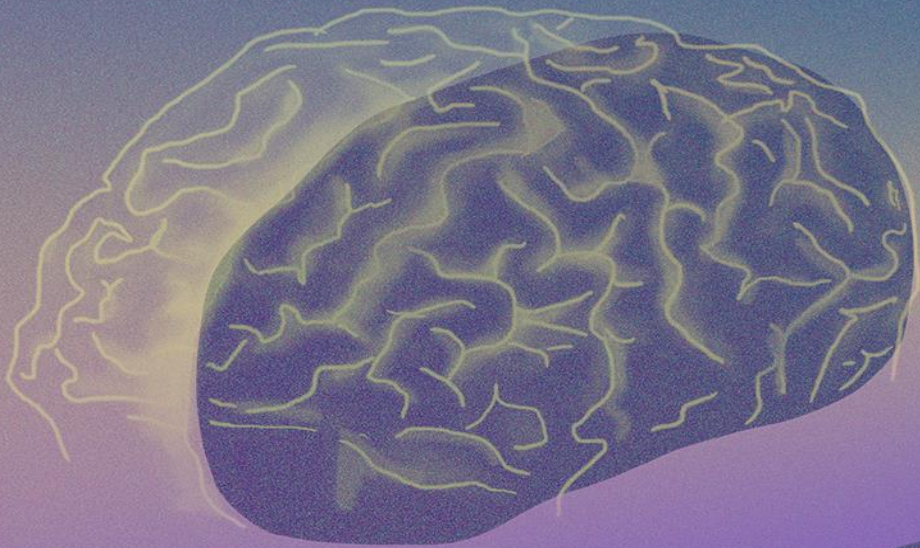
- i. ability to discriminate
- ii. high level of reflectivity (meta-consciousness)
- iii. memorization
- iv. reportability

Neural Correlates of Meta-Consciousness

Bernardo Kastrup

Common theories of consciousness

- signal reentry (feedback loops) Gerald M. Edelman
- global workspace connected with many specialized areas Stanislas Dehaene and Jean-Pierre Changeux, Bernard Baars
 - higher order thought David M. Rosenthal
- connected to frontal executive cortex, binding by synchronized firing Francis Crick and Christoph Koch



Split brain patients

Roger Sperry

corpus callosum
damaged

image to left is not
reportable by language
but can be selected by
left hand

What if very small areas
are active, how to get a
report from these then?

↳ NCCs

Semir Zeki:
micro consciousness

amplified, stabilized and interconnected

↓
reaching threshold of reportability

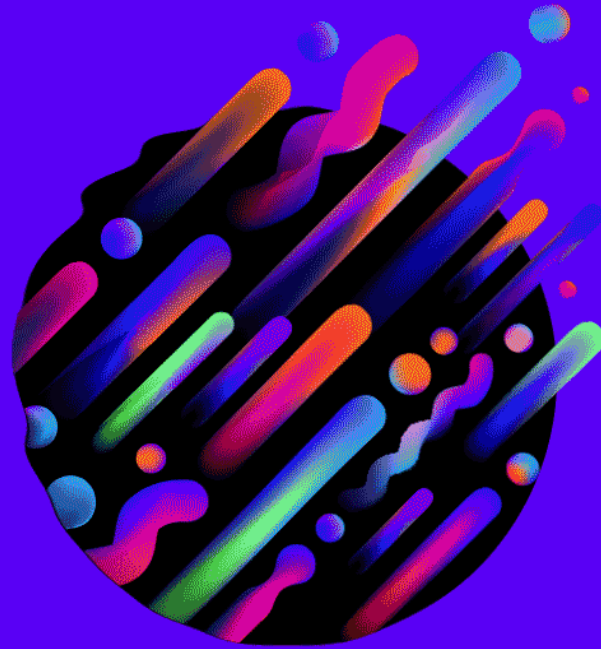
Hard Problem

Can NCCs illuminate the 1st person perspective

?

What is matter?

role of the observer
and experimental
apparatuses?



objects seem not
independent of
experimental and
intellectual tools of
investigation?

Hard Problem

Can physical processing be considered independent of an observer and what does that say for the hard problem

?

Alternative
Stance
Stance
Stance
Stance
Stance
Stance

Neurophenomenology

- subjectivity not neglected or despised
- first person perspective reintegrated
- expand the scope of questions
- cultivate mapping the inner world
- mutually informing

Alternative
Stance
Stance
Stance
Stance
Stance
Stance

Problems

- i. First person reports can be biased
- ii. very act of reporting can change experience
- iii. relate first person report to third person behavioural data

Alternative
Stance
Stance
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Stance
Stance
Stance

Applications to psychiatric disorders?

Neurofeedback / Braininterfaces / Apps / Pharmacotherapy
combined with
Psychotherapy / Meditation / Contemplative practices

Google Tech Talks: Richard Davidson : <https://www.youtube.com/watch?v=7tRdDqXgsJ0>

Science and Philosophy

are not
independent

Worldviews shape
scientific questions
-> ideological bias

„It is the theory which decides
what can be observed“
Albert Einstein