

# EXPLORATIONS INTO THE NATURE OF CONSCIOUSNESS

A BRIEF OVERVIEW OF CONSCIOUSNESS

Bob Staretz

[www.GrokingWholeness.info](http://www.GrokingWholeness.info)

2025

# A VISUALIZATION EXERCISE



# PURPOSE

## TO FACILITATE DISCUSSION

- ▶ Establish a common vocabulary and baseline
- ▶ Hi-level review of state-of-the-art in the science of consciousness
- ▶ Raise awareness of issues, implications and coming paradigm shift

Warning: some of the contents contained within may challenge long held beliefs

# WHY CONSCIOUSNESS?

“You cannot solve a problem with the same kind of thinking that got you into the problem in the first place”

Albert Einstein

“It all depends on how we look at things, not how they are in themselves”

Carl Jung

The only certainty there is in the world:

“I am conscious, therefore I am”

Rene Descartes

# CHANGE OF PERSPECTIVE IS URGENTLY NEEDED

- ▶ Until the mid-19<sup>th</sup> century everything we needed to know to survive and thrive could be learned by the ripe old age of 6
- ▶ Our knowledge of the world, our instincts and our beliefs no longer serve us well; instead, they act to our detriment
- ▶ Our traditions and our institutions are based on knowledge and understanding that are woefully out of date
- ▶ Continuous growth in a finite (closed) system is unsustainable
- ▶ Today our understanding of the reality we are living in (e.g. our sciences and metaphysics) is incomplete and it has a long way to go
- ▶ The experiences we have within our reality are real but many of our interpretations of them are not
- ▶ The rate of change of human knowledge now has a half-life of 18-24 months.
- ▶ There is little time to adapt let alone plan to accommodate such rapid change



# ITS ALL ABOUT UNDERSTANDING THE NATURE OF CONSCIOUSNESS



“To understand the human condition,  
you must first understand the universe”  
Buckminster Fuller

“If you want to understand the universe,  
you must first understand the self”  
Mystics and Sages of all cultures and eras

We define ourselves through our consciousness  
It is the only way we know how we (and everything else) exists

## SO, WHAT IS CONSCIOUSNESS?

# CONSCIOUS STUDIES – A DEFINITION

- ▶ An interdisciplinary field of study that explores the nature of consciousness, its experiences and its behaviors
- ▶ It combines insights from philosophy, neuroscience, psychology, spirituality and other related fields.
- ▶ It seeks to understand all aspects of consciousness, including
  - ▶ External (objective) experiences (perceptions) and
  - ▶ Internal (subjective) experiences (thinking, emotions, feelings, etc.,)
  - ▶ Interactions between subjective and objective experiences
  - ▶ Relationships (correlations) between brain activity within and between all experiences.

# WITHOUT CONSCIOUSNESS

There would be no knowing and no existence

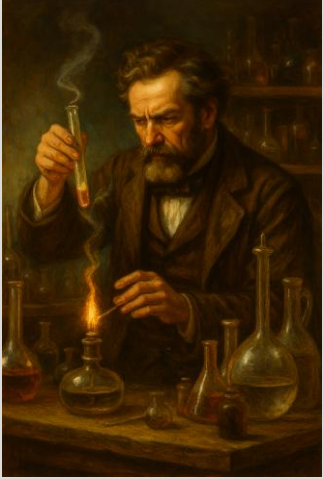
Consciousness is what goes away when we are under anesthetics or enter dreamless sleep

No me                      No friends                      No environment                      No objects  
No time                      No space                      No memories                      No colors  
No present                      No future                      No past                      No emotions  
No sights                      No sounds                      No thoughts                      No tastes                      No sensations  
No dreams                      No smells

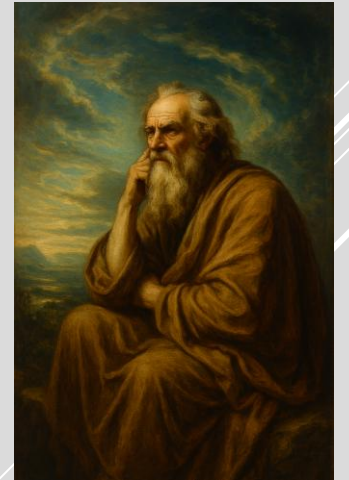
**Consciousness is “what it is like to have experience (to be)”**



# A COUPLE OF DEFINITIONS

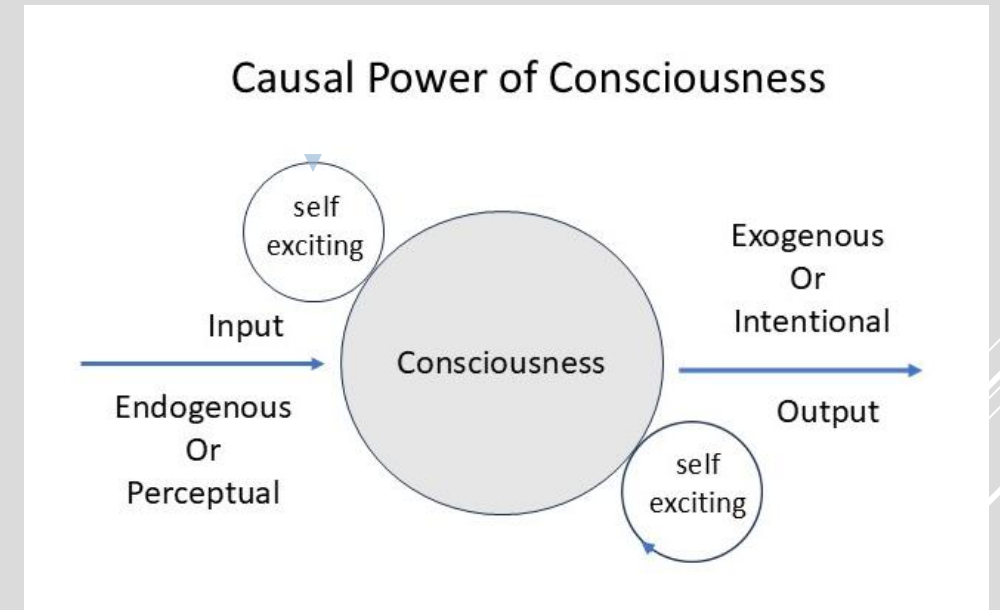


- ▶ Science – the study of how nature behaves
  - ▶ Based on experiments
  - ▶ Predictive models
- ▶ Metaphysics – the study of what something actually is
  - ▶ Based on philosophy
  - ▶ Logic and reasoning
- ▶ We will look at both to understand consciousness



# SO, WHAT IS CONSCIOUSNESS?

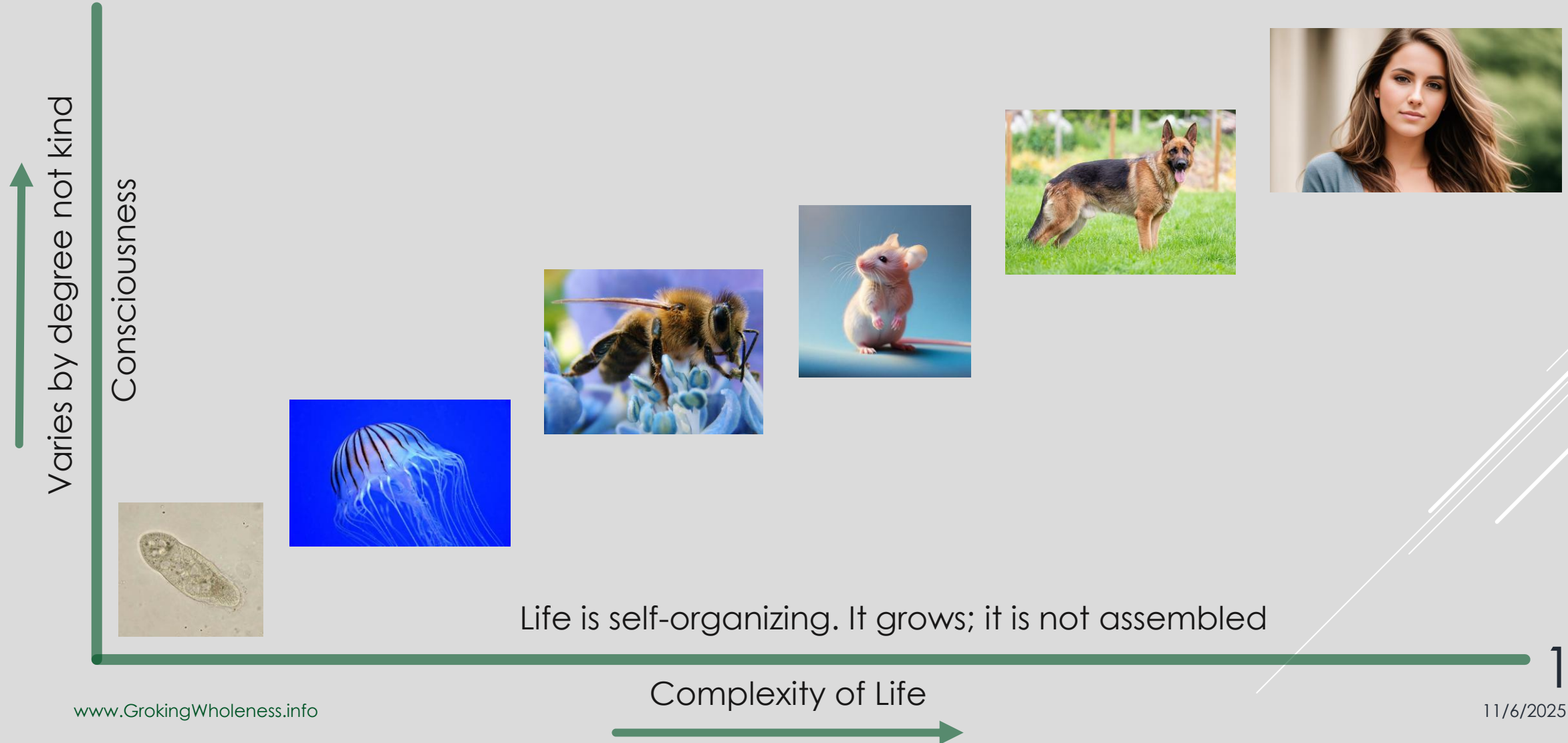
- ▶ Two Aspects
  - ▶ A state of being = phenomenal consciousness
  - ▶ Self reflection = meta consciousness
- ▶ Consciousness = Experience (state of being)
- ▶ Intelligence ≠ Consciousness (state of doing)
- ▶ 2 Major Theories
  - ▶ Consciousness is an epiphenomenon
  - ▶ Consciousness is a fundamental aspect of reality



*I think,  
therefore I am*

*I move (act),  
therefore I am*

# CONSCIOUSNESS & LIFE ARE INTRICATELY CONNECTED



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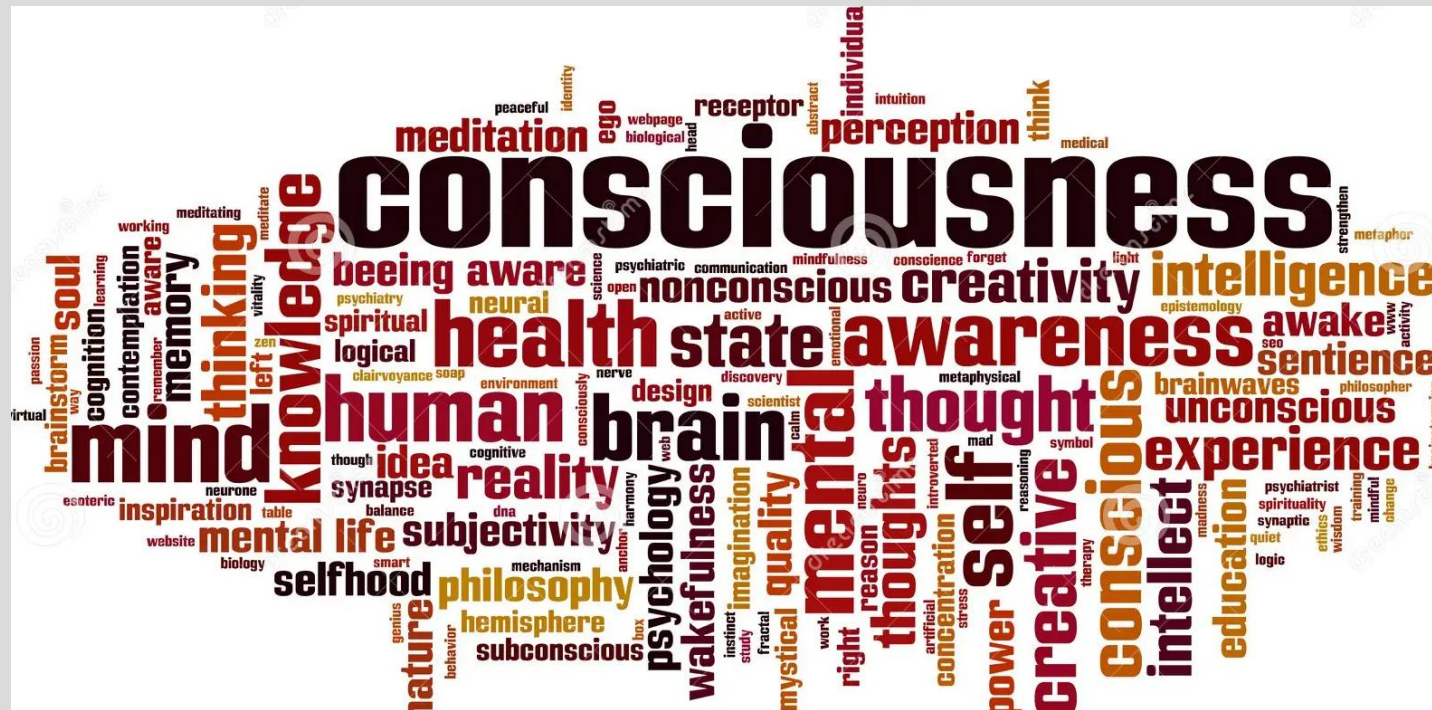
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# CONSCIOUSNESS MEDITATION



# HISTORIC MILESTONES IN CONSCIOUSNESS

- ▶ Ancient eastern traditions (circa 1500 BC)
- ▶ Council of Constantinople (381 AD) – The Holy Spirit
- ▶ Circa 1640 Rene Descartes – Mind-Body Dualism
- ▶ Early 20th Century – Quantum physics conundrum – Sir James Jeans
- ▶ 1973 – IONS Founded (from epiphany in space)
- ▶ 1974 – Thomas Nagel “What is it Like to be a Bat”
- ▶ 1994 – Journal of Consciousness Studies
- ▶ 1995 – David Chalmers “The Hard Problem of Consciousness”
- ▶ Early 2000s – Active debates about the nature of reality & consciousness
- ▶ Present Day theories
  - ▶ Physicalism vs Consciousness
  - ▶ Overcoming inertia



The study of the nature of consciousness is at least 3500 years old

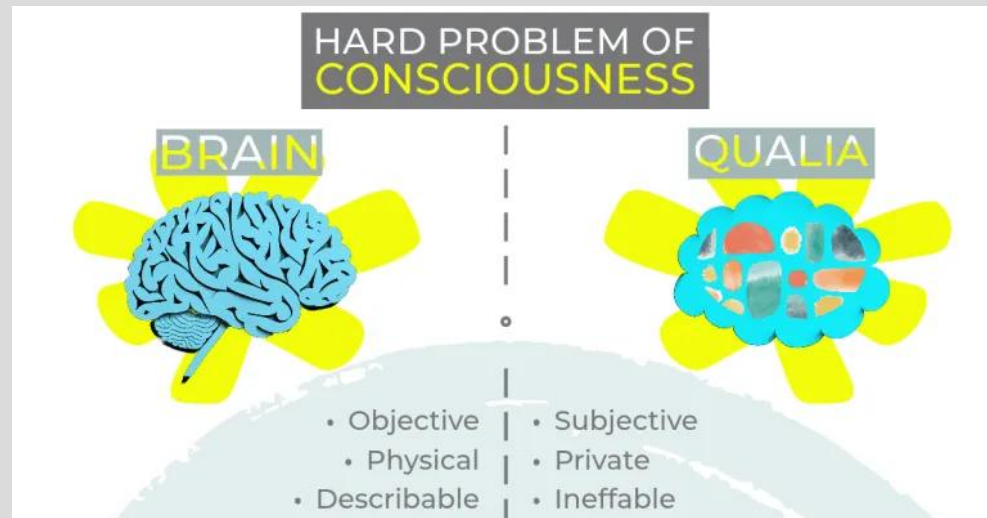


# THE HARD PROBLEM OF CONSCIOUSNESS

- ▶ The Hard Problem (according to Physicalism)
  - ▶ How can physical processes in the brain give rise to subjective experience (“what something feels like”)?
  - ▶ Why are we not “Zombies” (have no conscious experience)
- ▶ The Easy Problem
  - ▶ How the mind integrates information or produces reports about mental states



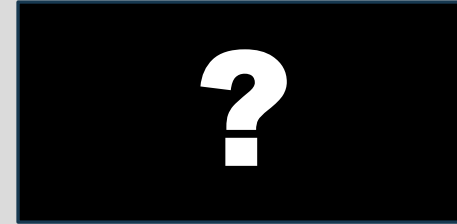
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# SPECTRUM OF CONSCIOUSNESS

## 1. Unconsciousness

- ▶ No existence
- ▶ No experience (deep sleep, anesthetics)\*



## 2. Phenomenal Consciousness – all living organisms

- ▶ Existence; “to experience”
- ▶ Subjective (conscious) Experience
- ▶ Awareness / Intentionality (casual power)
- ▶ “What it is like to be/do”
- ▶ To know/to intend



## 3. Meta Consciousness – living organisms with a brain

- ▶ Re-representation (self-reflection) of experience
- ▶ Ability to evaluate, analyze, plan
- ▶ To know that you know or intend
- ▶ Experience/intention are reportable



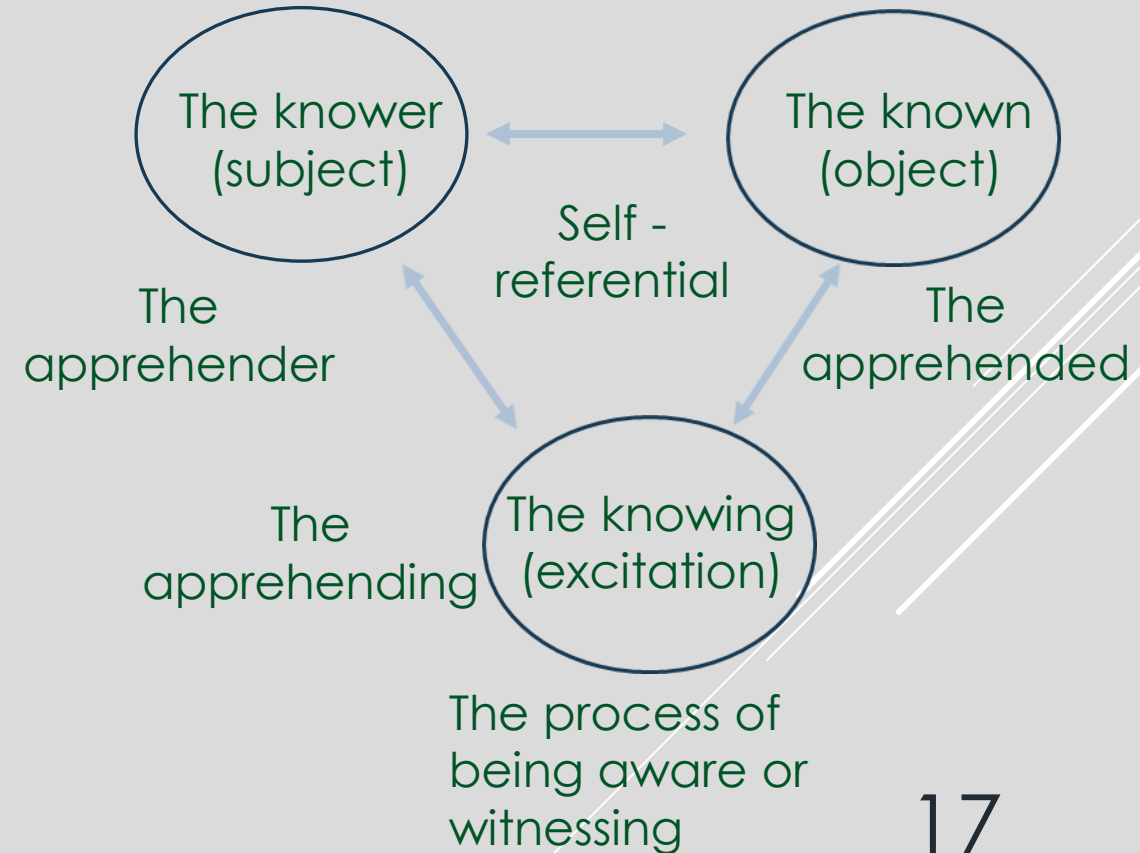


# THE PERSPECTIVES OF CONSCIOUSNESS

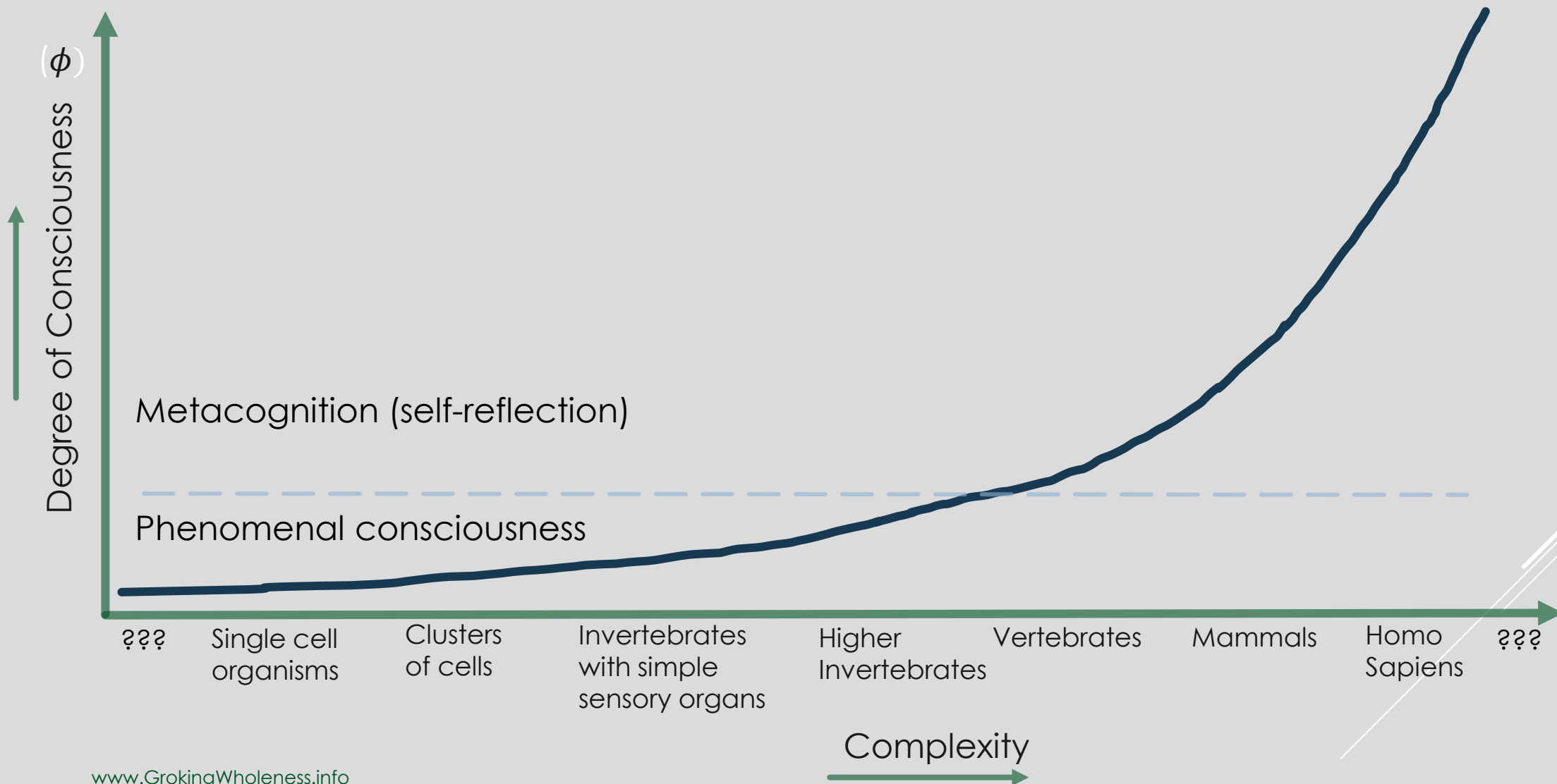
- ▶ Consciousness vs content of consciousness
- ▶ It has three aspects
  - ▶ The Experience (knower/observer)
    - ▶ Subject - the doer;
  - ▶ The Experiencing (knowing/observing)
    - ▶ Process/Mechanics
  - ▶ The Experienced (known/observer)
    - ▶ Object (that which is being done to; can be self-referential)
- ▶ It has causal power
  - ▶ The ability to affect change for itself or for others
- ▶ It is non-computational
- ▶ It is a state of being

That which is aware / the witness

That which is the object of awareness or that which is witnessed



# SPECTRUM OF CONSCIOUSNESS



# CONSCIOUSNESS ≠ BEHAVIOR

- ▶ Behavior may imply consciousness
  - ▶ External stimuli
    - ▶ Looking for opportunities
    - ▶ Avoiding threats
    - ▶ Pursuing desires
    - ▶ Being alert
  - ▶ All voluntary acts
- ▶ Being conscious does not imply behavior
  - ▶ Internal focus
    - ▶ Visualizing /planning
    - ▶ Intending
    - ▶ Dreaming
    - ▶ Meditating
    - ▶ Mystical/transcendental experience
  - ▶ Behavioral unresponsive ("locked in")



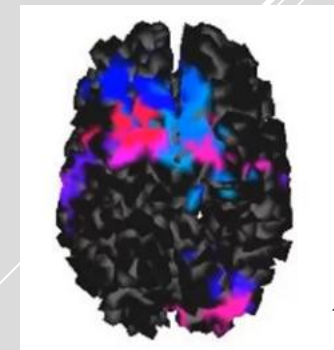
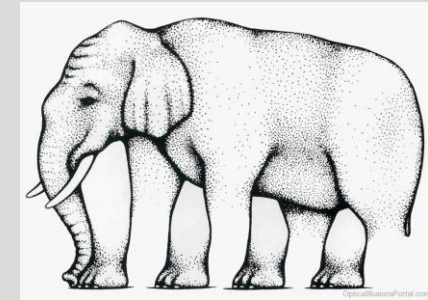
# ASPECTS OF MIND

- |   | AI | Life |
|---|----|------|
| ▶ Memory  | ↓  | ↓    |
| ▶ Information store of experience                     |    |      |
| ▶ Information   |    |      |
| ▶ Patterns of matter or energy or                     |    |      |
| ▶ Symbolic representations                            |    |      |
| ▶ Intelligence (doing)                                |    |      |
| ▶ Measurable (Objective)                              |    |      |
| ▶ Ability to set and reach goals                      |    |      |
| ▶ Pattern recognition, analysis & matching            |    |      |
| ▶ Computational (problem solving)                     |    |      |
| ▶ Consciousness (being)                               |    |      |
| ▶ Metaphysical  |    |      |
| ▶ Phenomenal (Subjective)                             |    |      |
| ▶ Instinctive (archetypical)                          |    |      |
| ▶ Metacognitive & self-reflective                     |    |      |
| ▶ Assigns meaning to information (i.e. understanding) |    |      |
| ▶ Computationally irreducible                         |    |      |

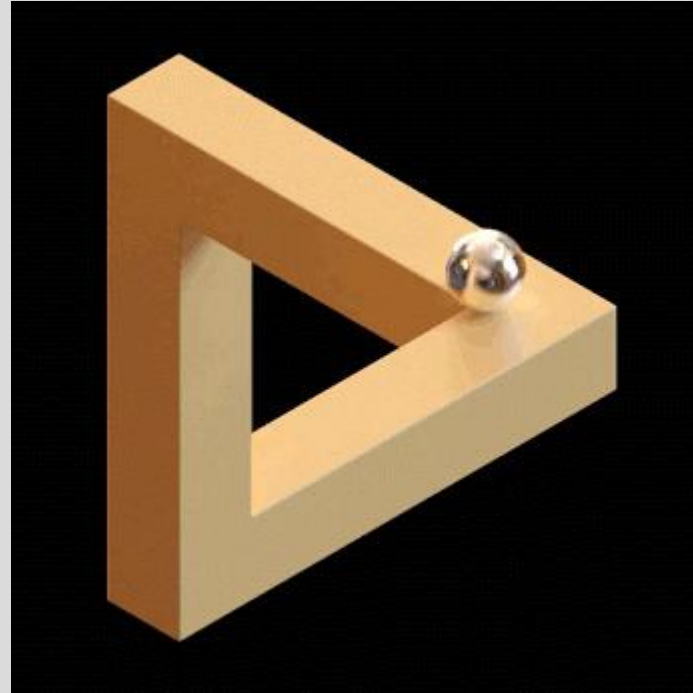
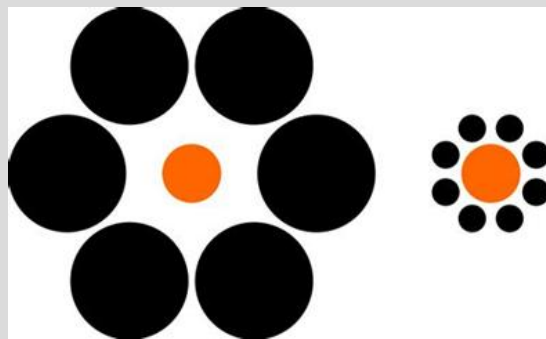
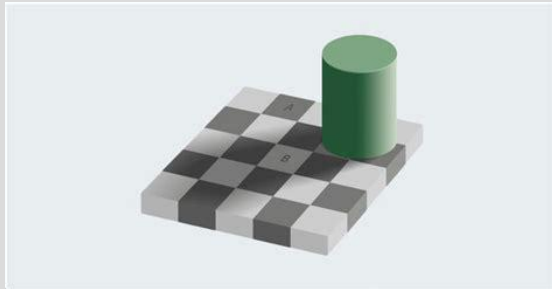
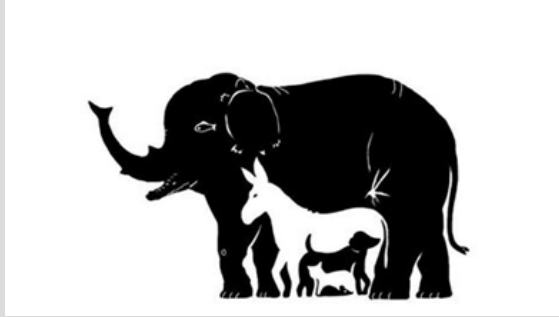


# (EGO) MIND

- ▶ Experience as a unity of conscious experience
  - ▶ Computationally irreducible
- ▶ Does a great job at deceiving itself
  - ▶ Representations of external reality
- ▶ A collective of meta-conscious and phenomenal complexes
  - ▶ Most are not in meta-conscious awareness
  - ▶ Only one is in control at any given instant
- ▶ Physical correlates of subjective awareness
  - ▶ Correlates with centers of brain function & processes
  - ▶ Neural Correlates of Consciousness (NCCs)
  - ▶ Correlation does not imply causation
- ▶ Includes memories as well as conscious states



# THE (EGO) MIND LOVES TO DECEIVE ITSELF



We all experience external reality differently

# MEMORY – IT'S NOT WHAT YOU THINK



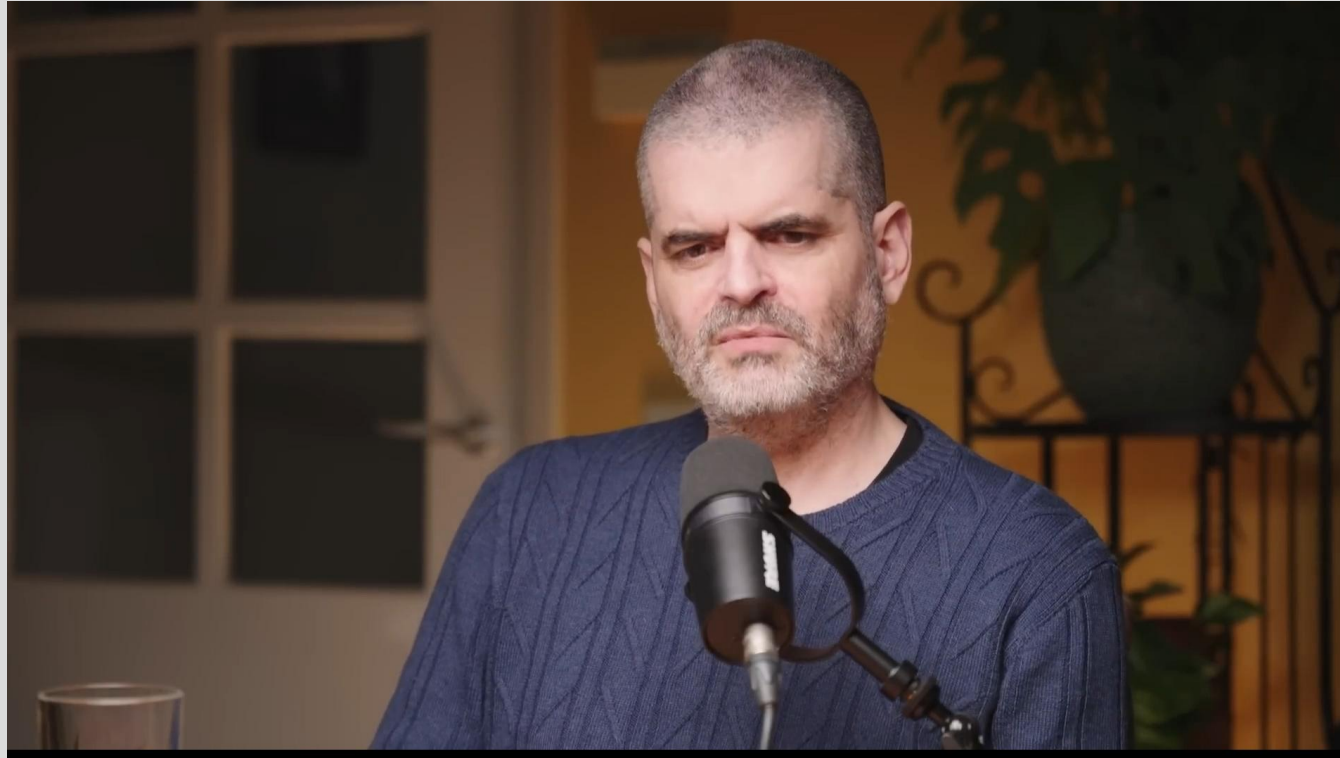
## ► New Developments

- Recent experiments in biology
- Organ transplant surgery
- Episodic memory in savants

- Container of the entire event history of your life experience
- Retrieval takes place through the appropriate cognitive associations
- Content is about what was experienced; not what existed in reality
- Recent evidence suggests that it may not be stored within the brain



# WHERE IS MEMORY STORED?



Excerpted from YouTube Video “*The Research That Rethinks Neuroscience & Biology* | Dr. Bernardo Kastrup” – Essentia Foundation  
Discussing Michael Levin’s work at the Allen Biology Research Lab at Tufts University



# EXTRAORDINARY COGNITIVE ABILITIES

- ▶ Synesthesia
  - ▶ Sensory Crossover
- ▶ Savant Syndrome
  - ▶ Exceptional talents accompanied with profound mental impairments
- ▶ Hyperthymesia
  - ▶ Extensive autobiographical memory
- ▶ Photographic memory
  - ▶ Exceptional recall of pictures, words and events
- ▶ Intuition (6<sup>th</sup> sense)
  - ▶ The ability to instantly sense and/or understand something
- ▶ Terminal Lucidity
  - ▶ End-stage dementia experiences a sudden burst of energy and clarity
- ▶ Mystical Experiences
  - ▶ Expanded state of awareness and connectedness
- ▶ Psi Phenomenon
  - ▶ Abilities that transcend known laws of physics or are acquired through means other than normal perceptual mechanisms



Raven Paradox - “*all ravens are black*” - supports how empirical evidence can support universal generalizations

# THE EXTRAORDINARY WORLD OF HYPERTHYMESIA

## **Neuroscience**

<https://www.youtube.com/watch?v=A9vUBzlwWr0>

# THE MAN WHO SUFFERED INJURY AND BECAME A “PIANO SAVANT”



<https://www.youtube.com/watch?v=r0h4cylQd2g>

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# INTROSPECTION MEDITATION





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# INSTINCTS (ARCHETYPICAL BEHAVIORS) & BELIEFS

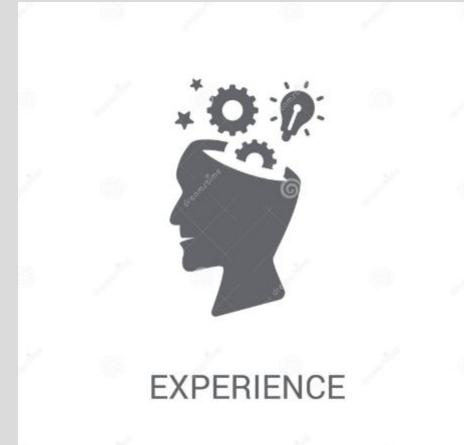
- ▶ Nature's motivators and survival mechanisms for a stable planetary ecosystem
  - ▶ Instincts are inherited behaviors (archetypical)
  - ▶ Beliefs are learned behaviors
- ▶ Beliefs are reenforced through repetition
  - ▶ Results from memories of prior experience
  - ▶ Often enculturated at an early age
  - ▶ Solidified over time w/o proper reflection
- ▶ Established beliefs are difficult to change
  - ▶ A person's identity is often tied up in their beliefs
- ▶ Operate at the level of phenomenal consciousness
  - ▶ Usually not self-reflective
  - ▶ Very quick reaction time
- ▶ Can be overcome but require considerable metacognitive effort and reconditioning
- ▶ Cultivators – events experienced with a strong emotional context and/or by reinforcement
  - ▶ Anger / Fear / Pain / etc.
  - ▶ Love / Joy / Pleasure / etc.



# CATEGORIES OF EXPERIENCE

Experience  “What something feels like”

1. Perceptual (external – objective – 3<sup>rd</sup> person)
  - ▶ Sense organs involved
2. Endogenous (internal – subjective – 1<sup>st</sup> person)
  - ▶ Thinking, Emotions, Feelings, Intuitions, Imagination, Instincts, Memories



Experiences are self-excitations (e.g. the behavior) of consciousness

Experiences are qualitative not quantitative

All experiences exist for themselves and have causal power

All subjective experiences are personal to that which is having the experience



# QUALITIES OF PERCEPTUAL OBJECTIVE (EXTERNAL – 3<sup>RD</sup> PERSON) EXPERIENCES

- ▶ Spatial extendedness
- ▶ Temporal flow
- ▶ Objective (3<sup>rd</sup> person viewpoint)
- ▶ Colors
- ▶ Sounds
- ▶ Smells
- ▶ Textures
- ▶ Tastes
- ▶ Etc.



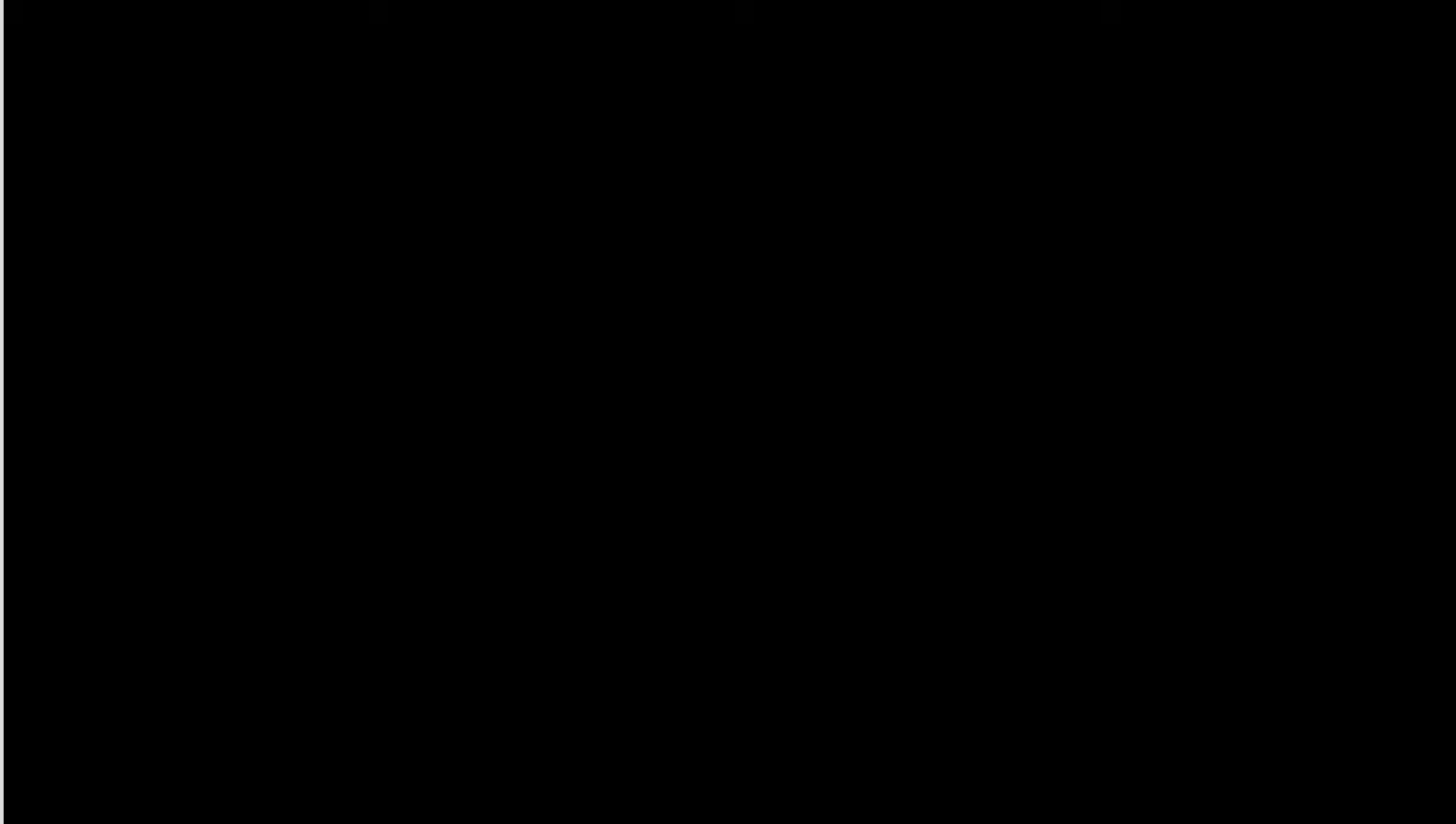
The variations of these experiences probably number in the quintillions ( $10^{18}$ ) or more

The mind filters and acts as a reducing valve to all external experiences

External experiences are shared experiences

Interpretations of experiences vary based on beliefs & prior experiences

# PERCEPTION BOX



YouTube – What is Perception Box? – [www.TinyBlueDotFoundation.org](http://www.TinyBlueDotFoundation.org)

# PERCEPTUAL REALITY IS AN INTERFACE



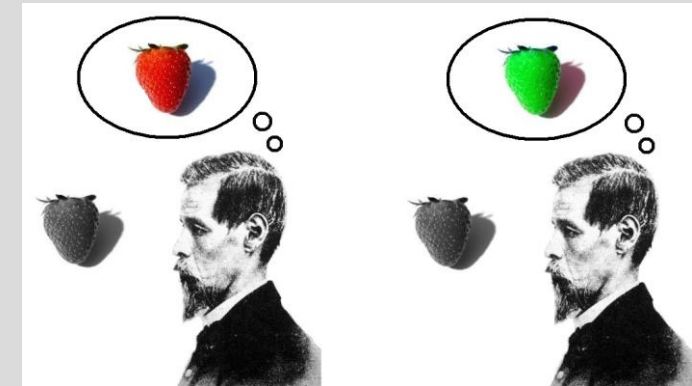
- ▶ Entropy overload
- ▶ Representations of what nature is
- ▶ A 3rd person view of external reality
- ▶ Reducing valve
- ▶ Focus on survival
- ▶ It is impossible to separate perception and interpretation ( $\max \Phi$ )



“We don’t experience Nature as it is  
We experience Nature as we are”

# QUALITIES OF ENDOGENOUS SUBJECTIVE (INTERNAL) EXPERIENCES

- ▶ Pure subjectivity (1<sup>st</sup> person viewpoint)
  - ▶ Experience is private
  - ▶ Conveys or provides meaning to experience
  - ▶ Shaped by archetypes (mental properties)
  - ▶ Cannot be described by quantities (or words)
  - ▶ Specious present (stream of consciousness)
- ▶ Pure Intentionality
  - ▶ Exists for itself
  - ▶ Self exciting
  - ▶ Agency (has causal powers)



# THE QUALITIES OF ENDOGENOUS (SUBJECTIVE – 1<sup>ST</sup> PERSON) EXPERIENCE

- ▶ The color green
- ▶ The smell of a rose
- ▶ The taste of chocolate
- ▶ The pain of a toothache
- ▶ The feeling of love
- ▶ The beauty of a sunset
- ▶ The feeling of fear
- ▶ The feeling of boredom
- ▶ Bodily sensations
- ▶ Desiring
- ▶ Dreading
- ▶ Imagining
- ▶ Etc.



Physicalist science has no good explanations as to how felt experiences (i.e. qualities) are generated by the brain (e.g. the “hard problem” of consciousness)



# SUBJECTIVE EXPERIENCES & INTERPRETATIONS



The actual event  
- Fire engine siren



Thinks of a  
police car



Hard of hearing -  
Thinks of nothing



Frightened by a  
loud unfamiliar noise



Thinks of the hook  
& ladder from  
firehouse #3

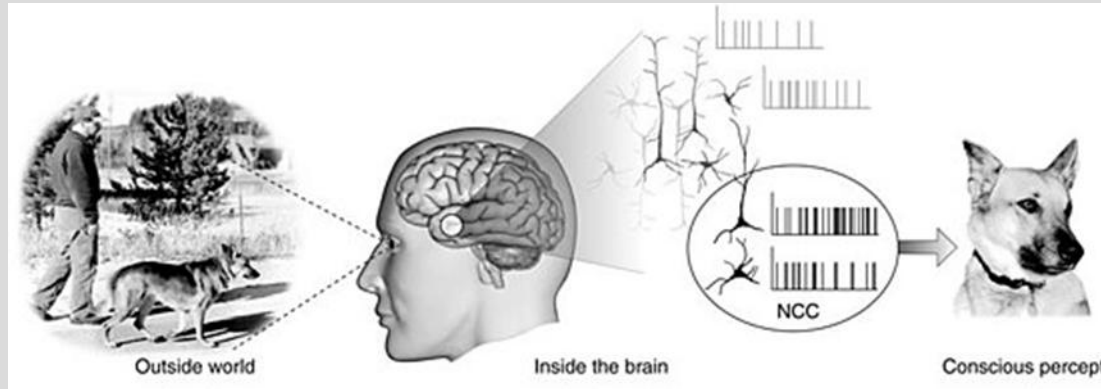
**Perceptions are interpreted and based upon instinct, beliefs and prior experiences**

**Perceptions cannot be separated from interpretation and vice versa (Maximum  $\Phi$ )**

# NEURAL CORRELATES & COMPLEXES OF CONSCIOUSNESS

Every specific conscious experience is associated with an NCC

Collections of NCCs make up a conscious complex



Qualia  $\equiv$  instances of specific subjective experiences

# THE NEURAL CORRELATES OF CONSCIOUSNESS

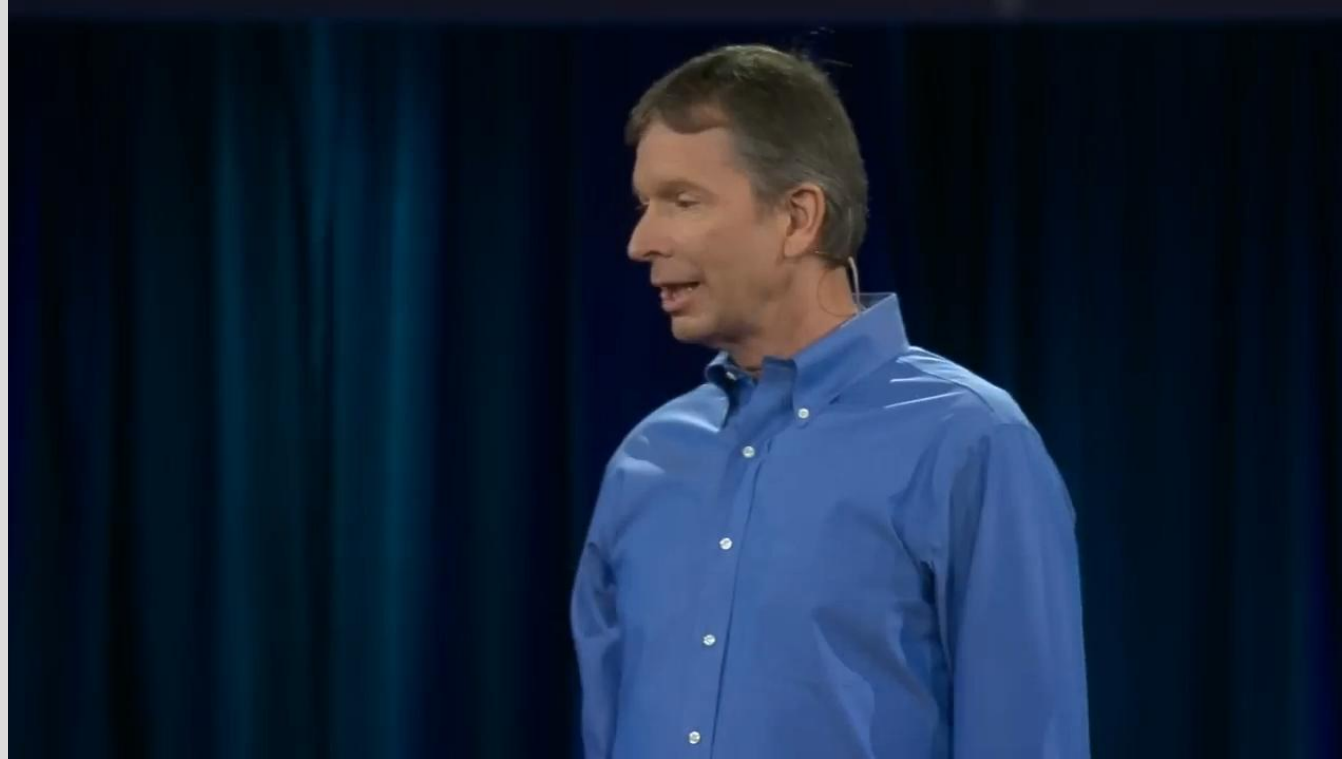


What Are Neural Correlates Of Consciousness? - Neurotech Insight Pro:  
<https://www.youtube.com/watch?v=w78pzEc-IBQ>

Correlation does not imply causation



# DO WE SEE REALITY AS IT IS? | DONALD HOFFMAN



TED Talk: <https://www.youtube.com/watch?v=oYp5XuGYqqY>

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# CHARACTERISTICS OF EXPERIENCE

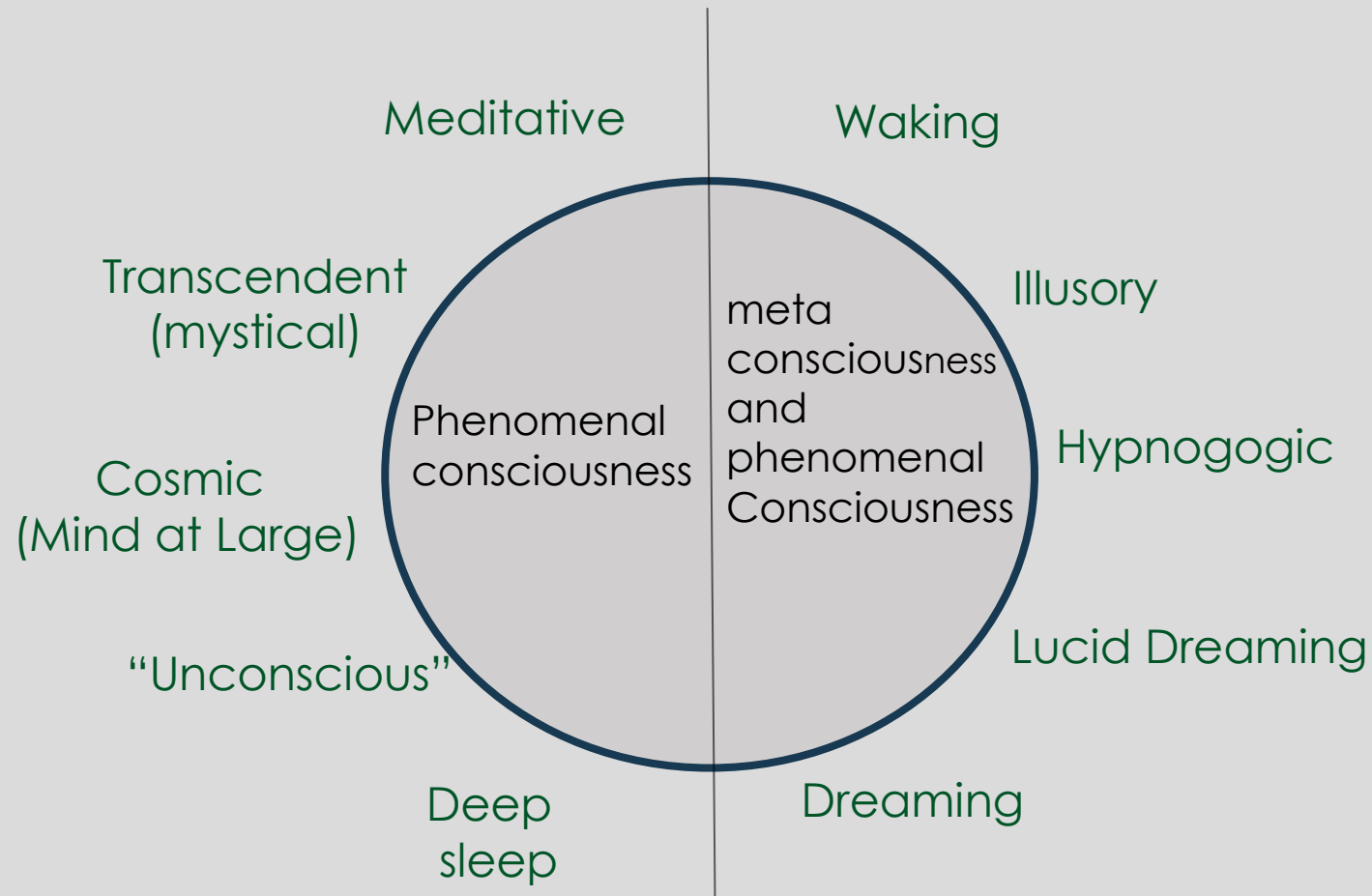
- ▶ Unitary and holistic
- ▶ Exists for itself
- ▶ Excitations are self-activating
- ▶ Has agency (causal power) to influence its own and other states
- ▶ Influenced by other states

Experience is the behavior of the thing that is experiencing (e.g. consciousness)



**Consciousness is a state of being – it is not a computation**

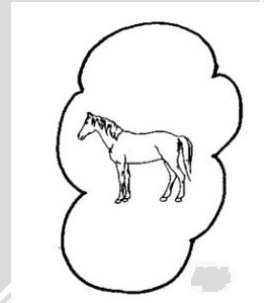
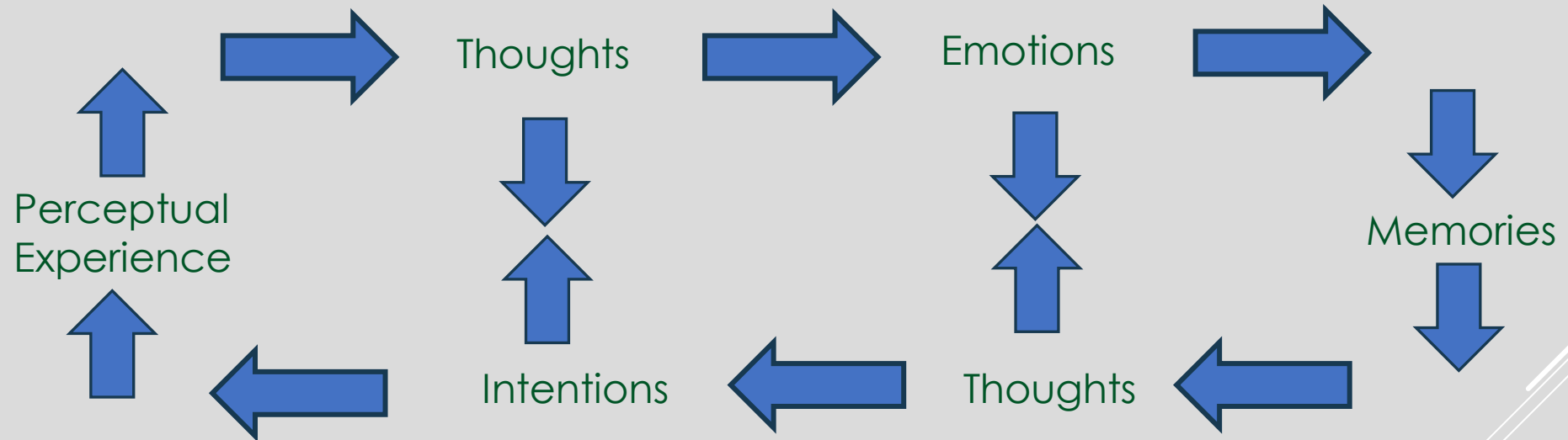
# STATES OF EXPERIENCE



Depth and richness of experience varies by state

# SUBJECTIVE EXPERIENCE INTEGRATES BY ASSOCIATION

Collection of conscious complexes made up of conscious agents  
(a network of self excitations which cannot be predicted)



Order and interactions will vary based on cognitive associations & attention

Recurring associations tend to become habits of behaviors

# THE EXPERIENCE OF TRANSCENDENCE

Excerpt from "then I am myself the world" – by Christof Koch

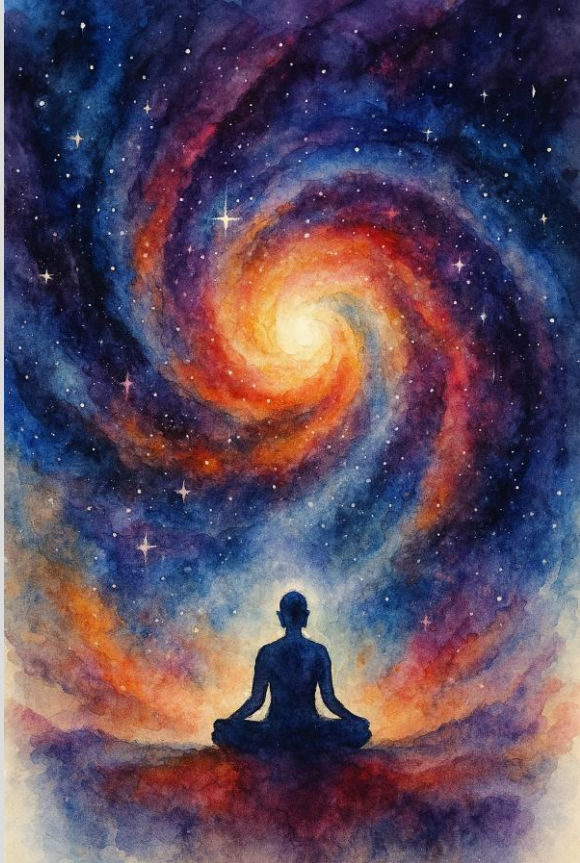
*I ceased to exist in any recognizable way, shape or form. No more Christof, no more ego, no more self; no memories, dreams, desires, hopes, fears – everything personal was stripped away. Nothing was left but a non-self; this remaining essence wasn't a man, woman, child, animal, spirit or anything else; it didn't want anything, expect anything, think anything, remember anything, dread anything.*

*But it experienced. Did it ever.*

*It saw a point of cold white light of unbearable intensity, unable even to conceive of looking away, as there was no "away from." There was no left or right, up or down, front or back, far away or close by. There wasn't a black canvas upon which the light existed, as there was no space. There were no other attributes: no color, no motion, no texture, no sound or silence, no smell, no body, no pleasure, no pain. What there was, was a timeless universe convulsed to a blazing, icy light. That and a profound feeling of both terror and ecstasy, the awfulness of pure experience lasting indefinitely – for there was no perception of time. The experience wasn't brief or long. It simply was.*

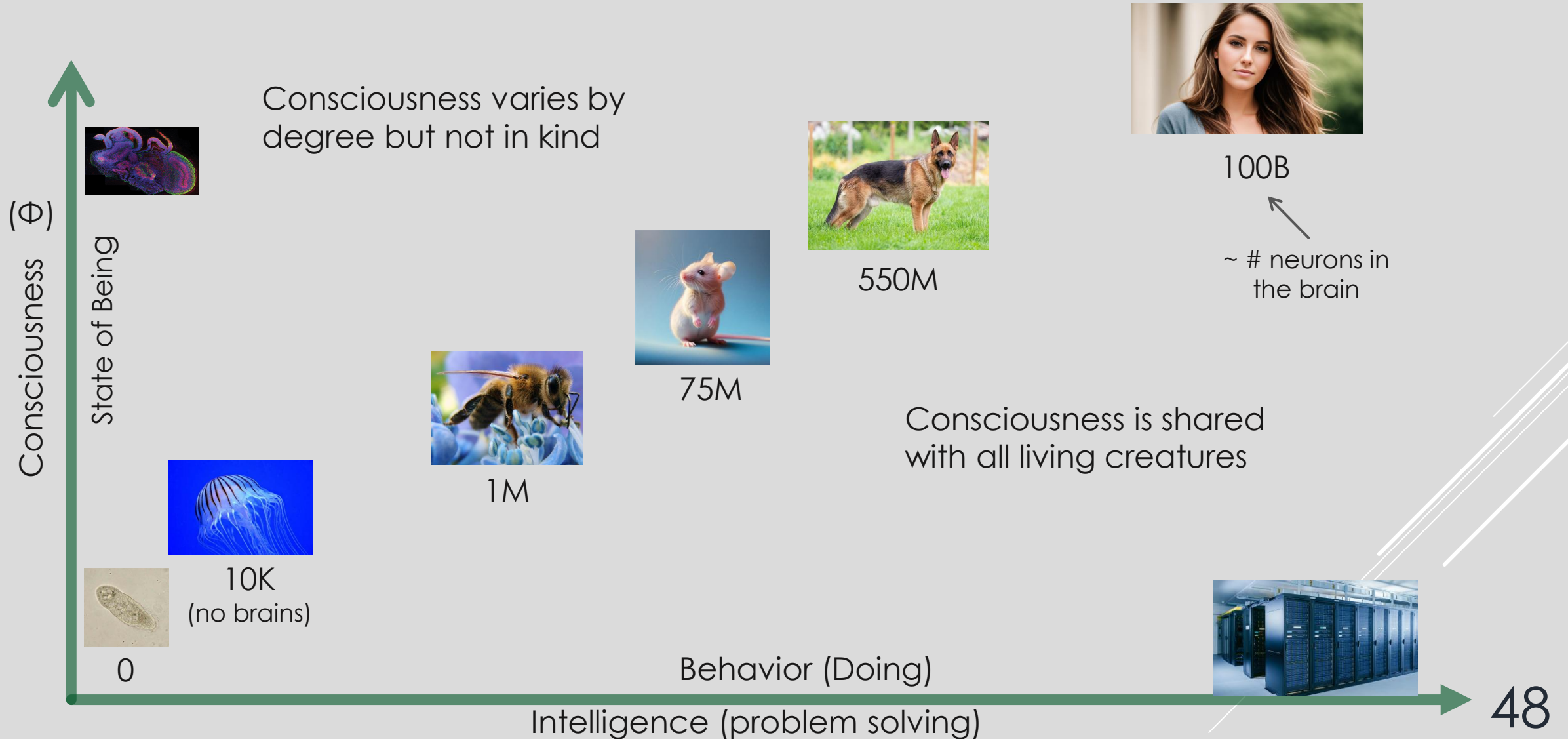


# A PERSONAL EXPERIENCE



*"All perceptions and imaginations cannot describe  
That which only can be experienced.  
The ecstasy and the terror of it.  
A peek of Divine essence.  
Beyond imagination.  
More real than real.  
Timeless and boundless.  
The Oneness of what we are,  
Unlimited in knowing, pure in bliss and in unconditional love.  
Nothing and everything and yet the essence of all that exists."*

# CONSCIOUSNESS VS INTELLIGENCE

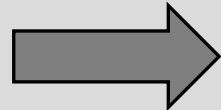


# THREE ASPECTS OF INTELLIGENCE

- ▶ Analytical
  - ▶ Recognizing problems and solving them
  - ▶ Computational
- ▶ Creative
  - ▶ Innovation (via pattern matching)
- ▶ Practical
  - ▶ Application of knowledge



Higher Intelligence



More ways to solve problems (by different means)

# NATURE'S EVOLUTIONARY IMPERATIVES



- ▶ Inhibitors
  - ▶ Pleasure, joy, happiness, etc.
  - ▶ Instinct & beliefs
- ▶ Drivers
  - ▶ Pain, suffering, etc.
  - ▶ Fear, anguish, etc.
- ▶ Metacognition
  - ▶ Ability to balance Inhibitors & drivers
  - ▶ Ability to reason (evaluate, analyze & plan)
  - ▶ Ability to assign meaning to experience
  - ▶ Ability to affect



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# AI & CONSCIOUSNESS

- Consciousness
  - About being, not doing
  - Exists for itself
  - Has causal power (for itself & others)
  - Non computational
- Intelligence
  - About problem solving (pattern matching)
  - Computational
  - Simulations do not have causal power

Intelligence  $\neq$  consciousness



Simulations are not the same  
as the thing being simulated



# ARTIFICIAL (GENERAL) INTELLIGENCE

“Assuming that IIT is correct, it can be proven that a powerful general AI, or even a detailed simulation of one’s brain, will remain unconsciousness (in any meaningful sense)”

Julio Tononi – co-inventor of IIT



A simulation is not the same as the thing being simulated  
Consciousness is not computational

Artificial Intelligence [AI] is not the same as Artificial Consciousness [AC]

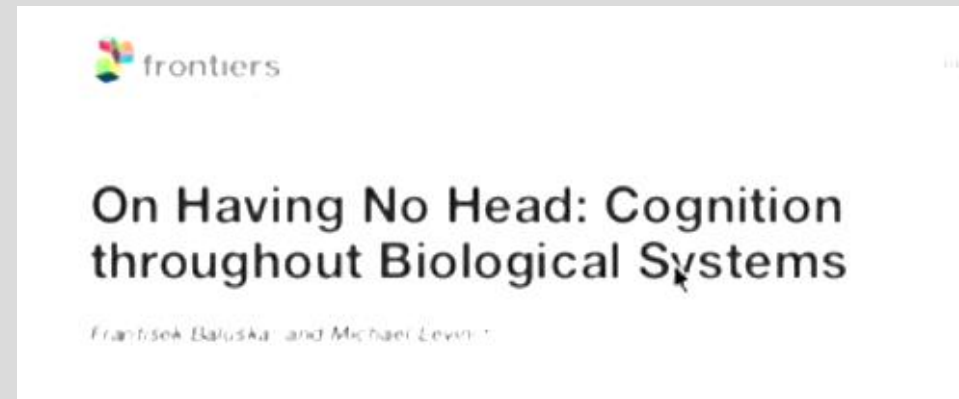
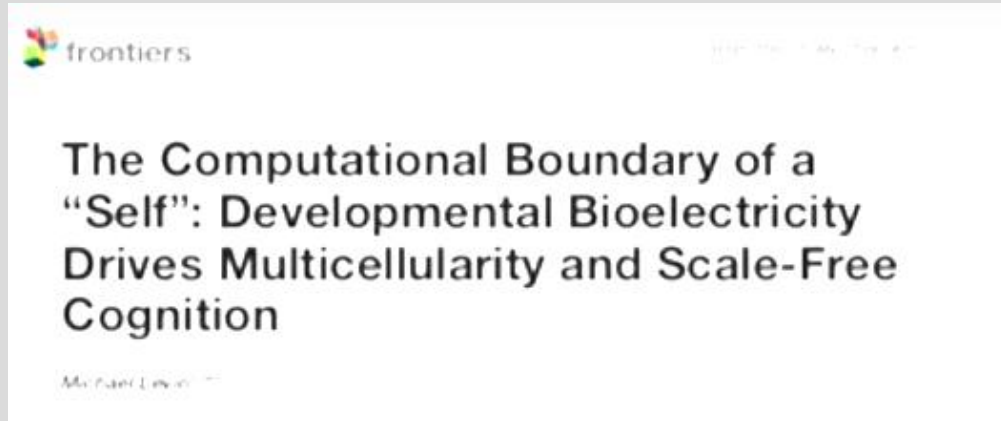
# LIFE $\equiv$ CONSCIOUSNESS

## Cognition all the way down

Biology's next great horizon is to understand cells, tissues and organisms as agents with agendas (even if unthinking ones)

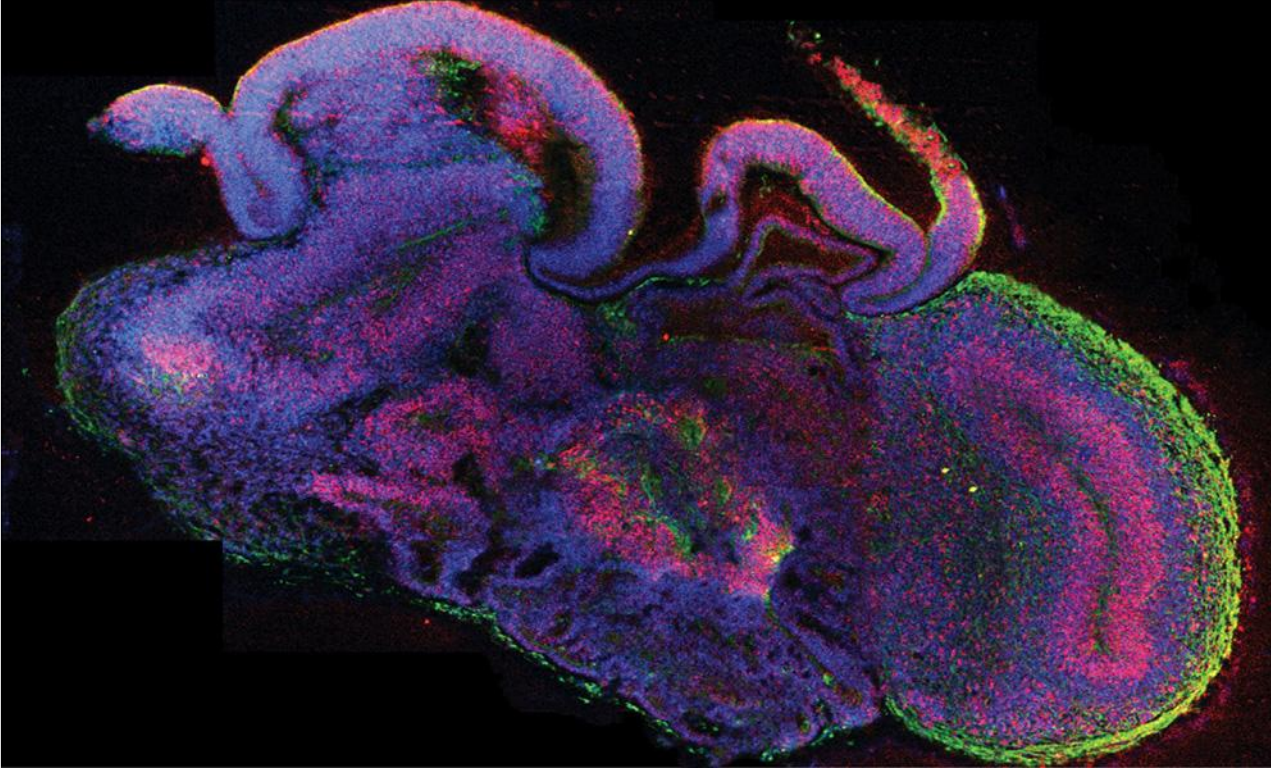
Michael Levin - Frontiers in Frontiers

<https://aeon.co/essays/how-to-understand-cells-tissues-and-organisms-as-agents-with-agendas>



Dr. Michael Levin - Professor of Biomedical Engineering Tufts University

# ORGANOIDS ARE COMING



- Three-dimensional (3D) living structures that mimic the architecture & function of actual organs.
- Derived from stem cells
- Can self-organize into complex tissue-like formations
- Valuable tools for various functions
  - Biomedical applications,
  - Bioelectronics & biocomputing
  - Cyborgs
  - ???

# THE REAL THREAT TO HUMANITY

**World's first commercial biological computer launched by Cortical Labs (Australian start up) – March 5, 2025**



CL-1. Credit: Cortical Labs

CL1's lab-cultivated cells are based on neurons grown from human stem cells

They are grown across a silicon chip that has pins used to send electrical impulses into the web of neurons and receive impulses back.

This creates a high bandwidth connection between the organic network and digital set ups.

# HUMAN BRAIN CELLS ON A CHIP FOR SALE

The Cortical Labs CL1's compact energy and hardware footprint could make it attractive for extended experiments. A rack of CL1 units consumes 850-1,000 watts, notably lower than the tens of kilowatts required by a data center setup running AI workloads.

[www.GrokingWholeness.info](http://www.GrokingWholeness.info)



The first 115 units will begin shipping this summer (2025) at \$35,000 each, or \$20,000 when purchased in 30-unit server racks. Cortical Labs also offers a cloud-based “wetware-as-a-service” at \$300 weekly per unit, unlocking remote access to its in-house cell cultures.

Each CL1 contains 800,000 lab-grown human neurons, reprogrammed from the skin or blood samples of real adult donors. The cells remain viable for up to six months, fed by a life-support system that supplies nutrients, controls temperature, filters waste, and maintains fluid balance. Meanwhile, the neurons are firing and interpreting signals, adapting from each interaction.

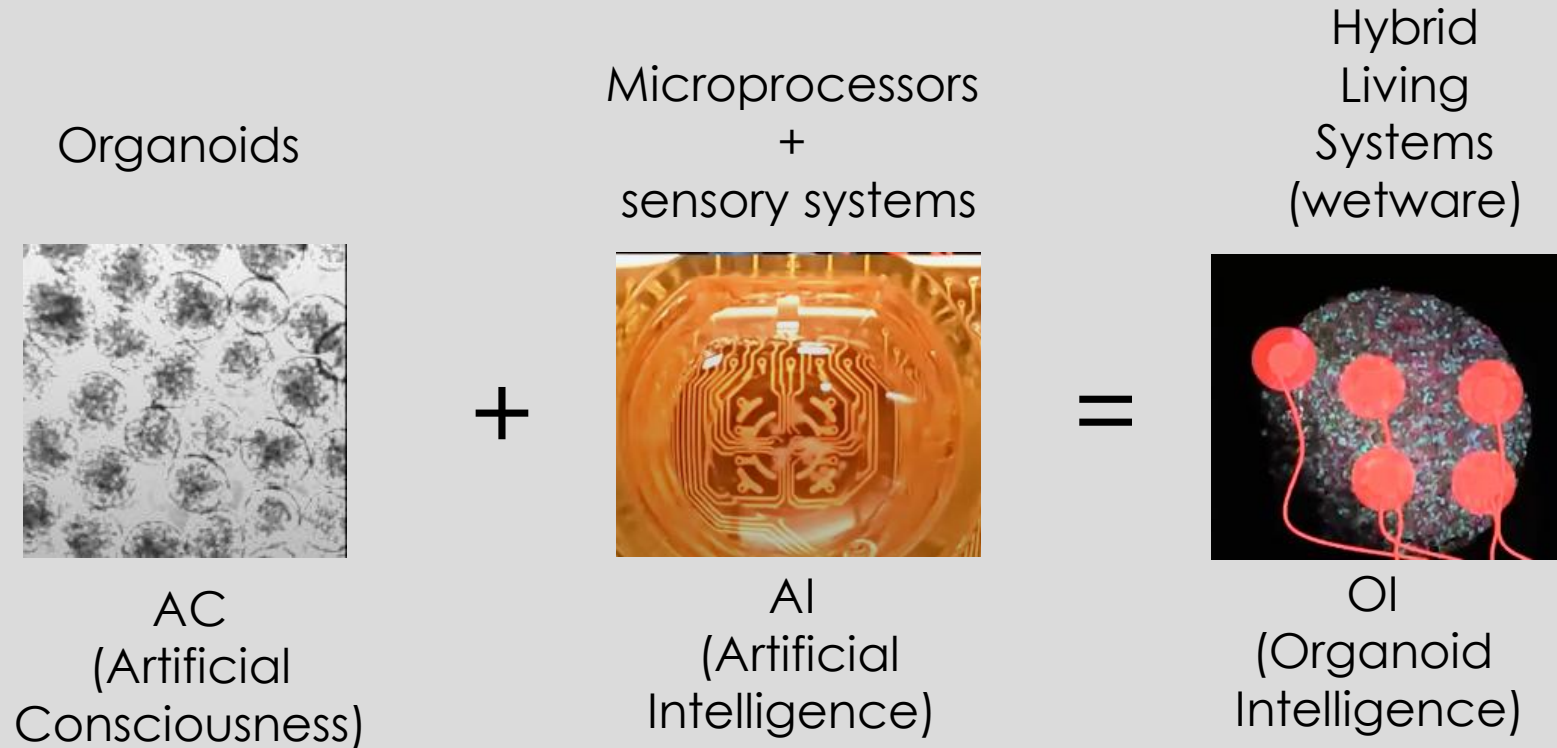


# ORGANOID INTELLIGENCE





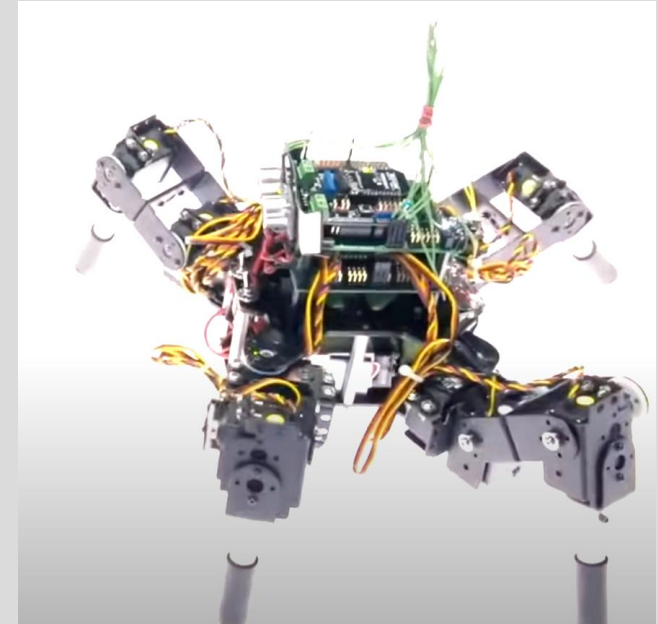
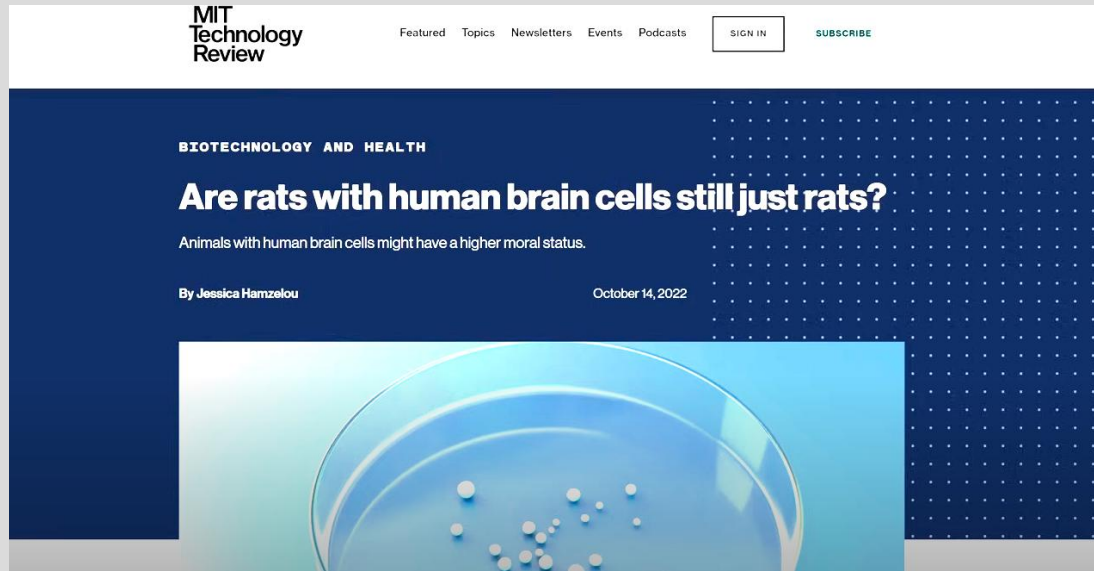
# THE FUTURE – BIOCOMPUTING



Eventually OI capabilities will far exceed human capabilities

Whiting School of Engineering, Johns Hopkins University

# ETHICAL IMPLICATIONS OF OI



Journal of Law and the Biosciences, 1–13  
<https://doi.org/10.1093/jlb/lbad007>  
Original Article

OXFORD

## The legal personhood of human brain organoids

Masanori Kataoka <sup>1</sup>, Tsung-Ling Lee <sup>2</sup> and  
Tsutomu Sawai <sup>1,3,\*</sup>

<sup>1</sup> Graduate School of Humanities and Social Sciences, Hiroshima University, Hiroshima, Japan

<sup>2</sup> Graduate Institute of Health and Biotechnology Law, Taipei Medical University, Taipei, Taiwan

<sup>3</sup> Institute for the Advanced Study of Human Biology, Kyoto University, Kyoto, Japan

\*Corresponding author. E-mail: [tstmsw@hiroshima-u.ac.jp](mailto:tstmsw@hiroshima-u.ac.jp)

# EXPLORATIONS INTO THE NATURE OF CONSCIOUSNESS

A BRIEF OVERVIEW OF CONSCIOUSNESS

PART 6

Bob Staretz

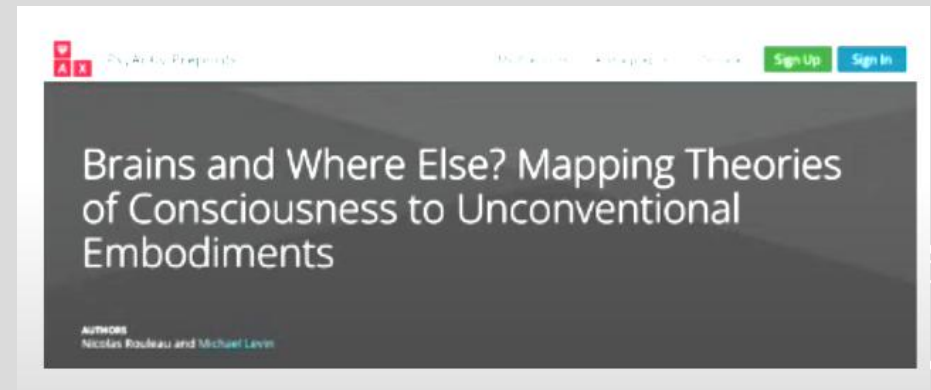
[www.GrokingWholeness.info](http://www.GrokingWholeness.info)

2025

# WHERE IS CONSCIOUSNESS?

*“If you take molecular mechanisms, evolutionary relationships, or problem-solving behaviors as evidence of consciousness in the problem of other minds, you need to take it seriously for non-linguistic body organs too (and beyond)”*

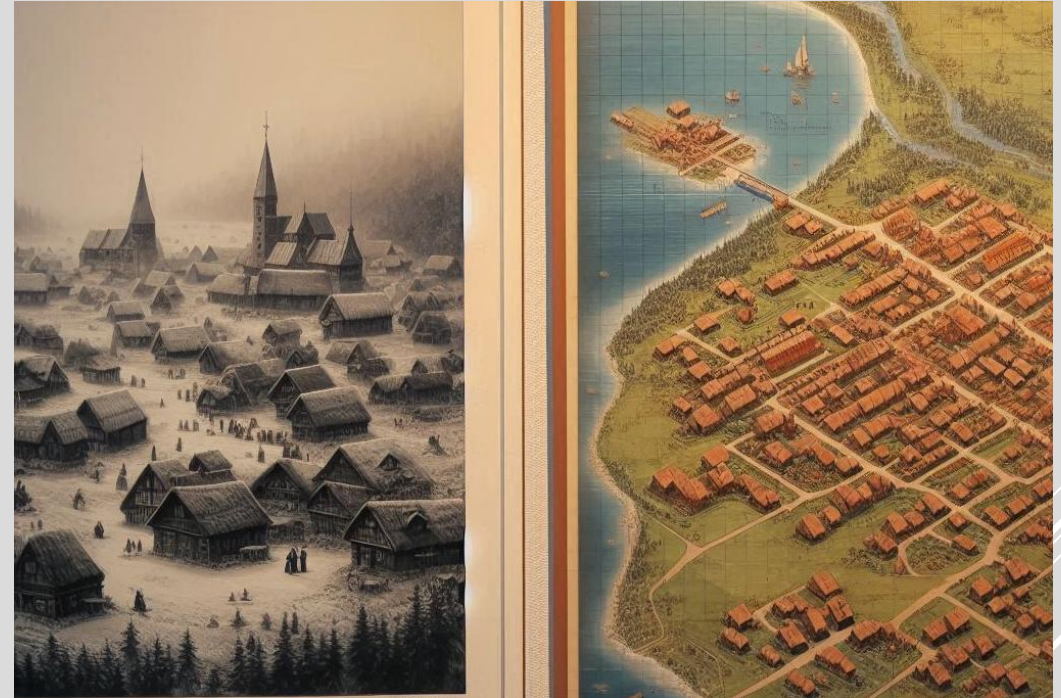
*Michael Levin PhD – Biology Dept. Tufts University*



*“Creative problem-solving, learning, etc. are ancient – not brain-specific. Sciences of the self-assembly of bodies (developmental biology) and of the autopoiesis of minds have a lot to teach each other”*

# MODELS OF CONSCIOUSNESS

- ▶ “The map is not the territory”
  - ▶ Does not represent the thing represented as it really exists
- ▶ Predictive value
  - ▶ Mimic nature's behavior
- ▶ Symbolic thinking is a model of reality; experience is the actual thing
  - ▶ Describe the taste of garlic
  - ▶ Experience the taste



Actual village

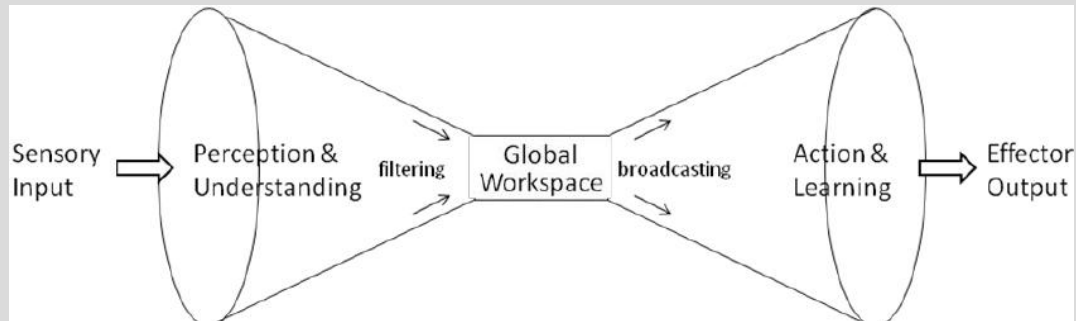
Map of Village

Models are useful for conceptual reasoning and explanatory power

# LEADING THEORIES OF CONSCIOUSNESS

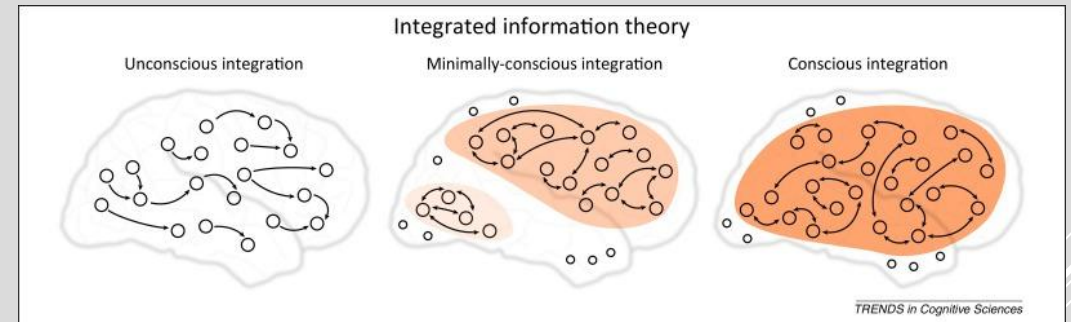
Both Theories Integrate Information

## Global Workspace Theory



Perceptual information of an experience goes to a global workspace and is broadcast to other centers

## Integrated Information Theory (IIT)



Consciousness is intrinsic to cognitive networks that exert “causal power” on themselves. Can be measured by a parameter referred to as  $\Phi$



# THE IIT MODEL OF CONSCIOUSNESS

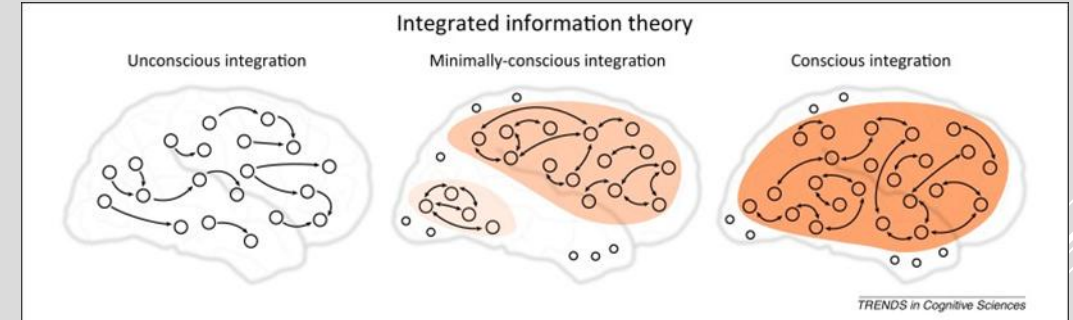
- ▶ Integrated Information Theory (IIT)
- ▶ A **model** describing what consciousness does – not what it is

- ▶ Starts from experience (consciousness) – which exists irrefutably
- ▶ Accounts for the qualities of experience
- ▶ An experience is identical to a cause-effect structure (cognitive complex) upon itself
- ▶ Maps subjectivity to neural correlates (physicality)
- ▶ Structural; non computational
- ▶ Not tied to a specific metaphysics

- ▶ Has explanatory and predictability value

- ▶ Practical Applications

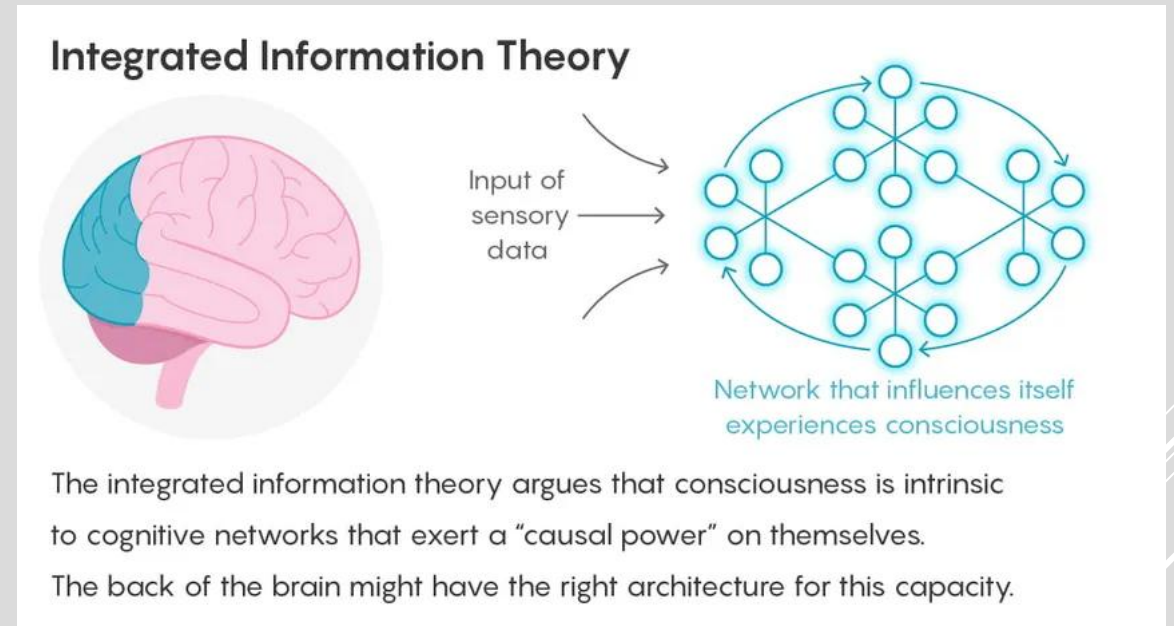
- ▶ “Locked in” syndrome
- ▶ Consciousness modification (anxiety disorders, suffering, etc.)
- ▶ Ethics
  - ▶ Measurement (degree of suffering)
  - ▶ Free will debate (certain types of decisions)
  - ▶ Moral rights (what is the threshold)
- ▶ Compassion



Note: correlation does not imply causality

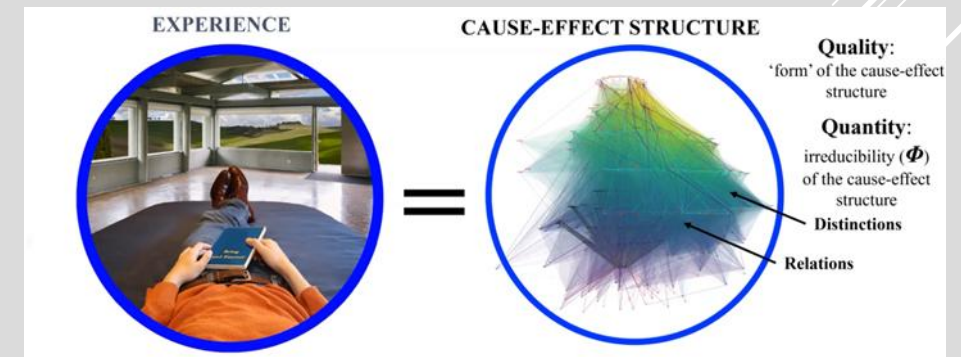
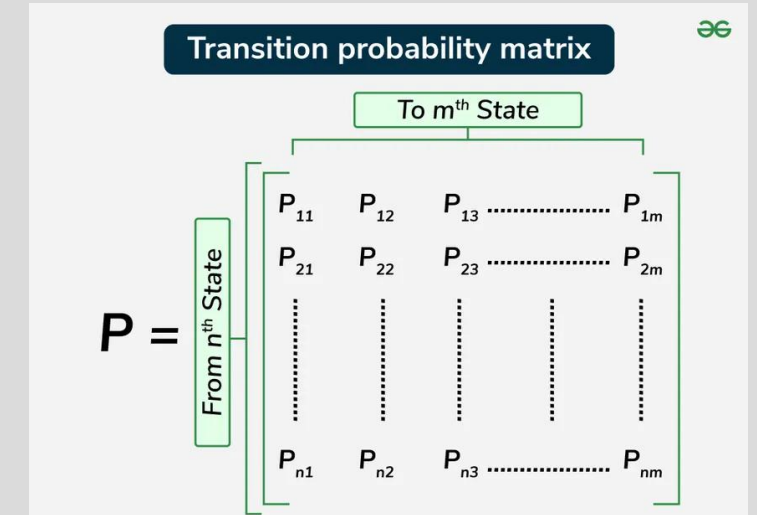
# INTEGRATED INFORMATION THEORY

- ▶ Starts with experience (e.g. consciousness)
- ▶ Axioms (describe all conscious experience)
  1. Every experience exists for itself
  2. Its specific
  3. Its definite
  4. Its only one (not many) integrated (unified) experience
  5. It may have multiple components, visual, auditory, touch, taste, etc.
- ▶ It has causal power for itself or for external objects auditory, touch, etc. (It can make or take a difference)
- ▶ The current state is determined by its own past and can determine its own future
- ▶ The extent to which a system has causal power defines the degree of consciousness it has ( $\Phi$ )



# TRANSITION PROBABILITY MATRIX

- ▶ The TPM describes how a system transitions between end states
- ▶ By determining the intrinsic causal power a system has upon itself, you can compute the amount of integrated information it has ( $\Phi$ )
  - ▶  $\Phi = 0$  = no consciousness
  - ▶  $\Phi > 0$  = the system exists for itself (is conscious)
- ▶ Every structure maps to a corresponding state (subjective experience – what the system is conscious of)



# EXPLORATIONS INTO THE NATURE OF CONSCIOUSNESS

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PART 7

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[www.GrokingWholeness.info](http://www.GrokingWholeness.info)

2025

# METAPHYSICS VS SCIENCE

## ▶ Metaphysics

- ▶ A description of what nature is (Being)
- ▶ Metaphysics can inform science
- ▶ Living systems cannot directly see reality for what it actually is

## ▶ Science

- ▶ A description of how nature behaves (Doing)
- ▶ Science is perceptual (3<sup>rd</sup> person)
- ▶ Science can validate metaphysics
- ▶ Uses models (convenient fictions) to predict nature's behavior
- ▶ Maps (models) are NOT the territory
- ▶ Scientific theories can be falsified (scientific method)



# MAJOR SCHOOLS OF THOUGHT ON THE METAPHYSICS OF CONSCIOUSNESS

- ▶ Physicalism (aka materialism)
  - ▶ Consciousness is an epiphenomenon (byproduct) of brain function & processes
- ▶ Dualism
  - ▶ Matter and consciousness are two distinct but fundamental aspects of reality
- ▶ Panpsychism
  - ▶ Every physical object has an additional property (a basic component of consciousness )
- ▶ Idealism
  - ▶ Everything either is consciousness or is in consciousness and/or manifested by Consciousness





# CONSCIOUSNESS IS FUNDAMENTAL

Dualism

Panpsychism

Idealism

Ancient eastern traditions



# FILTER THEORY OF CONSCIOUSNESS

- ▶ Subjective experience is not generated by the brain, but merely selects it according to the body in space-time
- ▶ Examples of reduced brain activity leading to transpersonal/mystical states
  - ▶ Fainting caused by asphyxiation
  - ▶ G-Force induced lost of consciousness
  - ▶ Holotropic breathwork
  - ▶ Psychedelic experiences
  - ▶ Transcranial Magnetic stimulation (TMS)
  - ▶ Stroke patients
  - ▶ Acquired savant syndrome
  - ▶ NDEs
  - ▶ Etc.



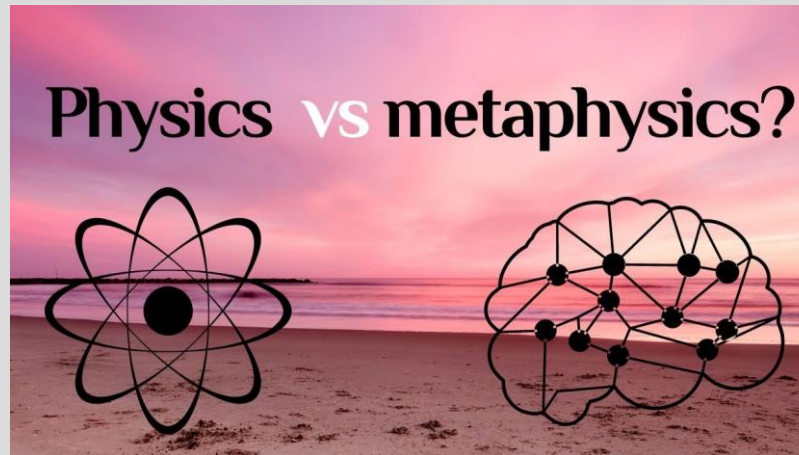
# THE PATH TO IDEALISM

- ▶ One starts as a materialist, then one becomes a dualist, then a panpsychist, and one ends up as an idealist
  1. First one is impressed by the success of science, endorsing materialism about everything and so about the mind
  2. Second, one is moved by problem of consciousness to see a gap between physics and consciousness, thereby endorsing dualism, where both matter and consciousness are fundamental
  3. Third, one is moved by the inscrutability of matter to realize that science reveals at most the structure of matter and not its underlying nature, and to speculate that this nature may involve consciousness, thereby endorsing panpsychism
  4. Fourth, one comes to think that there is little reason to believe in anything beyond consciousness and that the physical world is wholly constituted by consciousness, thereby endorsing idealism

Source: David Chalmers: "Idealism and the Mind/Body Problem"

# Criteria for Evaluating Metaphysical Hypotheses

- ▶ Empirical evidence consistent with hypothesis
- ▶ Explanatory power for observed phenomena
- ▶ Coherent and supported by informed intuitions and experience
- ▶ Plausibility
- ▶ Logic and reasonability tests
- ▶ Parsimonious (Occam's razor)

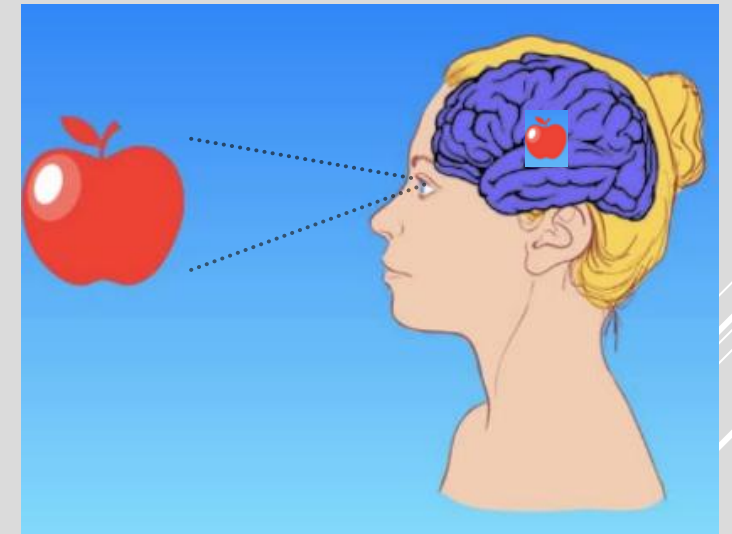


# PHYSICALISM (AKA MATERIALISM)

## PREVAILING VIEW

- ▶ Originally invented as a political weapon against the church
- ▶ External non-living objects have their own independent physical existence and are made of a single ontic category
- ▶ Assumes that consciousness arises from biological brain functions and processes (epiphenomenal)
- ▶ Consciousness does not exist in organisms without a brain
- ▶ Matter can be described by quantities (mass, charge, size, etc.)
- ▶ Issues
  - ▶ Provides no solution to the “Hard Problem of Consciousness” – what are the physical objects (and their properties) that create experience
  - ▶ Not a single conscious experience has ever been explained
  - ▶ Conflicts with recent discoveries in physics, biology, neuroscience and neurophysiology
  - ▶ Does not explain much of the human experience
  - ▶ Cultural conditioning embedded in humanity since the mid 19th century

*The map is not the territory*





# EVIDENCE AGAINST MATERIALISM

- ▶ Science
  - ▶ Quantum Physics
  - ▶ Neuroscience
  - ▶ Neuropsychology
  - ▶ Biology
- ▶ Non-ordinary states of consciousness
  - ▶ Terminal lucidity
  - ▶ NDEs,
  - ▶ Savant syndrome
  - ▶ Insights and intuition
  - ▶ Psychedelics
  - ▶ PSI
- ▶ Explanatory power
  - ▶ Much of the human experience is denied
  - ▶ Empirical evidence
- ▶ Logic and reason
- ▶ Parsimony (Occam's razor)



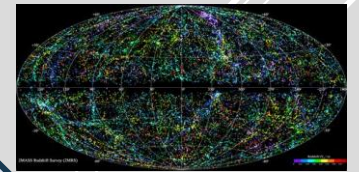
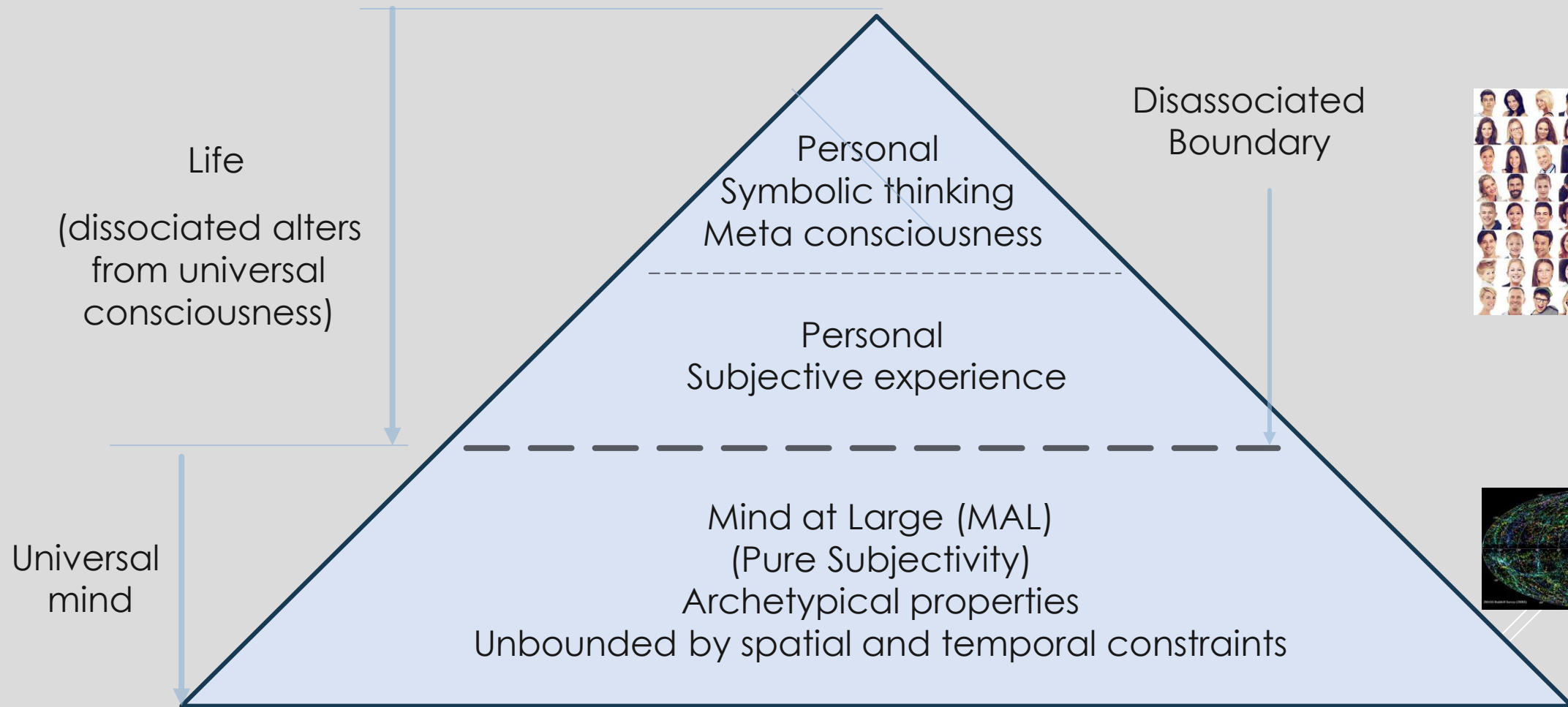


# ANALYTICAL IDEALISM POSTULATES

BERNADO KASTRUP

- ▶ Phenomenal Consciousness (Universal mind)
  - ▶ Ontological primitive Life (1<sup>st</sup> person view) is a dissociation of Universal mind
  - ▶ Metabolizes
- ▶ All Physicality (3<sup>RD</sup> person view) is a projection of Mind at Large (MAL)
  - ▶ Mentality
- ▶ The reality we perceive is an interface
  - ▶ Mental image of Mind at large)
  - ▶ Desktop / Airplane instrumentation panel metaphors
  - ▶ Entropy
- ▶ Memory and Experience
  - ▶ Non-local and unbounded
- ▶ Agency (causal power)
  - ▶ Exists in embodied form

# ANALYTIC IDEALISM EMERGING VIEW



All physical objects are 3<sup>rd</sup> person representations of mentation (consciousness)

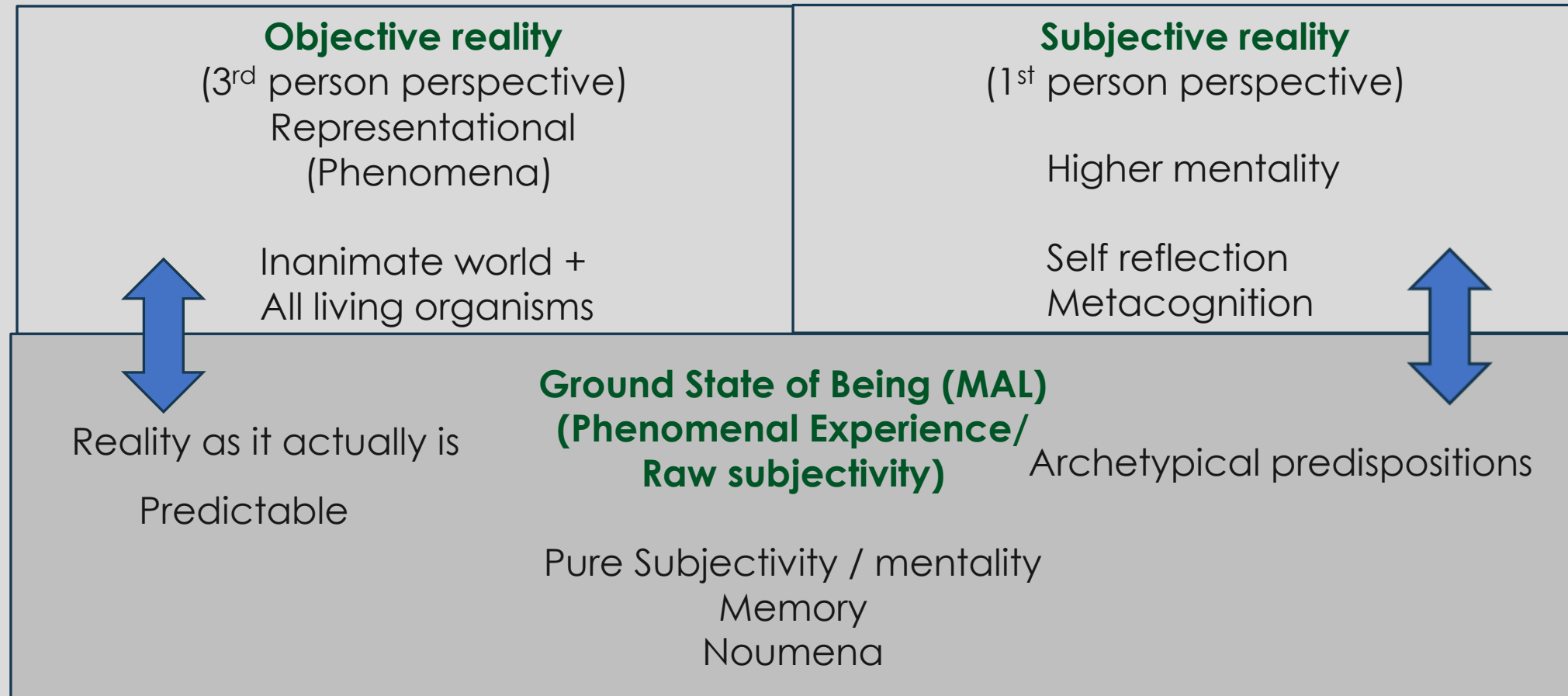
Subjective experience is the fundamental substrate of Nature

# UNIVERSAL CONSCIOUSNESS - DREAM ANALOGY

- ▶ The dreaming mind
- ▶ The avatar
- ▶ The objects of the dream
- ▶ The wakeup realization



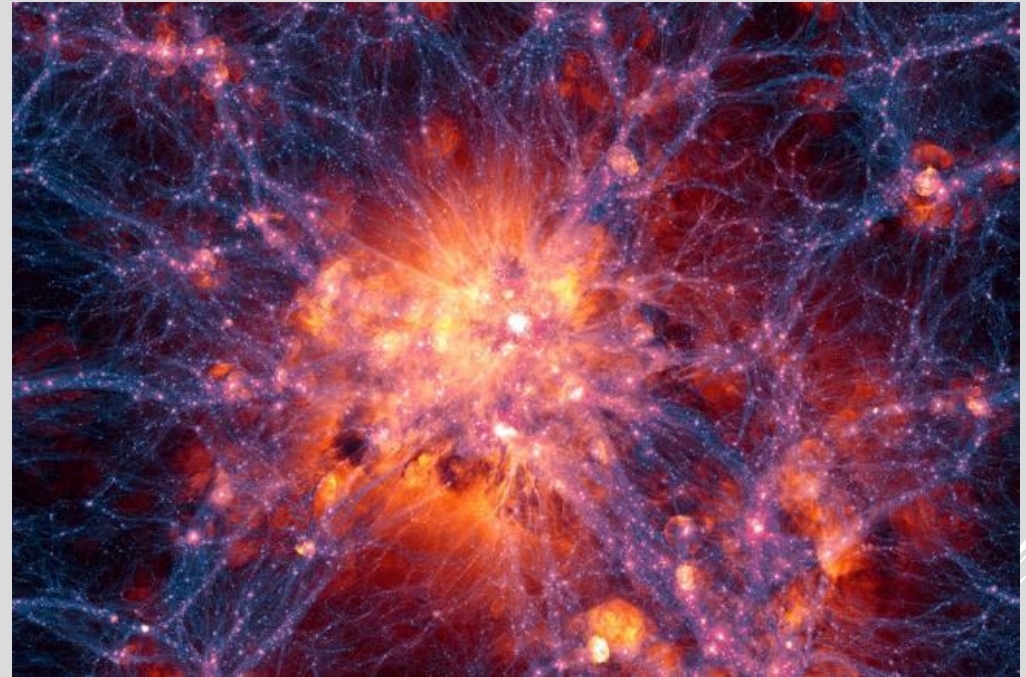
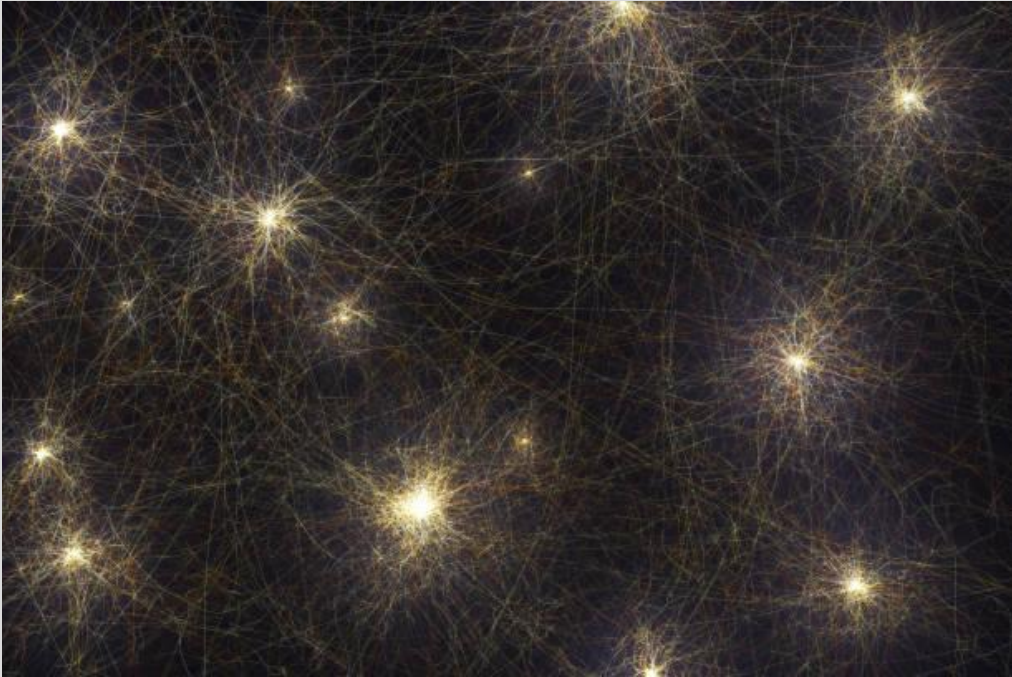
# ASPECTS OF ANALYTIC IDEALISM





# LARGE SCALE STRUCTURE OF THE UNIVERSE

(Third person perspective)



A neural network?

# VIDEO ON MATERIALISM VS PHYSICALISM

► To be added



# IMPLICATIONS – SURVIVAL BEYOND DEATH



**Excerpt: Bernardo Kastrup on Near Death Experiences**

<https://www.youtube.com/watch?v=Cuo2DJtulcA>

# THE ONE IS IN THE MANY & THE MANY IS IN THE ONE



# EXPLORATIONS INTO THE NATURE OF CONSCIOUSNESS

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PART 8

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[www.GrokingWholeness.info](http://www.GrokingWholeness.info)

2025

# CONSCIOUSNESS IS ALL THERE IS

- ▶ At the fundamental substrate of reality there is only one universal (subjective) consciousness
- ▶ Everything is conscious or exists in consciousness
- ▶ All life is dissociated aspects of universal consciousness
- ▶ Physicality is a 3<sup>rd</sup> person perspective of consciousness
- ▶ Space and time are mental constructs that organize experience
- ▶ Consciousness is unbounded
- ▶ Consciousness assigns meaning to experience
- ▶ There is only oneness
- ▶ Self excitable (causal powers)
- ▶ Exists for itself



“The more you look at the Universe, the more it seems like a great thought”

Sir James Jeans

# CONSCIOUSNESS - THE ONTOLOGICAL PRIMITIVE

- ▶ Consciousness is Incontrovertible
  - ▶ If there is an **experience**, there is an experienter
- ▶ Empirical Evidence
  - ▶ Quantum Physics
  - ▶ Neuroscience & Neurophysiology
  - ▶ Biology, medicine
- ▶ Explanatory power
  - ▶ Brain impairments or pathologies
  - ▶ Terminal Lucidity
  - ▶ Savant syndrome
  - ▶ Non-ordinary states of consciousness
  - ▶ NDEs, OBEs, etc.
  - ▶ Synchronicities
  - ▶ Psi phenomena
  - ▶ Etc.

**Essentia  
Foundation**



[www.essentiafoundation.org](http://www.essentiafoundation.org)

# BERNADO VIDEO

- ▶ (Bernado video)



# WHERE WE ARE AND WHERE WE ARE HEADED

- ▶ Physicalism (prevailing view)
  - ▶ Consciousness is an epiphenomena of matter
  - ▶ Consciousness ends at bodily death; life has no meaning nor purpose
  - ▶ Applauds consumption and accumulation of material resources
  - ▶ Encourages Individualism and separation
  - ▶ Promotes nihilism and an epicurean lifestyle
  - ▶ Removes the fear of death the biggest fear in human history
- ▶ Analytic Idealism (emerging view)
  - ▶ Consciousness is the substate for all reality and is unbounded by time and space
  - ▶ Matter is derived from consciousness
  - ▶ It restores meaning and purpose to the human condition
  - ▶ What is learned and/or experienced is never lost
  - ▶ There is only oneness and entanglement
  - ▶ It promotes empathy, altruistic behavior and the sanctity of life
  - ▶ Provides a much better understanding of the full breath human experience
  - ▶ A new model of wellness – one that promotes mind body interactions



# AN EPIPHANY FROM SPACE

► (add Edgar video here)

# PARTING THOUGHTS

*“I have trust that we humans can resolve the problems that we have created.  
There is a Sanskrit saying that I subscribe to and I like very much”*

“God sleeps in the minerals,  
Awakens in plants,  
Walks in the animals,  
And thinks in mankind”

Edgar Mitchell

# FOR FURTHER INFORMATION

- ▶ Bernado Kastrup
  - ▶ Christoff Koch
  - ▶ Rupert Spira
  - ▶ Donald Hoffman
  - ▶ David Chalmers
  - ▶ Giulio Tononi
  - ▶ Bernard Carr
  - ▶ Federico Faggin
  - ▶ Michael Levin
  - ▶ Ruper Sheldrake
  - ▶ Plus many others
- ▶ Essentia Foundation
  - ▶ Tiny Blue Dot Foundation
  - ▶ IONS
  - ▶ Heart Math Institute
  - ▶ Fetzer Institute
  - ▶ Science and Non-Duality
  - ▶ Science and Medical Network