

Is Consciousness primary ?

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- What do we *mean* by « consciousness »? (Neither self-consciousness, nor (moral) conscience, but **pure experience**).
- « (Consciousness) is **not** a *something*, but **not** a *nothing* either ! »

Wittgenstein, *Philosophical Investigations*

- *What does Wittgenstein mean? What does « Consciousness is not something » mean?*

✓ *What kind of « things » are we able to indicate by means of language?*

1. A **noun** indicates an **object**, independent of situations and subjects, detached from present being. By contrast consciousness as experience is *situated* ; it is *what it feels like to be a subject*; or at least it is *what it feels like to BE*.
2. A **predicate** ascribes a *property* to an object. Is consciousness a *property* of certain living beings? We do not have reliable *criteria* to ascribe consciousness to somebody else. **Empathy, unquestioned presupposition.**
3. A special **restrictive predicate** points towards a *phenomenon* rather than a property: « An object *appears to be* red ». **But consciousness as experience is not even a phenomenon: A phenomenon is a *content* of experience ; *it is not experience as a whole*.**

- So, consciousness as experience is not something : neither an **object**, nor a **property**, nor even a **phenomenon**.
- ***But consciousness is not nothing !***
- **For us, now, while we are reading these lines, it might even be *everything*...**
- Consciousness is not what we *have*, but what we *are* in the first place.
- It is not what can be described by us in the third person, but what we live through *in the first person*.
- **Consciousness is *existentially* primary.**
- Arguments against its being taken as **ontologically secondary** (to matter)

Argument from Epistemology

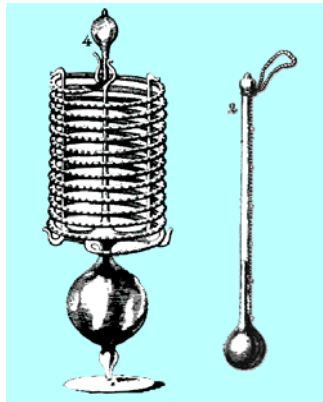
- Objective knowledge is elaborated *in two steps*, **with conscious experience as an implicit departure point**.
 1. Push aside features of **experience** on which conscious subjects cannot always agree: tastes, values, emotions.
 2. Retain a **structural residue of experience**, object of a consensus: Mathematics or general propositions.

*Objective descriptions arise as **invariants** for a number of conscious subjects.*

Heat and temperature at the edge of the “bifurcation of nature”



Galileo's thermoscope
(Gas dilation)



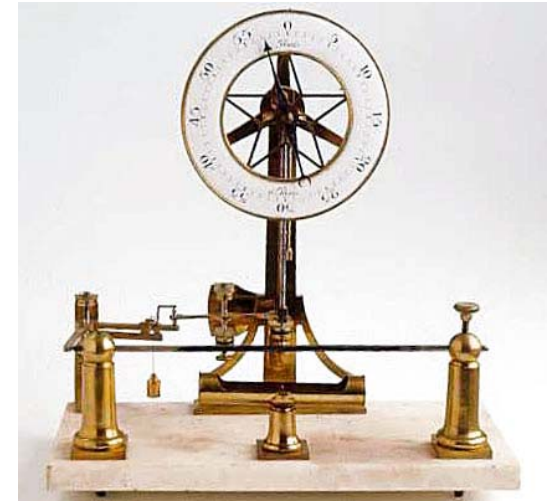
18th century
Liquid
thermometers



Red hot
metal



Work
And Heat



18th century Pyrometer
(metal dilation)



Boiling liquids and distillation

In the beginning, there were bodily “sensations”, and qualitative observations about color of metals, fusion or ebullition of materials, expansion of liquids according to whether they are cold or hot etc. Heat and temperature were hardly distinguished from one another, and from the feeling of hotness....

- The thermometric scale (**strict order relation** of temperature), replaced the **partial order relation** of hotter and colder.
- The visual experience of **graduation readings** (the *invariant* of many such visual perceptions), was given priority over the **tactile experience of hotness**.
- **The feeling of hotness became a complex and confused outcome of heat transfer with the skin.**
- Declarations about tactile experience: locked up in the **restrictive category of “subjective” statements**.
- Subjective statements are independent of the truth of statements of other types ; they are isolated cogwheels that do not engage with the rest of language (Wittgenstein, 1983).
- Metaphysical translation : **dualism or reductionism**. Dualism if one projects the two-realms organization of statements onto a two-realms organization of entities/properties ; reduction of subjectivity to objective entities if one takes the criticism of experiential expressions on objective grounds as a sign of subordination of the former to the latter.
- ***But if one looks back at the whole cognitive process by which the two-realms organization of statements was established, it appears that the very alternative of dualism and reductionism is flawed.***

- **Consciousness is *methodologically* primary.**
- **Husserl** (1936): The creators of objective knowledge *forget* that objective knowledge starts in conscious experience.
- **Varela** (1996): « Lived experience is where we start from and where all must link back to, like a guiding thread ».
- **Zeman** (2004): « I have described consciousness as a 'further fact', but it might be described more accurately as the fundamental fact of our human lives ».

Experience and the absolute

- **HUSSERL**

- Natural objects are given through mere “adumbrations” (*abschattungen*): facets connected with expectations.
- The existence of natural objects is “essentially” subject to doubt: future contents of experience can disconfirm previous conjectures about them.
- But lived experience is immediately and completely given. Future experience cannot *disconfirm* its present existence.

- **SARTRE**

- Consciousness is inherently consciousness of something *and* consciousness of itself *at the same time*
- Consciousness as lived experience is never merely possible apart from existing

Experience and the absolute (2)

- **In the PHILOSOPHY OF LANGUAGE**
- The connection between absoluteness and self-evident indubitableness is perceptible in our use of sentences including special restrictive predicates such as “appears to me as red”.
- These statements are either taken to be indisputable or subject to a classification in terms of *sincerity* rather than *truth*.
- They are sheltered from the procedure of empirical test by which we assess the truth or falsity of propositions about nature.
- *They are functionally absolutized.*

Objective science and structure

- Reduction of knowledge to structure is in fact the price which has to be paid for intersubjectivity or intersituationality (Kant, 1781, Mannheim 1936).
- The history of science as a whole tends towards relinquishment of substantial concepts and research of “invariant relations” instead;
- In science, the concept of property has been (re)defined in such a way that “it includes in itself the concept of relation” (Cassirer, 1920).

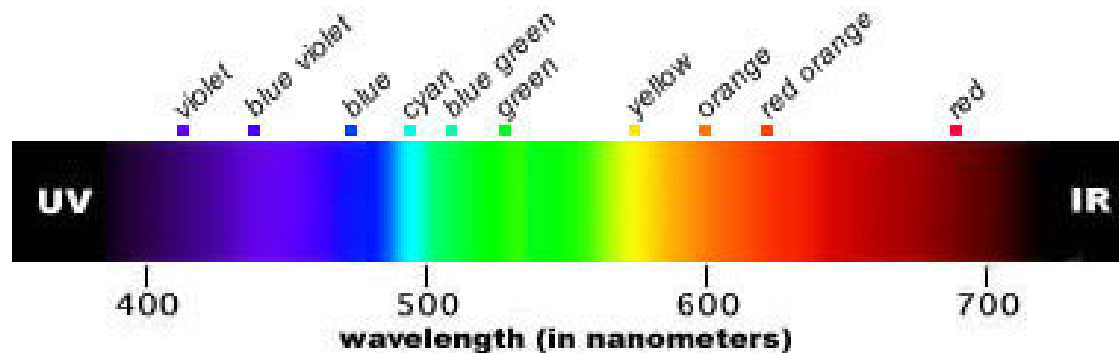
A CATEGORY MISTAKE?

- Accounting for the self-evidentially *absolute* conscious experience in terms of the *relational* concepts of objective science sounds implausible.
- It might well represent a major aspect of G. Ryle's "category mistake". (Another aspect: categoreal objective properties vs. dispositional mental properties)
- The conflict between absolutist and relational concepts in the philosophy of mind has been documented by D. Chalmers and G. Strawson. Both authors argued that there must exist in the world some hidden *non-relational* property that accounts for mind.

Do not mix up the « easy problems » of neurophysiology with the « hard problem » of the origin of consciousness!

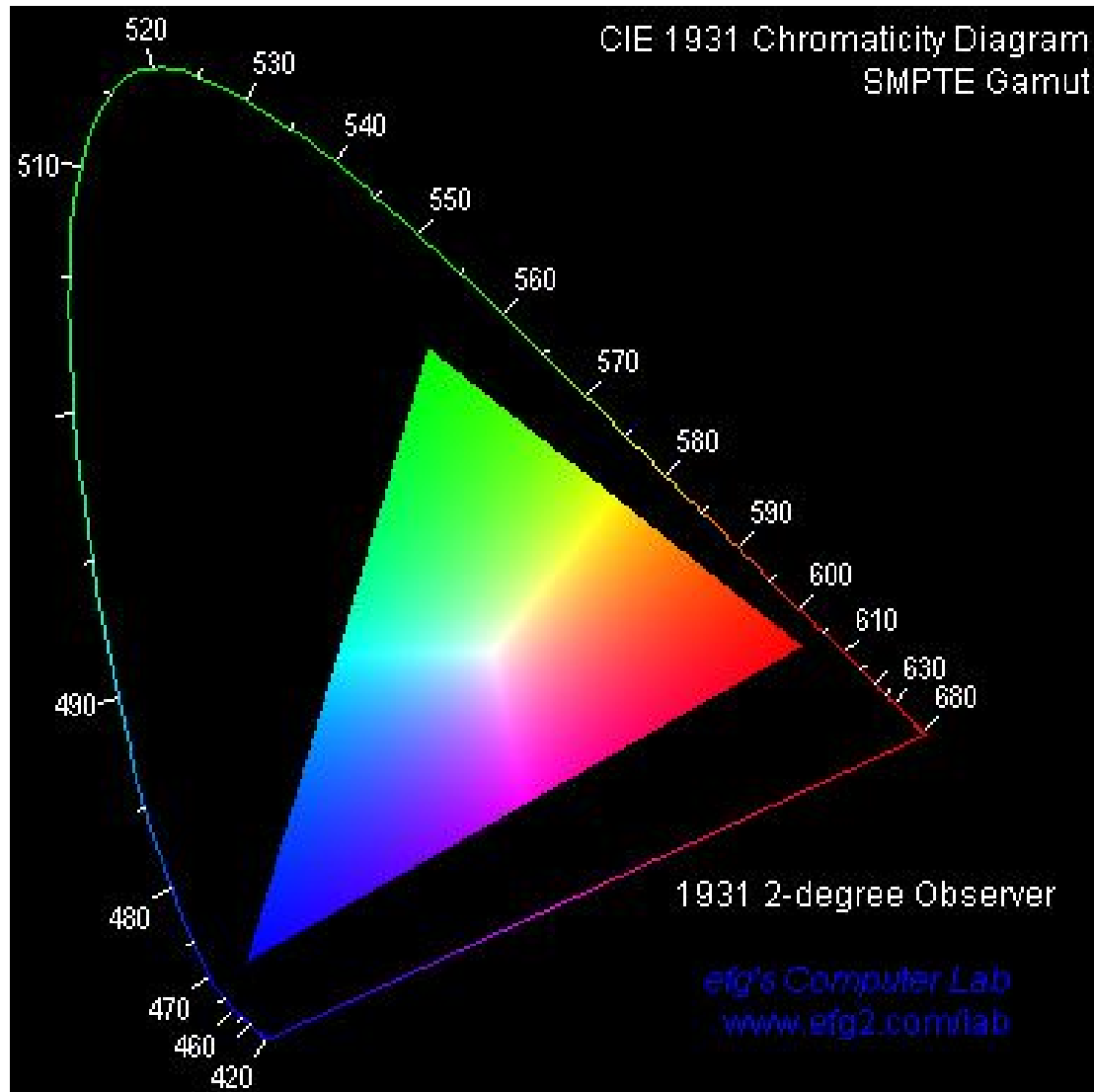
- *Hope of materialist thinkers: forget the **existential** and **methodological primacy** of consciousness. Show that consciousness is **ontologically secondary**.*
- *Materialist thinkers say: « if enough **easy** problems are elucidated in the **future**, a solution of the **harder problem of the material origin of consciousness will** arise »*
- **This hope is likely to be illusory...**

The long way towards « reducing » experience of color

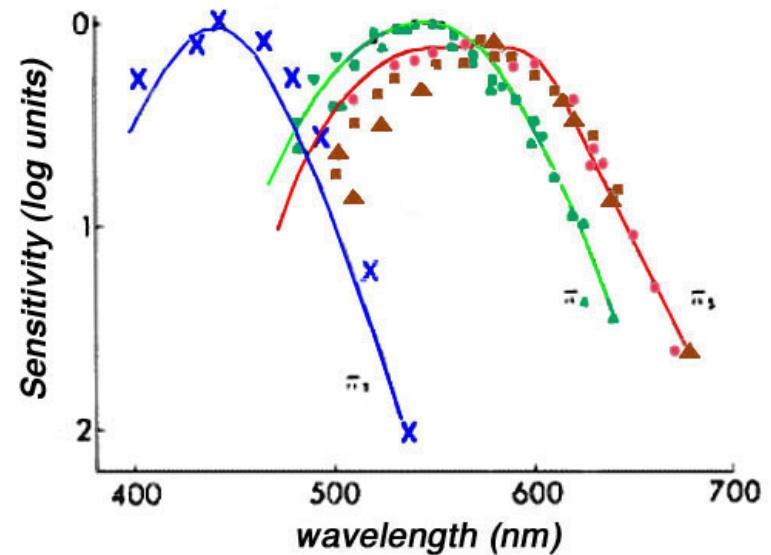
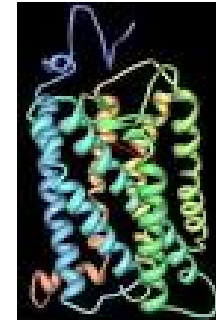
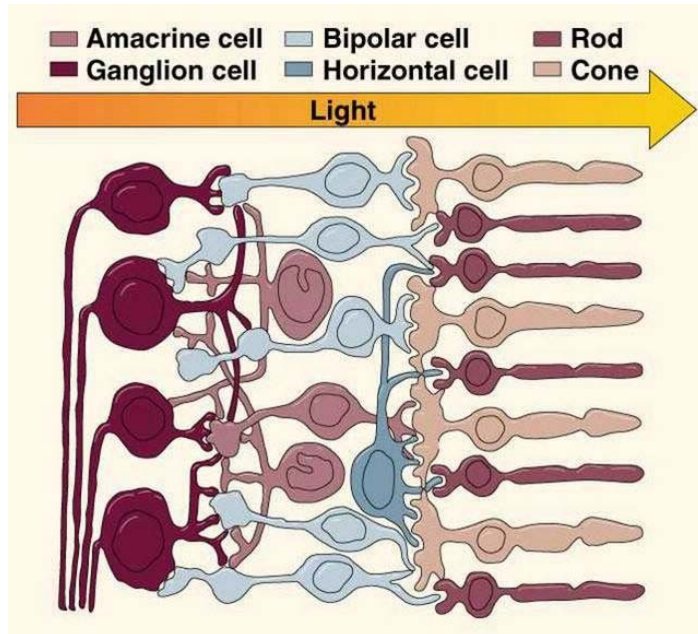


- i) The correlation between wavelength and perceived color is imperfect. Similar perceptions of color can be associated with various mixtures of light of different wavelengths and intensities. « EASY »
- ii) There is no conceptual connection, no passage, between a wavelength and *what it is like to experience* redness or blueness. « HARD »

Maxwell triangle of colors



Retina, cones and photopigments



Visual Pathway, V1 and Color Columns, V4 and Color perception

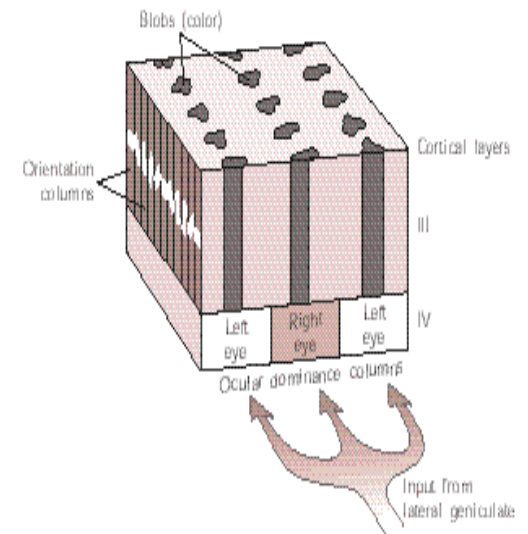
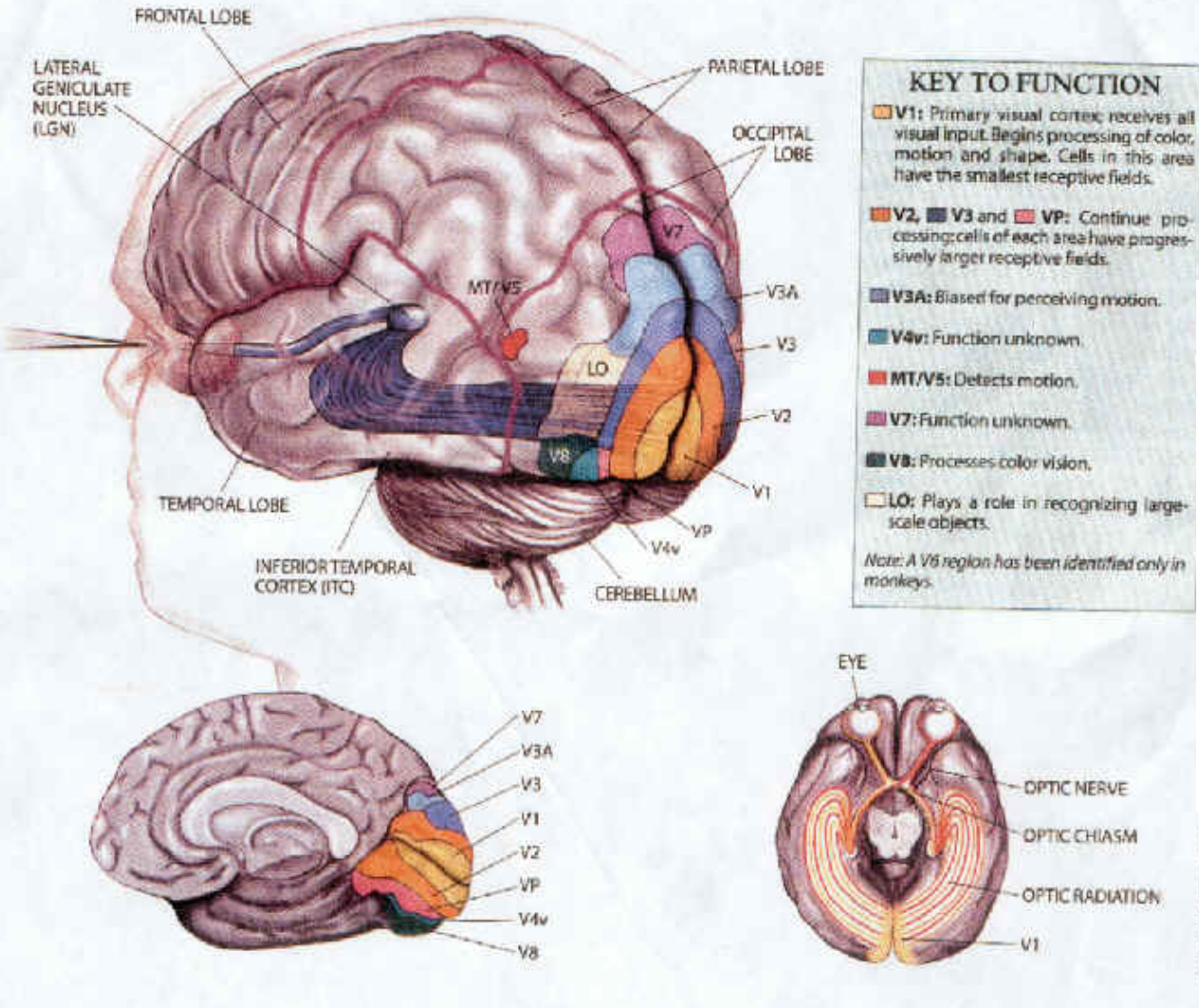
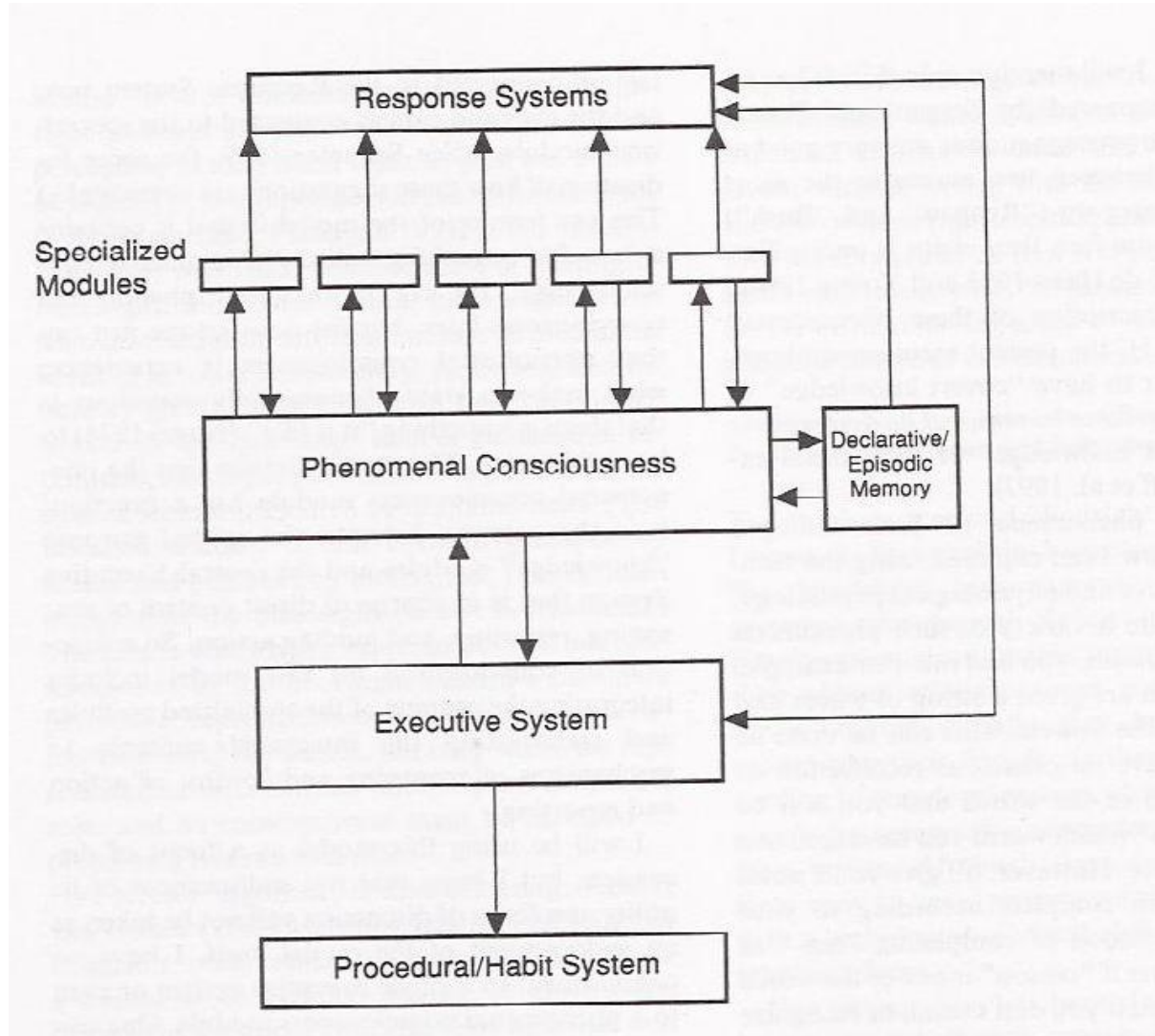


FIGURE 15-10 (continued)

- “Solve enough easy problems about the **neural correlates** of experiential **structures**, and the hard problem of the **origin** of conscious experience **as a whole** will be solved”
- *Walk enough steps, and the horizon will be reached*

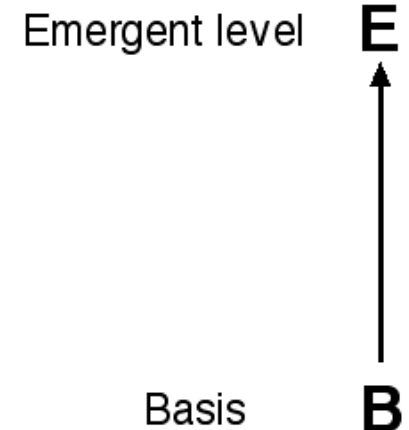


Functionalism



From Function to Tissue

- Argument from *Synaesthesia*:
 - Vision \longrightarrow experience of blue
 - Listening a word *W* \longrightarrow experience of blue
- Different functions but same cortical area activated (V4-V8)
- *Galen Strawson* (2006): « For any feature of E, there must be something about B and B alone in virtue of which E emerges, and which is sufficient for E »
- Nothing about functions, tissues... + Materialist monist premise \longrightarrow *Panpsychism*



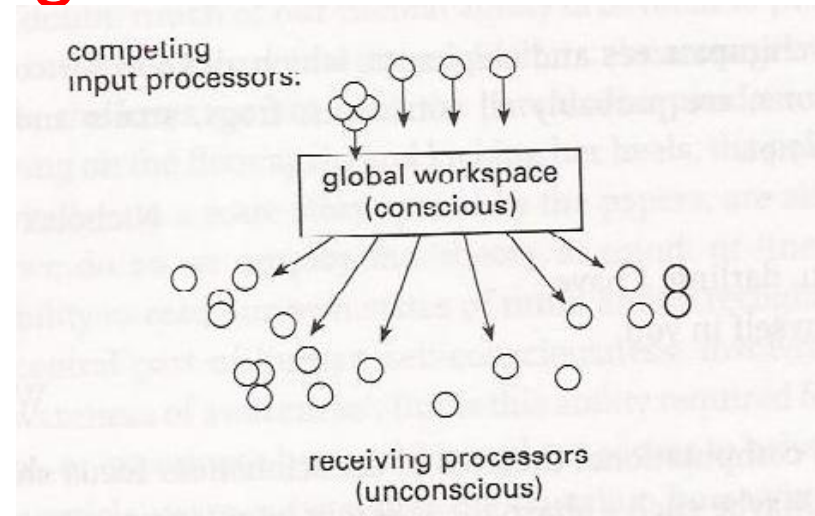
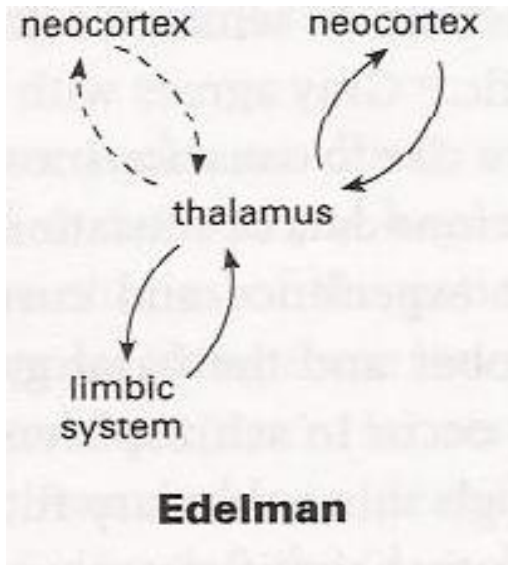
Methodological Bias

- Presence / absence of consciousness is assessed by (*a priori* or *a posteriori*)

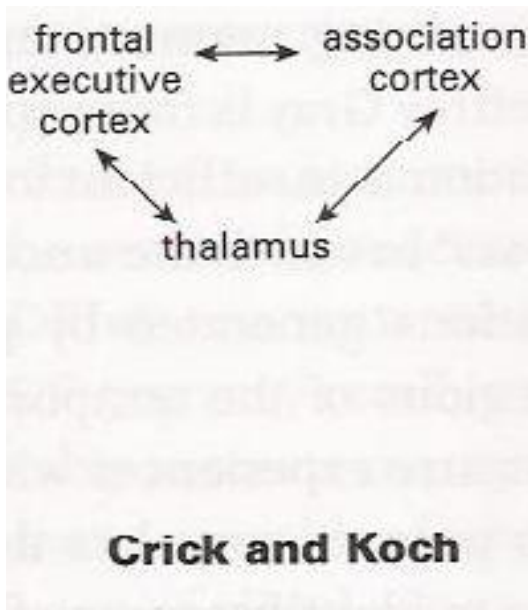
Report

- Report presupposes: discrimination, reflectivity, memorization etc.
- How can we be sure that, when no report can be obtained, there *is no* experience *at all* ?

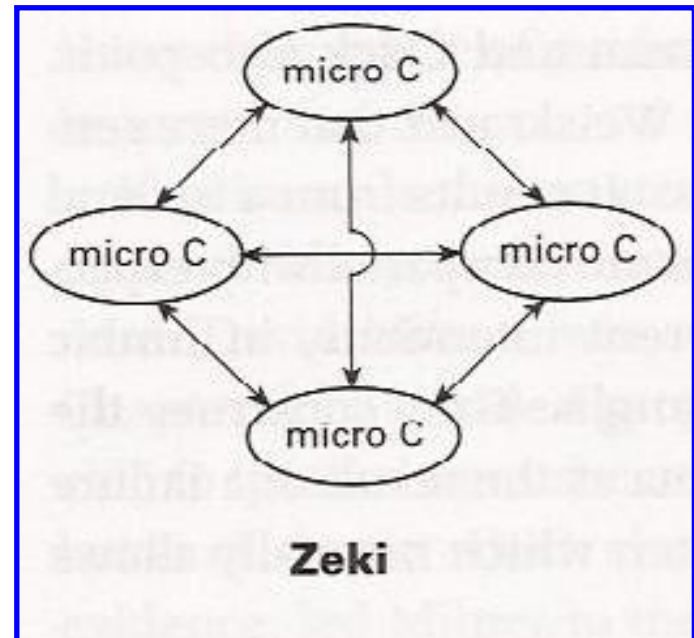
Some neurological theories



Baars, Dehaene, Changeux



...The three theories are biased by ability to Report



Enters Quantum Physics

A concatenation of (disputable) assumptions

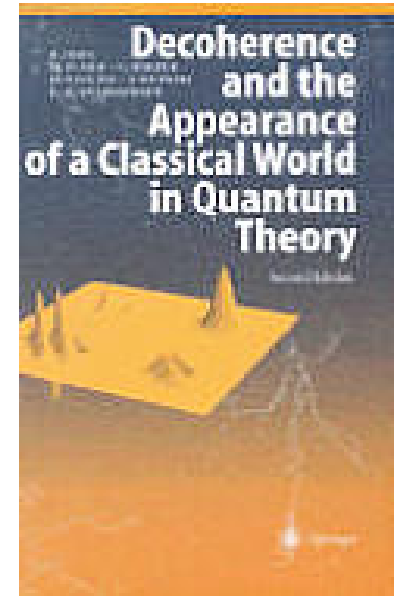
- State vectors or wave functions undergo an “objective reduction (‘OR’)” ; OR is triggered by quantum gravitational processes ;
- Gravitational processes are non-computable ;
- Quantum coherence takes place in neuron microtubules, and this is the basis of a quantum information processing in the brain ;
- OR occurs in microtubules, thus suppressing coherences ;
- Conscious thought is non-computable (in view of anti-mechanicist arguments based on Gödel’s theorem) ;
- Consciousness therefore arises from microtubular OR (this is the final claim, submitted to experimental test by various ways of acting on microtubular coherences).

QuickTime™ et un
décompresseur TIFF (LZW)
sont requis pour visionner cette image.

Penrose & Hameroff

Enters Quantum Physics (2)

- M. Tegmark (2000) challenged the view that state superposition can have a sufficiently long life-time in the brain to fit the characteristic time scales of **reportable** experiences (at least 25ms).
- The decoherence time in microtubules is shorter than this characteristic time scales by several orders of magnitude.*
- Reply from Hameroff and his group: this decoherence time is too uncertain, in view of the various molecular environments that may surround microtubules, to be taken alone as a fatal blow against their quantum theory of consciousness.



Joos, Zeh, et al.

Enters Quantum Physics (3)

- **Challenge the premise of Penrose's and Hameroff's proposal**
- Their root assumption: quantum mechanics is a theory describing the objective world; Every alteration of the formal elements of the theory (e.g. the State Reduction) is to be ascribed to a change in the objective world.
- But there are interpretations of quantum mechanics in which State Reduction plays no role (or only an ancillary role). They challenge the belief that quantum mechanics is aimed at describing anything “out there”.
- Many features of QM lose their paradoxical flavor if one accepts that quantum mechanics is aimed at predicting the effects of our intricate relation (or “interface”) with the environment.
- Far from being a picture of the world construed as detached from us, quantum mechanics is a picture of the *bounds* of detachment in physics.
- In this case, it looks absurd to hope that quantum mechanics will do the job of ordinary naturalism: accounting for conscious experience by describing relevant parts of an objectified nature.

Two clarifications from this non-ontological way of interpreting QM

Clarification 1

- Microphysical phenomena are not independent of the experimental situation which makes them manifest: **they cannot be said to “reveal” independent properties.**
- Quantum physicists then built an intersituationally and intersubjectively acceptable theory. **They obtained intersubjective consent without detachment of an object.** They reached this aim by elaborating universally valid rules for *predicting* “values of observables”, and by stating prescriptions for mastering *directly* the *technological* implementations of the predictive rules, **without the help of a model of objects.**
- The epistemological situation of the science of mind is isomorphic: **conscious experience adheres to conscious beings and cannot be detached from them.** Just as there are no true “quantum properties” but only “observables”, **there are no “experiential properties”, but only “livables”.**
- Obtain intersubjective consensus about “livables”, and formulate prescriptions for acting on contents of experience **without the help of a model of how experience arises from an objective ground.**

Two clarifications from this way of interpreting QM

Clarification 2: the science of matter against materialism

- **Matter in the classical sense (namely a set of bodies) is nothing else than an *appearance*** shaped by the coarse apparatuses we use to explore our environment (see Decoherence): bodies at our scale only *seem* to be localized, *seem* to occupy a region of space at a given time, and *seem* to have the properties we ascribe to them (Joos et al., 2003).
- Quantum Field Theories deny the intrinsic existence of particles. According e.g. to Paul Teller, particles are no longer “(...) the sort of things that are either There or Not There” (Teller, 1995). They are only the name we give to a *potentiality* of quantized events of detection, embedded in certain group-structures (Wigner, 1939).
- Jean-Marc Lévy-Leblond: **Particles have the “mode of existence of rainbows”**: they depend of a relational network of conditions.
- **As a consequence, the matter of which our brains appear to be made out, is no more fundamental than anything else. Matter can hardly be taken as the real stuff out of which everything else emerges, including consciousness.**

- Consciousness is *existentially* and *methodologically primary*. Attempts at showing that it is *ontologically secondary* to matter have failed.
- Can we say that conscious experience is *ontologically primary* ?
- ... Or *double-aspect theory* (Spinoza) in which conscious experience and material appearances are two *facets* of the *same* unknown *stuff* ?

- **NO new theory, but new ATTITUDE:**
 1. Change the limit between (scientifically) *answerable* and *unanswerable questions*
 2. Cultivate the experiential side of the embodied mind, just as much as the objective side: **Varela's neurophenomenology**

The bounds of sense...

1. Renouncing to answer the question “why is there a physical universe rather than none?” ...
2. Or renouncing to answer the question “why is there **experience-of-a-physical-universe** rather than nothing at all?”.
 - Renunciation 2: Not because any question about the origin of conscious experience is “un-scientific” (pejorative), but because conscious-experience-of-something is the all-pervasive *origin* of any (scientific) inquiry.
 - The most primitive “given”, the “world as I found it” (Wittgenstein), is neither an external universe nor a purely internal world : it is an inextricably united experience-of-a-world, out of which the poles of the usual duality are differentiated (Claire Petitmengin)

The Varelian stance

- Our neuropsychological research should be more **balanced** : instead of focusing exclusively on careful elaboration of neurophysiology and physics (with the correlative project of reducing conscious minds to brain processes), we should put exactly as much attention on cultivating the experiential side of the embodied mind.
- Try to establish what Francisco Varela referred to as “**mutual generative constraints**” between the mental and physiological domains.

The Varelian stance: a few prescriptions

1. Do not try to *absorb* contents of experience into the structural network of objective science (elimination, reduction, *identity*). Strive towards *embedding* phenomenological reports within a broader relational network, of which the law-like structure of the objective domain is only a fraction.
2. Avoid mere juxtaposition of an objective science with a poorly studied subjective realm. Instead, cross the threshold of a new amplified science with its own unprecedented structures.
3. Mutual constraints
 - Phenomenological reports may help to pick out and ascribe meaning to previously unnoticed neural configurations (Petitmengin et al., 2006) ;
 - Conversely, neurological findings may become an incentive for re-categorization and further development in phenomenological research (Depraz et al., 2002).

4. Show how objectivity arises from a universally accepted procedure of intersubjective debate. Recognize that intersubjectivity should be endowed with the status of a common ground for both phenomenological reports and objective science.
5. Do not rely on a minimal and most elementary form of intersubjective consent, but try to amplify the criteria of intersubjective understanding by refining the stability and sharpness of subjective experience.
6. Think about the most basic presupposition of the process of objectification and of establishment of law-like relations between objective quantities : a system of socially regulated *practices* (*Instruments, theories; technology and rationality*). A new set of practices including experiential training in the *cursus of studies* would alter the performative *substratum* of research, stabilize an expanded version of the regulative ideal of intersubjectivity, and favor the new generalized paradigm of science which neurophenomenology forecasts.

This prescriptive program does not *solve* the “hard problem” of the physical origin of conscious experience.

- Reason for this non-solution: not that the problem is too difficult, but that in the proper stance **it does not even arise**.
- It does not arise because **the physical world is no longer the standard of being, and objectivity is no longer the ultimate standard of method**.
- In the alternative stance, the standard of being is underpinned by a standard of self-evidence, and the methodological standard of objectivity is expanded into a more general standard of intersubjectivity.
- Wittgenstein: “The solution of the problem of life is seen in the vanishing of the problem”
- Varela: **The solution of the hard problem of consciousness is found in a certain stance and research program wherein the problem vanishes.**