

# Review of: "The Study of Consciousness Is Mired in Complexities and Difficulties: Can They Be Resolved?"

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The manuscript submitted to Qeios (Qeios-2024-V6Z7V) titled "*The Study of Consciousness Is Mired in Complexities and Difficulties: Can They Be Resolved?*" ([Jonathan Nash](#)) is about suggestions to improve the progress of consciousness research and discourse by achieving greater "semantic lucidity". To do so, based on definitions of consciousness and on research for consciousness neural correlates, the author advocates for rationality: an operational definition in research on consciousness as a 'process' versus "*a tangible thing*".

The manuscript is made up of four sections: **Section 1 : Introduction**, **Section 2 : Etymology, definition and related semantic issues** (section 2 with 4 Sub-Sections. Sub2-1: *Conscious and Consciousness*, Sub2-2: *A Multitude of Definitions for Consciousness*, Sub2-3: *Sociolinguistic factors regarding the English language*, Sub2-4: *Nomenclature and related issues of semantics*), **Section 3 : Conceptual, semantic, and methodological issues in research**(Sub3-1: *The search for the Neural Correlates of Consciousness, NCC*) and **Section 4 : Summary and Conclusion** (*being usually Discussion and conclusion*).

The **Introduction section** is about the paper's content: about "*the lack of clarity emanating from this field of study*", exploring "*several etymological, semantic, sociolinguistic, and methodological factors that have impeded the progress of consciousness research*" and "*offer some suggestions for consideration*".

**Section 2 : Etymology, definition and related semantic issues** is about "*the over 30 different theories of consciousness and over 20 different 'types' of consciousness*" that were noted in the introduction section. Sub2-1 about "*Conscious and Consciousness*" first provides the Oxford English Dictionary (OED) Etymology: "*from the Latin term *conscientia* which means 'knowledge shared with others', or being a witness to something. and stems from the combination of two words: *scio* (I know) and *cum* (with)*". Then, the OED definition, which is also the reviewer's definition: "*Internal knowledge or conviction; the state or fact of being mentally conscious or aware of something*" ([https://www.oed.com/dictionary/consciousness\\_n?tl=true](https://www.oed.com/dictionary/consciousness_n?tl=true)). Curiously, although the author states that "*In its early usage, 'conscious' occurred in phrases such as 'being conscious to another' and 'being conscious to something'*"; he introduces confusion with the next sentence, which is surprisingly about the sharing of knowledge (sharing with whom? instead of the consciousness of what: "*this sharing of knowledge evolved into being privy to unshared knowledge, either about others or about oneself*"). Thus, in the whole paper, there is only 1 sentence with "conscious of *as much as you can notice*" and 2 sentences with "consciousness of (1: *wrongdoing*; 2: *guilt*)". This indicates that consciousness is here conceptualized as consciousness without real-world objects; being either the physiological state (consciousness, with c),

or the mental / cognitive process (Consciousness, with C; or awareness).

Instead of being based only on scientific definitions (such as APA) and scientific papers (*the Consciousness Literature*), Sub2-2 (*A Multitude of Definitions for Consciousness*) is about a multitude of sources, including “a summary of an informal content meta-analysis” done by the author in March 2024, a section that does not provide the author references of the given references. For instance, as in many papers, the Damasio definition of consciousness is given on page 6 as being “an organisms’ awareness of its own self and surroundings”. But without its reference, which is “Damasio A. *The Feeling of What Happens—Body and Emotion in the making of Consciousness*. New York: Harcourt Brace. 1999”.

AMOF, Damasio was providing a standard dictionary definition of consciousness: “Although I do not see consciousness as the pinnacle of biological evolution, I see it as a turning point in the long history of life. Even when we resort to the simple and standard dictionary definition of consciousness—as an organism’s awareness of its own self and surroundings—it is easy to envision how consciousness is likely to have opened the way in human evolution to a new order of creations not possible without it: conscience, religion, social and political organizations, the arts, the sciences, and technology. Perhaps even more compellingly, consciousness is the critical biological function that allows us to know sorrow or know joy, to know suffering or know pleasure, to sense embarrassment or pride, to grieve for lost love or lost life. Whether individually experienced or observed, pathos is a by-product of consciousness and so is desire. None of those personal states would ever be known to each of us without consciousness. Do not blame Eve for knowing; blame consciousness, and thank it, too.” And this is done not for science but for philosophy.

Sub2-3 (*Sociolinguistic factors regarding the English language*) and Sub2-4 (*Nomenclature and related issues of semantics*) are variations about Consciousness. However, I advocate that these variations are “different points of view of”, “different parts of”, “different instances of”, “different sub-categories of”, “different kinds of” the same kind of things. (Being conscious that what I have seen is an illusion, thinking about the point of view of making an illusion vs. being the one that sees it, understanding what parts of the drawing are making the illusion, what kind of illusions they are, for kids, and I’m an adult.)

For instance, one could be surprised by so many kinds of trees, of different leaves with or without fruits, and so on. But they are all trees. What is useful in a meta-analysis is the making of an ontology of the kinds of things (concepts) at hand. This kind of thing is here the metacognitive processes about the “who, what and why” of the “here and now” of our information processing when attentionally focused to think about this mixed variety of contents. Thus “recall of the past” is not “consciousness of this past”, but consciousness “here and now” of its effects.

**Section 3: Conceptual, semantic, and methodological issues in research** has a single Sub3-1 topic about *The search for the Neural Correlates of Consciousness, NCC*) that is not under our reflection, consciousness (c) being a step in the Consciousness process (C) see below). Note that a section must have more than a single one.

**Section 4: Summary and Conclusion** is avoiding a profitable discussion. I recommend a discussion section about the authors’ point of view (what else?).

DISCUSSION OF "*The Study of Consciousness Is Mired in Complexities and Difficulties: Can They Be Resolved?*"  
(Jonathan Nash).

Consciousness is a central topic in Cognitive Psychology, Cognitive Science, Computer Science, and Robotics (*what's about Robotic consciousness?*). Modelling and simulating consciousness is a recent prolific new field of research that deserves a meta-analysis of research about consciousness.

The Jonathan Nash paper was of interest to the reader because it helps to know what to search for in these fully human metacognitive processes. Below are the reviewer's reflections, thanks to Jonathan Nash and Louis Irwin.

First of all, some important dimensions for the study of consciousness:

- importance of being a robot and not a computer (*Damasio*),
- importance of autonomy to self-observe (*Pitrat*),
- importance of the distinction "Being conscious of something" vs. "not being conscious of it" (*Bouchon-Meunier*),
- importance of imitation (*Katz*), the importance of the other that we imitate, the importance of what he thinks of what we do; which pushes us to "*look at ourselves through the eyes of the other and what we assume to be the other's thoughts*"

There is also a Qeios article by Dresch-Langley (*Dresch-Langley, B. (2023). Artificial Consciousness: Misconception (s) of a Self-Fulfilling Prophecy Nobody Wants. Qeios*). With Dresch-Langley, we have joint research collaborations (*Pierre Collet, Adam Reeves, and Steve Grossberg*). I highly recommend reading Dresch-Langley's Qeios article. She quotes Steve Grossberg a lot in her article, and this is the direction we should look in if we are, like Steve Grossberg, more optimistic than she is about artificial consciousness.

Many authors talk about consciousness in general as if there were consciousness of everything or nothing. If consciousness concerns a particular thing (idea, object), it is because it is being processed (*in the field of attention, but not necessarily of consciousness: Perception-Mind*) and also because of metacognition: "*we are seeing ourself thinking while thinking about this particular thing*": Perception-Mind-Consciousness within a Consciousness-Mind-Perception loop. For this, in neuroscience, there are mirror neurons. In ART (*Steve Grossberg*), there are basins of attraction.

In his paper, Jonathan Nash advocates that "*consciousness*" should be differentiated from "*Consciousness*" with respectively "c" and "C" to differentiate what is related to the physical state of the person (*physiology, c*) from what is related to her mental state (*psychology, cognition, C*).

Do we need such a distinction?

AMOF, terminological ambiguity does not match semantic ambiguity because the context allows the attribution of meaning that makes us understand what the significant topic target is. "*The word DOG does not bark*" is an expression that means that we must clearly distinguish the signified (*the dog as an animal*) from the signifier (*the word dog made of letters*). Such as for "*It's raining cats and dogs*" in English that is translated into French as "*It's raining ropes*". As a

difference from such metaphorical expressions, other usual sentences are those for which the same word, naming a category of things, can be denoting either a superordinate or a subordinate instance: "*cats are my favorite animals*" vs. "*Animals are living beings*".

As a difference from such expressions of metaphors and categories, there are expressions of phenomena that are processes. We fully agree with the author that consciousness is a process (*that is made of successive and continuous transformation of states*). But precisely, in such processes, states that are, for instance, a prerequisite and a subgoal, might have the same name but different meanings. Thus, a paramedic might say, "*Soon, this person will regain consciousness (c).*" Then, "*Now, that's it, this person has regained consciousness of what happened and consciousness of who I am (C).*"

Note that (c) and (C) indicators are not mandatory to understand that "*the cognitive state of being conscious of something (C)*" implies "*the physiological state of a conscious mind (c)*". But as an implication, the reverse is not: (c) does not imply (C)".

In summary, we need an ontology of consciousness.