Review of: "A Calculus of Qualia"

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Potential competing interests: No potential competing interests to declare.

About "A Calculus of Qualia"

The originality of this paper lays in its aim to tackle a topic at the frontiers of knowledge, as the author expresses it, “expanding science to include 1rst-person phenomena “.

Alfred North Whitehead underlines such a concern, inter alia, in*The Concept of Nature*, by also evoking the red of the twilight, on the one hand, which moves us so much, and the red that we measure by its wavelength, on the other hand. These two types of red do not have the same causative power on our affects.

More precisely, Whitehead claims:

“For natural philosophy everything perceived is in nature. We may not pick and choose. For us the red glow of the sunset should be as much part of nature as are the molecules and electric waves by which men of science would explain the phenomenon. It is for natural philosophy to analyse how these various elements of nature are connected” (A. N. Whitehead, *The Concept of Nature*, Cosimo, N. Y, 2007, p. 29)

The author wishes to contribute to this wonderful field of knowledge. Nevertheless, his aim differs through his ambition to extend the knowledge of nature in a framework that would allow the interaction between qualia and quanta. This is not a detail, because in the author's view, science could integrate qualia. This proposal means that the methods used to apprehend the quanta are sufficient to integrate the qualia. But this is not certain at all; otherwise, this work would have been undertaken long ago.

If we can extend science to include phenomena in the first person, then it is no longer a question of extension, but of reduction, i.e., whereby we can quantify qualia.

On this point, I doubt that operators, such as addition, equation, subtraction, and multiplication, are efficient operators for

qualia.

I am not sure either whether the validation of qualia is feasible in the mode of a mathematical function. The main characteristic of qualia is their causative power, that is to say, their potency. This feature opens up avenues to apprehend them.

Consequently, the beginning of the paper is clear and the objective well identified, with the question on extension/reduction that I raised. Then, the article becomes very speculative, for lack of an adequate framework or a new framework able to encompass quanta and qualia and their respective operators, their differentiated modes of evaluation, the operators of their connection, etc. The author's approach would tend to prove Daniel Dennett right...

The author also alludes to morphisms. Using Grothendieck's theory of topos or, more generally, of category theory, could allow us to consider this new framework.

In conclusion, I would recommend to the author to set up a framework that more precisely targets and fits the project’s aims. One way is to build a conceptual scaffolding that will provide an obvious answer to the problem. In other words, instead of resorting to the constraint exerted on qualia via the methods usually used to characterize quanta, it is preferable to locate the problem within a more adequate theoretical framework. The solution then becomes a natural consequence of the system in which it is now embedded.