

Studi - Commenti

# Cognitive Naturalism and the Phenomenal Feel

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**Abstract** According to Sandro Nannini's *Time and Consciousness in Cognitive Naturalism*, we can draw an analogy between the shift in the conception of time that occurred in physics with the introduction of relativity theory and a shift towards a scientifically more graspable functional concept of phenomenal consciousness. This analogy is meant to persuade us of the eliminative materialist view that we should abandon our folk psychological concept of consciousness. In my commentary, I examine the naturalization procedure underlying Nannini's cognitive naturalism, argue for its inability to account for the phenomenal feel of conscious states, and point to some important differences between the conceptual change in the case of time and the intended change in the case of consciousness.

**KEYWORDS:** Eliminative Materialism; Phenomenal Consciousness; Explanatory Gap; Hard Problem; Cognitive Naturalism.

**Riassunto** *Naturalismo cognitivo e sensazioni fenomeniche* - In *Time and Consciousness in Cognitive Naturalism* Sandro Nannini propone un'analogia tra il cambiamento radicale della nozione di tempo che ha avuto luogo in fisica con l'introduzione della Teoria della Relatività e un cambiamento radicale del concetto funzionale di coscienza fenomenica, che lo renderebbe più adatto a una descrizione scientifica. Questa analogia dovrebbe persuaderci della concezione materialistico-eliminativista, secondo cui dovremmo abbandonare la nostra concezione di senso comune della coscienza. Nel mio commento intendo esaminare la procedura di naturalizzazione sottostante al naturalismo cognitivo proposta da Nannini, cercando di mostrare come questo non sia in grado di rendere conto delle sensazioni fenomeniche che caratterizzano gli stati coscienti. Intendo inoltre rimarcare alcune importanti differenze tra il mutamento concettuale nel caso del tempo e quello ipotizzato in relazione alla coscienza.

**PAROLE CHIAVE:** Materialismo eliminativo; Coscienza fenomenica; Iato esplicativo; Hard Problem; Naturalismo cognitivo.



IN HIS *TIME AND CONSCIOUSNESS* in *Cognitive Naturalism*, Sandro Nannini tries to establish an analogy between the paradigm shift that occurred in physics a century ago when Einstein introduced his theory of relativity and the paradigm shift from folk psy-

chology (conceived of as a *theory*) to cognitive neuroscience argued for most notably by eliminative materialists. According to him, there are striking similarities between the change in the concept of time (as well as those of space and gravity) that occurred when

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moving from classical mechanics to the Special Theory of Relativity (STR) and the change in the concept of consciousness that is needed in order to naturalize mental phenomena. These similarities should make the latter conceptual change more plausible. Being at least broadly sympathetic to the method of functional reduction that underlies his cognitive naturalism, I find Nannini's attempt to make a convincing case for the eliminative view towards consciousness via this analogy intriguing. However, while this line of thought seems worth pursuing in principle, I argue that his account ultimately fails because it is unable to capture the phenomenal aspect of consciousness.

While many eliminative materialists focus on intentional mental states like beliefs and desires, Nannini focuses on phenomenal consciousness, that is, phenomenal experience. According to the traditional view, what characterizes phenomenal experience is a certain qualitative feel, a certain *what-it-is-like-ness*<sup>1</sup> – the infamous *qualia*. Because of this, phenomenal consciousness is usually thought to be difficult or even impossible to account for from a naturalistic point of view. While neuroscience arguably has already made significant progress in identifying neural correlates of specific conscious experiences – one of the *Easy Problems* in the terminology of Chalmers<sup>2</sup> – the *Hard Problem* of explaining how (and why) those neuronal states or processes give rise to phenomenal experiences remains. It seems there is an unbridgeable (or, as some may say, at least yet unbridged) *explanatory gap*<sup>3</sup> between the broadly physical and the phenomenal realms.

In the following, I focus on two aspects of Nannini's account. First, I comment on several details of his proposed naturalization procedure for phenomenal consciousness. I then conclude by pointing out some problematic features of his analogy between time and consciousness.

### ■ Phenomenal consciousness naturalized?

As noted above, Nannini tries to overco-

me the explanatory gap by replacing the traditional concept of phenomenal consciousness with one based in cognitive neuroscience. After a, in my view, disproportionately long section on the manner in which the concept of time is conceptualized in the STR as opposed to in classical mechanics, which should have been condensed in favor of a more detailed explication of his views in the later sections, he elaborates on the naturalization procedure by which he proposes to develop a scientific account of consciousness.

His account involves (i) a *reconception step* in which a functional analysis of the phenomenon to be naturalized is provided, and (ii) a *reduction step* of the functionalist flavor in which the brain processes that implement (or realize) that function in a particular entity are identified. While I am somewhat sympathetic to this approach, I am not sure it can be called genuinely eliminativist.

The eliminativist aspect seems to consist in a folk psychological concept being eliminated in favor of a functional concept, but it is unclear how this differs from typical functionalist approaches in which mental types are characterized solely by their functional roles. Eliminativism is often characterized as the thesis that there just are no phenomenal states at all. This can be interpreted as the claim that phenomenal concepts, as usually characterized in terms of a certain qualitative feel, do not pick out any property at all, and thus should be eliminated and replaced with functional concepts.

Thus, Nannini's proposed naturalization procedure, rather than being genuinely eliminativist, seems to add merely a further step to the functionalist program, which already starts out with a functional concept of conscious experience. Moreover, it is claimed that

[a]ccording to this definition of naturalization procedures, all mental phenomena can be reduced to brain processes (and more generally to biological and physico-chemical processes) by combining a func-

tional reduction with a neuro-biological implementation.<sup>4</sup>

On a literal reading, this would mean that the procedure by definition implies that all mental phenomena are functionally reducible; however, it seems quite obvious that this does not follow. For phenomenal experiences, the first step of the procedure – finding an “acceptable” functional analysis – arguably fails, as is also shown by Kim,<sup>5</sup> from whom Nannini adopts the method.

Rather than addressing the prototypical mental phenomena usually targeted by such naturalization procedures – particular *types* of phenomenal states such as pains, experiences of redness and so forth – Nannini tries to give a naturalistic account of consciousness as a whole. He proposes two functional concepts he thinks may potentially serve this purpose: Baars’ *Global Workspace*<sup>6</sup> and Edelman’s *Dynamic Core*.<sup>7</sup> It is, however, arguable that what these concepts actually capture is “access consciousness”<sup>8</sup> as opposed to “phenomenal consciousness”.<sup>9</sup>

According to Block’s distinction, while phenomenal consciousness is defined in the Nagelian sense mentioned above, access consciousness captures the functional-representational aspect of carrying information used in reasoning and intentional action. A further indication of this confusion is Nannini’s remark that the first step of his naturalization procedure is to find

an acceptable introspective-phenomenological reconstruction of what is commonly meant by words such as “consciousness” or “awareness”.<sup>10</sup>

While he seems to take those two terms as being synonymous, the latter is usually thought to refer to access consciousness rather than phenomenal consciousness.<sup>11</sup> Crick and Koch hypothesized that the synchronization of neural populations may underlie the binding of information from different modalities. Nannini suggests this synchronization pro-

cess as the mechanism implementing the format that he identifies phenomenal consciousness with.<sup>12</sup> However, unlike Nannini, Crick and Koch argue that the problem of qualia, the Hard Problem, is «best left on one side». <sup>13</sup> Nannini argues that

[p]henomenal consciousness is [...] the common “format” employed by all the processes in the brain that make up the *Complex Scene* (or the *Dynamic Core*). And this format must be identified in turn with a property shared by their respective dynamics.<sup>14</sup>

However, even if we accept that phenomenal consciousness is indeed the format in which certain internal states of the brain are represented, the problem remains in a different form. On the one hand, if we take the format to correspond to the qualitative first-personal state, it remains unclear both how the brain is able to access such a qualitative state, and how this fits into the suggested naturalization procedure. On the other hand, if we take the representational format to be the synchronized activity of neural populations, as seems to be suggested by Nannini, the explanatory gap (or at least some close cousin) is still left wide open – why should such synchronized activity be accompanied by a certain phenomenal feel if all that is necessary for the representation is the synchronized activity of a neural population itself? According to Nannini,

phenomenal consciousness must be redefined in functional terms as the higher order property of brain dynamics that transforms a sequence of detached and independent brain processes into the continuous stream of an agent’s subjective experience.<sup>15</sup>

This statement is problematic given that phenomenal consciousness, as traditionally conceived, “is” an agent’s subjective experience. Nannini’s talk of “phenomenal conscious-

ness” “producing” an agent’s subjective experience as its “output” is at odds with the traditional conception in a way that does not sit well with his overall account. If his goal is to eliminate phenomenal consciousness as traditionally conceived, it remains unclear what he means by the “subjective experience” of an agent, which he believes to be the result or “output” of the transformation process he identifies phenomenal consciousness with.

### ■ **Nannini’s analogy between time and consciousness**

The paradigm shift in physics from classical mechanics to STR involved a change in the concept of time that is counterintuitive. This probably is also the reason why the revision of the concept within physics did not significantly affect our everyday understanding of time. Nannini believes that the situation is similar in the case of consciousness. He admits that a functional concept of consciousness is highly counterintuitive, but he also argues that the paradigm shift involving the reconception of time clearly shows that we are able to overcome our intuitive views in favor of scientific progress, such that we should analogously be able to overcome our intuitions in the case of consciousness.

However, the analogy fails in an important respect. The concept of time, as characterized by both classical mechanics and STR, obviously does not (and need not) provide an account of our conscious experience of time durations. It can thus be conceptualized independently of such experience and in a manner contrary to our intuitions, which are derived from our experience of time under usual circumstances, where the differences between the speeds of objects relative to the speed of light are negligible. However, it is hard to see how an account of phenomenal consciousness can be provided without accounting for our qualitative first-person experience. When trying to account for phenomenal consciousness, what is at stake is exactly this qualitative experience, rather

than something independent of it. Any theory of phenomenal consciousness thus has to provide us with the means to understand how it is brought about.

A similar issue relates to our usual reason for adopting a new scientific concept or theory and leaving a traditional one behind: the revised theory must have more explanatory power than the old one. Here, there is an important difference between the two cases in Nannini’s analogy.

On the one hand, by introducing a new concept of time, the STR was able to account for the observer-relative durations both at the “normal” speeds we are commonly confronted with and at speeds close to the speed of light. The new theory thus boasted more explanatory power than classical mechanics with its more traditional concept of time. On the other hand, a theory that seeks to introduce a functional or neuroscientific concept of consciousness fails in the most important respect that would provide it with additional explanatory power – it does not explain why phenomenally conscious states have a subjective feel.

This, of course, does not render such a concept entirely nonsensical. Rather, it seems that such a concept implicitly (or maybe even explicitly in some cases) underlies the work pursued in the cognitive neurosciences anyway – it amounts to what Block calls “access consciousness”<sup>16</sup> and Chalmers calls the “psychological concept of consciousness”.<sup>17</sup> Hence, I do not see what we would gain from the proposed conceptual change. The notoriously difficult issue of properly relating what is picked out by the more traditional concept of phenomenal consciousness and by the functional concept is not addressed by the eliminativist view at all, because it supposes that the phenomenal concept of consciousness does not pick out anything in the first place.

So, it does not help to call the neuroscientific concept a phenomenal concept – according to this view, it picks out something different, or rather something instead of nothing. In the end, I believe that Nannini is correct in claiming that his account does not solve, but

rather dissolve (or as we might rather say: neglect) the *Hard Problem*; but, contrary to his view, I have the impression that this approach is not beneficial to his theory.

## Notes

<sup>1</sup> T. NAGEL, *What is it Like to Be a Bat?*, in: «Philosophical Review», vol. LXXXIII, n. 4, 1974, pp. 435-450.

<sup>2</sup> D.J. CHALMERS, *The Conscious Mind. In Search for a Fundamental Theory*, Oxford University Press, Oxford 1996, p. xii.

<sup>3</sup> J. LEVINE, *Materialism and Qualia: The Explanatory Gap*, in: «Pacific Philosophical Quarterly», vol. LXIV, n. 3, 1983, pp. 354-361.

<sup>4</sup> S. NANNINI, *Time and Consciousness in Cognitive Naturalism*, in: «Rivista Internazionale di Filosofia e Psicologia», vol. VI, n. 3, 2015, pp. 458-473, here p. 466.

<sup>5</sup> J. KIM, *Physicalism, or Something Near Enough*, Princeton University Press, Princeton 2005, p. 162.

<sup>6</sup> B.J. BAARS, *A Cognitive Theory of Consciousness*, Cambridge University Press, Cambridge (MA) 1988.

<sup>7</sup> G.M. EDELMAN, *Wider than the Sky: The Phenomenal Gift of Consciousness*, Yale University Press, New Haven 2004.

<sup>8</sup> N. BLOCK, *On a Confusion about a Function of Consciousness*, in: «Behavioral and Brain Sciences», vol. XVIII, n. 2, 1995, pp. 227-287.

<sup>9</sup> See also M. VELMANS, *How to Define Consciousness. And how Not to Define Consciousness*, in: «Journal of Consciousness Studies», vol. XVI, n. 5, 2009, pp. 139-156.

<sup>10</sup> S. NANNINI, *Time and Consciousness in Cognitive Naturalism*, cit., p. 466.

<sup>11</sup> D.J. CHALMERS, *The Conscious Mind*, cit., p. 228.

<sup>12</sup> S. NANNINI, *Time and Consciousness in Cognitive Naturalism*, cit., p. 466.

<sup>13</sup> F. CRICK, C. KOCH, *Towards a Neurobiological Theory of Consciousness*, in: «Seminars in the Neurosciences», vol. II, 1990, pp. 263-275, here p. 264.

<sup>14</sup> S. NANNINI, *Time and Consciousness in Cognitive Naturalism*, cit., p. 466.

<sup>15</sup> *Ivi*, p. 467.

<sup>16</sup> N. BLOCK, *On a Confusion about a Function of Consciousness*, cit., pp. 227-287.

<sup>17</sup> D.J. CHALMERS, *The Conscious Mind*, cit., p. 11-12.