

Considering Consciousness, Reconsidering Neuroscience

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This is the high time to understand the importance of consciousness (in the consciousness studies) than anything else whatsoever. Whoever wants to understand consciousness must understand, that consciousness as the central matter of our study, deserves justice in terms of being understood as what it actually is and not as how we want to describe it as. Due to our inability to grasp it the way it is, with our available physical or intellectual or linguistic apparatus, we must not hurry to reach any solution or conclusion, either by snubbing out its possibility, or by trying to reduce it to something else that it is most probably not.

Among the various kinds of anti-experiential accounts of consciousness, that we have, for example, philosophical behaviourism, functionalism, etc., the neurophysiological or neuroscientific reductive account of consciousness seems to be the strongest one. It is so strong as a theory of consciousness,

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that most of the soft problems of consciousness are dealt with by it and that too so incredibly. Besides having the hefty thesis of **brain-consciousness identity**, it has got some important empirical evidences to support its thesis. Moreover, the neuroscience, based on its empirical discoveries, enjoys more predictive and explanatory power about consciousness or conscious states than any other discipline. But despite a lot of scintillating facts about the neuroscience and its mind-boggling discoveries about the brain states, there are some facts that we should consider before accepting the credibility of neuroscientific findings about conscious states and consequently, its paramount position in the domain of consciousness studies.

The first one to consider is the method used by the neuroscientists. As said earlier, the method of the neuroscience is broadly speaking, an objective method, which involves mediate strategies like various brain imagery techniques to observe and study the brain activities (from third person perspective), such as Computerised Tomography (CT) Scan, Magnetic Resonance Imaging (MRI), etc. or immediate strategies like, open brain study of the various parts of the brain (from the third person perspective). Now using both the strategies, the neuroscientists, try to look for neuronal correlates of conscious states. But the important point to note here is that, though, according to the blue print of their plan, they are to find the correlations between conscious states and brain states, all they have at their hand to observe and study is the brain states or neuronal states of brain only. To take the account of the conscious states, however, they have to depend on the verbal reports of the subjects, and that is an important evidence of the subjectivity of the conscious states. Taking the verbal reports of the subjects in a way considers the *perspectivalness* of consciousness seriously.

So, all that we have come to know about or can know about consciousness, from the neuroscientific researches, at least for the time being, is that, there are co-relations between physical states of brain and conscious experiential states, and nothing else. Now, on the basis of these (mere) co-relations, the neuroscientists are

proposing a thesis, which reduces or tries to reduce the phenomenon of consciousness into neuronal states of brain. But, based on the correlations, why only to think that the physical states of brain give rise to consciousness or conscious experiential states, and not the other way round? If there is co-relation between A and B, then the possible relationship between these two can be envisaged in three different ways, that are, (i) that A causes B or that, B is caused by A; (ii) that B causes A or that, A is caused by B; and (iii) that neither of them causes the other, or that they are not causally related to each other and that, they both are caused by something else or are co-effects of some **cause/s**. Now, neuroscience, among these three possible ways in which brain states and conscious experiential states can be related to each other, chooses the one, in which brain states are accepted as causally efficacious for the generation of the conscious experiential states and the conscious experiential states are accepted as causally dependent on the physical states of brain, based on the mere fact that they are co-related, a fact, from which, the claim they are making, does not seem to be following necessarily. This type of views of consciousness, where only the physical phenomena are given importance and accepted as fundamental are generally called 'physicalism', and it is quite clear to us that, there involves a form of dogmatism. On the other hand, even if the conscious experiential states are accepted as fundamental and efficacious in determining or regulating the physical states of brain, just on the basis of mere co-relations between them, then, that view too would be as much dogmatic as the view called 'physicalism' is. So, instead of reaching any conclusion so hastily regarding consciousness, on the basis of the correlations between the two, we should better spend some more time on observing both the states (although unlike the brain states, the conscious states are not there to be publicly observed) and on earmarking their peculiarities.

So, from the discussion above, we can say that, neuroscience, in order to claim that, the conscious experiential states are reducible to the neuronal states of the brain, must prove that, the correlations

between the conscious states and neuronal states are no mere correlations, but actually causal relations.¹ However, for a thesis, which intends to show the causal dependence of the conscious states on the neuronal states, must also prove that, the causal relation between the two holds in a specific way, that is, from the side of the neuronal states to the conscious states, and neither the other way round (which would prove the dependence of the neuronal states on the conscious states) nor both ways (which would lead us to some sort of causal interactionism between the two, giving equal importance and emphasis on both the phenomena).

The nature of causal relations and dependencies are such that, if two phenomena are related with each other causally, or that, if one phenomenon is casually dependent on another, then the dependent one can be fully explained by the one, on which it is dependent. And now if there holds a causal relation between the neuronal states and the conscious states and that too from

the side of the former to the latter, then the neuronal states must be fully explanatory of the conscious states, leaving nothing of conscious states unexplained. That is to say, that even the experientiality of consciousness is to be explained by the neuronal states if the neuronal states are to be called the causes of the conscious experiential states. However, as a matter of fact, neuroscientific approaches towards studying or construing the nature of consciousness seem to be no way capable of even grasping such an aspect or side of consciousness, and thus the question of such explanations explaining the experientiality does not even arise.

The correlations between the neuronal states and the conscious experiential states should better be regarded as the starting point of the scientific study of consciousness and not the ultimate discovery or findings in this regard. The discovery of such correlations could be viewed as the omen for the discovery of a causal relation between the concerned two in near or far future.

Moreover, though the neuroscientific accounts of consciousness are so much informative about various brain states and how they work or function, they hardly say anything about the experientiality aspect of consciousness, as said earlier. As we have discussed earlier that the real hard problem of consciousness is the problem of experience or conscious experience, but much to our disappointment, despite being a dazzling theory of consciousness, the neuroscience fails to explain the problem of experience. Neuroscience, tells us that, consciousness, somehow emerges from the states of brain, but, it fails to tell us how and why, consciousness emerges from the states of brain. It somehow finesses the hard question (with specific reference to its position) of why the brain states are responsible for giving rise to consciousness or what makes them (brain states) responsible for the rise of consciousness or the way consciousness is.

To do away with the hard problem of consciousness or answering the questions related to the hard problem of consciousness, some neuroscientists have talked about conscious brain states and unconscious brain states, such as Bernard Baars.² According to his view, some physical processes of brain are conscious while some are not. But, again, this is nothing but another pseudo-explanation of consciousness, which too, like the other scientific explanations, fails to answer satisfactorily why conscious brain states are conscious and why other brain states with similar sort of configuration and processes going on within them are not conscious.³ In fact, all who have been able to understand the exact problem of consciousness, may be able to realise that, actually no scientific theory of consciousness explains the phenomenon of consciousness. As Chalmers is of the opinion that, the so-called scientific explanations do not explain the phenomena of consciousness but only talks about the co-relations between various conscious experiential states and the various physical processes of brain.⁴

Apart from the problems related to the correlations, the neuroscience has got a practical (methodological) problem.⁵ It is

quite hard to think that, how the microelements of the brain can be studied practically without damaging the microlevel structure or the neurons, or without killing the organism. Now, if that is a practical constraint, then while working on the microelements of the brain, we seem to be affecting the neuronal states and how the neurons behave. And no matter whether our intrusion into the neuronal matrix have positive or negative repercussion on the neuronal states, it seems so clear that, it is an impediment on our way to understand or study the neuronal states in their pure natural states, without affecting them.

According to Searle, another problem with the neuroscience is that, in neuroscience, there is no unifying theoretical principle, in terms of which or using which the neuronal states of brain can universally be explained.⁶ Though it is true that, neuroscience as an academic enterprise is brimming with a lot of information about brain or neurons or neuronal states and about their functions, but still due to the unavailability of a fundamental explanatory (of the matters at hand, i.e., consciousness) principle, neuroscience is unable to explain how such neuronal activities or whatever goes on at the micro-level of brain are responsible for the way consciousness is.

Neuroscience is a variety of materialism, in the sense that, it talks about the fundamentality of matter in the understanding of consciousness. According to the thesis of materialism (in the context of the discussion on consciousness), the phenomenon of consciousness can be fully explained with reference to or in terms of matter. And in neuroscience, this fundamental matter is neuron. Neurons are the fundamental matter which are accepted as being responsible for conscious experience or the phenomenon of consciousness. But the hard and the fundamental questions are: why only the neuron cells of brain are responsible for consciousness; and not the other cells that make up the other parts of our body, why always the neurons have been associated with consciousness and not the other cells; what is so special about neurons. Even within the category of brain cells (to which the neuronal cells

belong or fall under), not all cells are accepted as being responsible for consciousness, e.g., Glial cells. Glial cells are the non-neuronal cells which are expected to be one of the important components that help the neurons function properly.⁷ But as said earlier, the glial cells are never held responsible for the rise of consciousness or are never associated with consciousness the way neurons have been.

If matter (biological) is responsible for (the rise of) consciousness, then why not every possible kinds of matters are responsible for (or for giving rise to consciousness) it (consciousness). Or more radically speaking, if matter itself is conscious(ness), then why not all matters are conscious(ness). These are the kinds of questions that neurophysiology or neuroscience has to answer if it has to explain consciousness or to unravel the mystery of consciousness.

Searle uses an analogy to edify us about how otiose the findings and the study of the neuronal correlates may turn out to be in our project of explaining consciousness. In neuroscience, the micro-level elements of brain called 'neuron(s)' are studied to explain consciousness, and in Searle's opinion, this strategy to understand/explain consciousness can be as hopeless as that of understanding a car engine at the level of the molecules of the metal in the cylinder block simply speaking, by studying the molecules of the metal of which the engine is made.⁸

However, it seems to me that, body, no matter whether is reduced to the firings of neurons in brain or not, is an important element which contributes to the constitution of consciousness and the way consciousness is/feels, and I am not going to deny it, since there seems to be no ground to do so. Taking the experientiality aspect of consciousness does not require one to abandon or jettison the bodily aspect of it (consciousness) or to regard it (bodily aspect of consciousness) as less important than the experientiality aspect.

Being a hardcore Cartesian with regard to the nature of consciousness, seems to be philosophically passé these days. If it is true that we are essentially conscious, then it too is true that we are bodily beings and body too is essential for conscious experience. Even if experientiality is accepted as the most important aspect of consciousness, still based on our biological understanding of experience, we can say that, without the body, the possibility of experience would be in question. The body seems to be inseparably associated with conscious experience. And this fact about body in connection with consciousness must be taken into account to have a better understanding of or explain consciousness. Of course, at the end of the day we will have to answer that what kind of role body plays in the constitution of consciousness and how. But at this juncture we can safely claim that neuroscientific reduction with regard to consciousness is as passé as Cartesian dualism.

By now, I guess it is quite clear that at what stage of its development, the discipline of neuroscience is and based on that how far it can help us to understand the phenomenon of consciousness. Pointing out the above drawbacks of neuroscience should not in any remote way be seen or understood as a deliberate act to disregard and demean neuroscience as an academic or scientific or medical field of inquiry. Rather such an undertaking is an honest attempt to analyse the metaphysical and methodological underpinnings of neuroscientific reductionism to show that, neuroscience is not equipped to deal with the hard problem of consciousness. Despite having mentioned the drawbacks of neuroscience in the above passages I would not indulge into any form of dogmatism by saying that, neuroscience has nothing to contribute to the **big-picture understanding of consciousness**. For the time being, based on our immediate experiences of the phenomenon of consciousness and using all the intellectual, linguistic and scientific apparatus, we cannot associate the neuronal correlates of brain with consciousness as inseparably as we can relate our immediate awareness of it to it. But, based on this inability of us, we cannot make this ponderous claim that, the neuroscientific findings are worthless information

for the understanding of consciousness. Even after many years of research and contemplation on the phenomenon of consciousness, we have not yet been able to find our initial toehold and thus we are in no position to even say that what sort of information is really important and what is not for understanding consciousness. So, it is better for us to take every single of the available options into consideration, which could possibly help us to understand consciousness even if not individually but together.

The same I want the neuroscientists' approach to be, that, they should have regard for and should take into consideration the philosophical and other theoretical findings about consciousness, in order to construct a big-picture understanding and a better explanation of the phenomenon of consciousness.

It seems that, the nature of consciousness, in its hardest essence, spills over and outside the technologies of science. Hence, there seems to be a mismatch, or at least, an inadequate match between the phenomenon under investigation, that is, consciousness, and the methods of investigation. Now, to get over this impasse, science has two options. Either, science has to expand its methodologies beyond what it already has, or has to give up its investigation about consciousness to the other disciplines of inquiry.

Maybe science in general, as a discipline has already come to the realization of its inability to answer the real hard and the fundamental questions about consciousness and thus has started incorporating various approaches and methodologies from outside the domain of science for the sake of understanding consciousness better than ever. The best evidence of this radical change in the approach of science towards understanding consciousness, is perhaps The Science of Consciousness (TSC), formerly towards a Science of Consciousness conferences, which aim to bring all the available methodologies to understand consciousness together. TSC conferences are the Center for Consciousness Studies, University of Arizona organised international academic conferences, which have been held twice every year at various locations around the

world since 1994. My claim regarding TSCs reflecting this change of attitude of science towards understanding consciousness as a phenomenon can be understood if we look at the introductory blurb to the TSC conference 2019, which is available on its website. It says, TSC (The Science of Consciousness) conferences continue to bring together various perspectives, orientations, and methodologies within the study of consciousness. These include not only academic subjects within the sciences and humanities, but also contemplative and experiential traditions, culture and the arts. TSC aims to integrate viewpoints and bridge gaps, appreciates constructive controversy, and pursues the spirit of genuine dialogue.⁹

Notes & References:

1. Searle, John R.; *The Mystery of Consciousness*; New York: The New York Review of Books; 1990; p. 196.
2. Susan Blackmore; *Conversations on consciousness*; New York: Oxford University Press; 2005; p. 13.
3. *Ibid.*
4. *Ibid.*; p. 38.
5. Searle, John R.; *The Mystery of Consciousness*; p. 4.
6. *Ibid.*; p. 198.
7. “What are glia?,” Queensland Brain Institute, Last modified May 1, 2019, <<https://qbi.uq.edu.au/brain-basics/brain/brain-physiology/what-are-glia>>
8. Searle, John R.; *The Mystery of Consciousness*; p. 198.
9. “Home,” The Science of Consciousness Interlaken 2019, Last modified May 1, 2019, <<https://www.tsc2019-interlaken.ch/>>