Solving the Hard Problem of Consciousness by Asking the Right Questions

Stanislav Tregub

https://stanislavtregub.com/

The concept of the Mind contains a paradox. Everyone seems to understand what it is about, but when it comes to concrete answers about what it is, everything fades into a fog of uncertainty. Perhaps, we should start by asking the right questions. The article formulates these questions and begins the journey of building a model of the Mind as an attempt to answer them.

Keywords: consciousness, mind, hard problem, physical basis, signal processing

"Despite millennia of analyses, definitions, explanations and debates by philosophers and scientists, consciousness remains puzzling and controversial, being at once the most familiar and most mysterious aspect of our lives. Perhaps the only widely agreed notion about the topic is the intuition that it exists. Opinions differ about what exactly needs to be studied and explained as consciousness … Today, it often includes some kind of experience, cognition, feeling or perception … There might be different levels or orders of consciousness, or different kinds of consciousness, or just one kind with different features. Other questions include whether only humans are conscious or all animals or even the whole universe. The disparate range of research, notions and speculations raises doubts whether the right questions are being asked" (Wikipedia "Consciousness").

We have to decide what questions we ask. Asking the right kind of question is a good start for any study.

Here is how the modern philosopher David Chalmers formulated the question: "It is undeniable that some organisms are subjects of experience. But the question of how it is that these systems are subjects of experience is perplexing. Why is it that when our cognitive systems engage in visual and auditory information-processing, we have visual or auditory experience: the quality of deep blue, the sensation of middle C? How can we explain why there is something it is like to entertain a mental image, or to experience an emotion? It is widely agreed that experience arises from a physical basis, but we have no good explanation of why and how it so arises. Why should physical processing give rise to a rich inner life at all? It seems objectively unreasonable that it should, and yet it does. If any problem qualifies as the problem of consciousness, it is this one. In this central sense of "consciousness," an organism is conscious if there is something it is like to be that organism, and a mental state is conscious if there is something it is like to be in that state" (Chalmers, 1995).

Chalmers is not the first and the last one to ask the fundamental ontological question about the Mind, and no one ever thought it to be an easy one. But his statement that the problem is hard produced such a 'wow effect' because it was pronounced at the right time and in the right place.

DOI: 10.13140/RG.2.2.25607.32164

The time has come to remind the scientists that while they tried to sweep the question under the carpet, it has not disappeared anywhere.

Postulating the "hard problem of consciousness," Chalmers asks why and how subjective experience arises. These are two separate questions. 'How' is a strict technological question. It is not an easy but a soluble task. We can say that if we cover technological issues sufficiently for understanding the process, we will answer the question. But 'why' is ambiguous. If we look at 'why' as a functional question, it contains the answer.

Question: Why, when our cognitive systems process signals coming through sight and hearing, do we have visual or auditory experience? Answer: Our cognitive systems create signals' representations which are the experience. Question: Why does physical processing give rise to a rich inner life? Answer: A rich inner life is the physical process of coding signals into representations. Question: Why does the brain produce consciousness? Answer: The function of the brain is to carry out the processes that we call consciousness.

Of course, there are many aspects to the process, and the brain is not an easy object of study. But conceptually, the question is not hard. It is even trivial if looked at from the functional side. That is what Chalmers calls the easy problem. His point is that 'why' is not a functional question.

Here is his argument: "Why should physical processing give rise to a rich inner life at all? … What makes the hard problem hard and almost unique is that it goes beyond problems about the performance of functions … Why is the performance of these functions accompanied by experience? A simple explanation of the functions leaves this question open … Why is it that when electromagnetic waveforms impinge on a retina and are discriminated and categorized by a visual system, this discrimination and categorization is experienced as a sensation of vivid red? We know that conscious experience does arise when these functions are performed, but the very fact that it arises is the central mystery … To explain experience, we need a new approach" (Ibid).

Chalmers is asking why consciousness happens at all. This is the problem for him. Nothing we will say about how the brain produces subjective experience will satisfy the philosopher.

What does Chalmers suggest as a new approach? He calls his position "naturalistic dualism." The term sounds new but rings an old bell. He tries to convince us that the only way of solving the hard problem is to acknowledge that that Mind is some fundamental entity that "goes beyond what can be derived from physical theory, … over and above the properties invoked by physics" (Ibid).

That does not sound new at all. It is the 'good' old dualism. But Chalmers says that "it is an innocent version of dualism, entirely compatible with the scientific view of the world … Nothing in this approach contradicts anything in physical theory; we simply need to add further bridging principles to explain how experience arises from physical processes" (Ibid).

This really sounds like a hard problem: we should explain something that is beyond physics by physical principles. Explaining physical phenomena by non-physical entities is an old tradition and an easy way out. But the other way around is something new. That is why the philosopher insists that "the moral of all this is that you can't explain conscious experience on the cheap" (Ibid).

We should become dualists and monists, idealists and materialists, mystics and scientists simultaneously. It is an oxymoron that produces cognitive dissonance. The moral of all this is that the philosopher sets an impossible task. It is not solvable, cheaply or expensively. Here we should just agree with Chalmers that scientific methods "must fail" (Ibid). The reason is simple: explaining non-physical phantoms is not within the scope of science. Let them remain within the purview of philosophy and theology. The scientific community should go on with building a physical model of the Mind as a physical phenomenon. There is no dissonance in this position, only harmony.

DOI: 10.13140/RG.2.2.25607.32164

Any scientific explanation should be based on hypotheses about a physical mechanism that could be confirmed or refuted. If the model does not have this attribute of a scientific theory, it may be due to insufficient accuracy in defining the laws and mechanisms or the presence of unknown factors that determine the behavior of the phenomenon under study. In this case, it remains only to admit that there is no satisfactory scientific explanation yet.

According to another modern philosopher, Joseph Levine, this is precisely what happens in the study of the Mind: there is an explanatory gap because we lack an explanation of the mental in terms of the physical (Levine, 1983).

Suppose we say that the Mind is a non-physical thing that has settled temporarily in the physical body. In this case, we answer the 'what' question but not the 'how' question about the principles and mechanisms of operation. If we declare that the Mind is some "fundamental property" of the world, we create the illusion of an answer as it still misses the goal of explaining how it works. That is why there is no difference between classic dualism and modern "innocent dualism." Both versions are incompatible with the scientific view of the world, and both are cheap explanations.

Here is how Chalmers justifies his call to declare consciousness a fundamental property: "In physics, it occasionally happens that an entity has to be taken as fundamental. For example, in the nineteenth century it turned out that electromagnetic processes could not be explained in terms of the wholly mechanical processes that previous physical theories appealed to, so Maxwell and others introduced electromagnetic charge and electromagnetic forces as new fundamental components of a physical theory."

But the fact is that Maxwell's model did not give an explanation. It was a purely phenomenological model that described the observables well but did not explain the underlying mechanism. He had to use the concept of force precisely for the lack of an explanation. It is the same as using the concept of spirit or god responsible for the phenomena. He understood it perfectly well and, as a true scientist, was not too proud of the fact. Uncovering the mechanism of energy interactions remains a central topic in theoretical physics. So, once again: declaring something fundamental and thus avoiding the task of explaining the mechanism is a cheap way out.

The question of how our subjective experience arises is about how our brain produces verbal, visual, sound, gustatory, tactile, olfactory, proprioceptive, interoceptive, painful, motor, and other representations. But for a dualistic position, how the brain performs this function and how the experience arises are different things. Moreover, the technological question 'how' is entirely obscured by a shade of indefinite 'why.' This leads to a lot of fog about the "central mystery," which is accompanied by sloppy handling of strict technical terms. It is fine if we want to philosophize about the transcendental and fundamental, but it is a dead-end for answering the practical questions.

For example, Chalmers equates signal processing with information processing. This category mistake is not as insignificant as it may seem. Strictly speaking, our brain processes signals and generates information as code patterns that represent these signals. The quality of deep blue is a representation of a particular spectrum of light reflected from an object and perceived by the visual system. The sensation of middle C is a representation of sound vibrations of a specific frequency. From this technological perspective, it is not perplexing that "there is something it is like" to experience a mental image because a representation is an image and subjective experience.

The question "why is it that when our cognitive systems engage in visual and auditory information-processing, we have visual or auditory experience" does not make sense because signal processing done by the brain produces information that is the experience. But if we think

DOI: 10.13140/RG.2.2.25607.32164

that information created by the brain and subjective experience are separate things (as Chalmers suggests), we can go on wandering about their causal relationship forever.

The lack of progress in explaining the physical mechanism of the Mind has fed all kinds of dualisms. Classical dualists say that it is something non-physical. New 'naturalistic dualists' say that it is over and above or beyond the physical.

Suppose we agree "that experience arises from a physical basis, but we have no good explanation of why and how it so arises." Do we need to dive into deep but essentially cheap dualistic metaphysics, as he suggests? No, we just have to find a good, physically substantiated explanation. And this is not a cheap way out. We have to show what the representations are physically and what mechanism creates this subjective experience.

The question "What is the Mind?" implicitly contains the question "How does it work?" And it is not an idle philosophical issue but a practical task: we have to know the workings of the Mind to be able to fix its pathologies.

Asking the right kind of questions about the object of the study is vital for success. But we seem to forget that for the search to go in some direction, the object must be defined.

Here is what the International Dictionary of Psychology states: "The term is impossible to define except in terms that are unintelligible without a grasp of what consciousness means … Consciousness is a fascinating but elusive phenomenon: it is impossible to specify what it is, what it does, or why it has evolved. Nothing worth reading has been written on it" (Sutherland, 1989).

It is an honest confession about a failure of science named "knowledge of the mind" (from Greek psyche-logos). A science that cannot define the central object of the research finds itself in an awkward situation: the question arises — is it a science? Theoretical and practical research in psychology interprets the Mind's manifestations but does not explain the underlying physical mechanism. That is why any model may claim to be right, but it is impossible to confirm or refute it. Psychology is considered by many to be a pseudoscience precisely for this reason.

On the other side, there are various directions of brain research that are now generally called neuroscience. For a long time, neuroscientists pretended not to be involved with the question about the Mind. They even avoided the term whatsoever. If there is no question, no answer is needed. But the Mind does not disappear. On the contrary, it stubbornly 'knocks on the door' and requires attention.

By the end of the 20th century and the beginning of the 21st century, the situation began to change: researchers realized that the central object of study is the Mind. Now everyone seems to write about the Mind but still avoiding any definition. One gets the impression of its elusiveness for scientific knowledge.

The mystics triumph and say something like this: so many efforts did not lead to anything because the Mind is transcendent, immaterial and unknowable. But another logical chain is possible: if the previous efforts had no result, perhaps this means that they did not go in any direction. It is not surprising if the goal is not determined.

The reason for avoiding the definition is not only the phenomenon's complexity but the fear of error and responsibility. If you designate the goal, there is a significant risk of an obvious miss. If the target is blurred or not set at all, then you can shoot anywhere and declare that the target has been hit. There is another trick in this approach: the hope that you will hit something sooner or later if you shoot long enough in all possible directions. Both methods combine quite well and even complement each other. But there is another option: to clearly define the target and train the accuracy of the shot. You risk being ridiculed when you miss. But there is hope for a result that will be obvious to both the shooter and the observers.

DOI: 10.13140/RG.2.2.25607.32164

The dictionary author was right that we cannot define the Mind if we do not grasp its essence. But he was wrong that "it is impossible to specify what it is, what it does, or why it has evolved." We will grasp the essence when we start answering precisely these questions. Physical aspect: what is it? Teleological aspect: what purpose does it serve? Functional aspect: what does it do? Technological aspect: how does it do it? Only a theory that answers all these questions can claim to cover the explanatory gap between mental and physical.

Teleological Transduction Theory makes, probably, the first attempt in the history of science to give a clear and physically grounded definition of the Mind followed by a detailed explanation of its mechanisms covering the above questions. This model of the Mind is closely linked with the Theory of Energy Harmony as the model of Matter. They are developed in the research series "Symphony of Matter and Mind" (Tregub, 2021). The author hopes that it is worth reading.

Another quote from Chalmers can be a slogan for both theories: "The principles of simplicity, elegance, and even beauty that drive physicists' search for a fundamental theory will also apply to a theory of consciousness" (Chalmers, 1995).

References:

1. Chalmers, D. J. (1995). *Facing up to the Problem of Consciousness.* Journal of Consciousness Studies 1995 Vol.2, № 3 P. 200-219.
2. Levine, J. (1983). *Materialism and Qualia: the Explanatory Gap*. Pacific Philosophical Quarterly. 1983. Vol. 64, № 4. P. 354—361.
3. Sutherland, S. (1989). *Consciousness.* Macmillan Dictionary of Psychology. ISBN 978-0-333-38829-7.
4. Tregub, S. (2021). *Symphony of Matter and Mind. Part 1,2,3,4,5,6,7,8.* https://stanislavtregub.com/

DOI: 10.13140/RG.2.2.25607.32164