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A Brief Analysis of the Puzzle of Consciousness[1]

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Abstract

The challenging problem of consciousness, or more traditionally the mind-body problem, continues to maintain its vitality and importance despite all philosophical theories and advances in neuroscience, artificial intelligence and technology. The problem of consciousness has been addressed by both philosophers and scientists from ancient times to the present. In the most general sense, the problem of consciousness, also known as the hard problem, is the problem of how subjective mental states arise from a physical piece of meat. The main purpose of this article is to present a categorical and explanatory analysis of this puzzle of consciousness, which is still important today. For this purpose, first of all, the definitions of the concept of consciousness in the literature will be examined in depth. Afterwards, the characteristics of consciousness that are untamed for science, which turns it into the hard problem for us, will be touched upon, and the puzzle of consciousness will be explained with Chalmers' distinction between easy problems and the hard problem of consciousness. Finally, it is aimed to complete this explanatory analysis on the puzzle of consciousness by making a categorical distinction between traditional solution-oriented approaches to the problem of consciousness.

Keywords: Concept of Consciousness, The Puzzle of Consciousness, Subjective Consciousness, The Hard Problem of Consciousness, Traditional Solution-Oriented Approaches.

Bilinç Bilmecesinin Kısa Bir Analizi

Öz

Bilinç problemi ya da daha geleneksel bir ifadeyle zihin-beden problemi, tüm felsefi teorilere ve nörobilim, yapay zekâ ve teknolojideki ilerlemelere rağmen canlılığını ve önemini korumaya devam etmektedir. Bilinç problemi, antik çağlardan günümüze kadar hem filozoflar hem de bilim insanları tarafından ele alınmıştır. En genel manasıyla, zor problem olarak da bilinen bilinç problemi, öznel zihinsel durumların, fiziksel bir et parçasından nasıl ortaya çıktığı problemidir. Bu makalenin temel amacı, günümüzde hala önemini koruyan bu bilinç bilmecesinin kategorik ve açıklayıcı bir analizini sunmaktır. Bu amaçla öncelikle bilinç kavramının literatürdeki tanımları derinlemesine incelenecektir. Sonrasında bilincin bilim için ehlileştirilemeyen, onu bizim için zor bir probleme dönüştüren özelliklerine değinilecek ve Chalmers'ın bilincin kolay problemleri ve zor problemi ayrımıyla bilinç bilmecesi açıklanacaktır. Son olarak bilinç problemine yönelik geleneksel çözüm odaklı yaklaşımlar arasında kategorik bir ayrım yapılarak bilinç bilmecesine ilişkin bu açıklayıcı analizin tamamlanması amaçlanmaktadır.

Anahtar Kelimeler: Bilinç Kavramı, Bilinç Bilmecesi, Öznel Bilinç, Bilincin Zor Problemi, Geleneksel Çözüm Odaklı Yaklaşımlar.

[1] This paper is a revised version of a chapter of the PhD dissertation titled "Pseudo-Mysterianism of McGinn: A Constructive and Naturalistic Solution of the Hard Problem of Consciousness is Possible" which I submitted to Middle East Technical University, Department of Philosophy in Ankara in 2022

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Introduction

Now I sit at the computer with the intention of writing this article. While I am writing these words, odour molecules enter my nose stimulating my olfactory receptor, and I get the tantalising smell of the coffee on my desk. My dog is lying on the carpet in my room gnawing on his big bone; I think he is so happy as he fills his belly with his favourite food. I am feeling a bit unwell today with a dull ache and a twinge in my neck. Just for a few minutes I stop to write, and my attention turns to the window to watch the children playing in the park. I remember times gone by, the hammock under the mulberry tree in our garden, and imagine my own happy childhood for a few moments. I take a sip of my coffee and while its taste sends me into euphoria, I get back to writing. While you read these lines, you may be tasting your coffee, or you may be feeling a little hungry. Maybe you have had enough of what is written here, or you are wondering why I am telling you an excerpt from my everyday life.

The reason of this tiny story is to remind you that out of dreamless coma our daily lives are alive with the states named as conscious mental states – intending, smelling and tasting, thinking, feeling an ache, feeling happy or hungry, imagining, wondering, etc. – and we, human beings, as owners of various kinds of conscious states, are at the centre of our own individual conscious experiences. You cannot escape your feelings or desires, your conscious experiences, and it does not seem possible for anyone else to be closer to your conscious experiences than you are. Your direct access to your own conscious state is the most important evident for the existence of it. However, although our own conscious states are directly achievable and so ordinary for us, consciousness is quite a perplexing subject about which we have no theoretical knowledge. As human beings we still do not reach a conclusion about what consciousness is, what the nature of a conscious state is, how it arises and how it is related to the brain.

The purpose of this article is to formulate the problem of consciousness in an explanatory and categorical way. To do this, I will first point out the concepts of consciousness in the literature, for although it is a term frequently used in everyday language, it does not yet have a commonly accepted meaning. My aim in analysing the concepts of consciousness is to highlight the terminological diversity of consciousness in the literature, because it is important to distinguish the concept of consciousness in the sense that I will use throughout the article from its other definitions. Then I will look at the untameable features of consciousness that make it difficult to study in the physical world because these features play an important role in the emergence of the problem. After that I will set out what the real problem of consciousness is by taking help from Chalmers' hard problem thesis and finally, I will present to the reader the traditional solution-oriented approaches to the problem of consciousness in a categorical distinction, and so I will complete the explanatory analysis of the puzzle of consciousness.

1. What Does the Term Consciousness Mean?

To study on consciousness, it is necessary to understand what the term consciousness means. The term conscious refers to various kinds of phenomena in the literature, as there are different proposed answers by philosophers or scientists to questions about consciousness. The most common distinction in the field of consciousness that has been generally agreed upon is the distinction between "creature consciousness" and "state

consciousness".[3] While the notion of creature consciousness is used to attribute consciousness property to a subject – a human or an animal –, the notion of state consciousness is used to attribute consciousness to mental states.

The real controversy is under what conditions we can call a creature or a state conscious. Is there a single criterion for defining something as conscious, or are there distinct kinds of criteria? There is certainly no doubt that not all mental phenomena are conscious phenomena, but earlier philosophers such as Descartes and his successors do not have a need to use the term conscious to emphasize the difference between conscious and unconscious mental states because they consider that we are conscious of all our mental states. There can be no mental state of which we are not conscious. However, with the increase in research on consciousness the view is widely accepted that there are both conscious mental states we are aware and unconscious states of which we are not aware.

There are many concepts that have been developed to explain what makes a state a conscious mental state, but before we analyse them, let us focus on the concepts of consciousness that underline the conditions for a creature's being conscious. In the most general and basic sense, consciousness is characterized by "wakefulness". In this sense, being conscious depends on a human's or an animal's being alert and receptive to sensory stimuli. It is generally assumed that an organism could be conscious only if it is awake, and it refers to the opposite condition in which an organism is unconscious as dreamless sleep or deep coma. For instance, Tononi supposes that "[consciousness] is what vanishes every night when we fall into dreamless sleep and reappears when we wake up or when we dream".[4] Papineau and Selina also begin their book, Introducing Consciousness, with the assertion that "consciousness is what we lose when we fall into a dreamless sleep or undergo a total anaesthetic".[5] Similarly, Searle defines consciousness as a state of awareness that begins "when we wake from a dreamless sleep and continue through the day until we fall asleep again, die, go into a coma or otherwise become 'unconscious'".[6] However, as mentioned before there is no definition of consciousness agreed upon, and of course, there are philosophers who argue against the synchronisation between consciousness and wakefulness. To illustrate, Thompson defends the argument that consciousness continues in dreamless sleep.[7] According to him, we can remember the quality of our sleep because we have consciousness in our deep and dreamless sleep as well.

In addition to wakefulness, some are willing to define the term consciousness in such a way that it is identical with the terms such as "awareness" or "attention". It can be acceptable to claim that being conscious of something is required to be able to aware of those things, but awareness and consciousness are semantically different from each other. As Gennaro asserts that there are cases for awareness without consciousness like subliminal occurrences, so defining consciousness as synonymous with the awareness is nonacceptable today.[8]

[3] David Rosenthal, "State Consciousness and Transitive Consciousness," *Consciousness and Cognition: An International Journal* 2, no. 4 (1993): 355-36.; David Rosenthal, "A Theory of Consciousness" in *The Nature of Consciousness*, eds. Ned Block, Owen J. Flanagan and Guven Guzeldere (MIT Press, 1997), 729-753.; William Lycan, "Resisting ?ism" in *Consciousness and Its Place in Nature,* ed. A. Freeman (Imprint Academic, 2006), 65-71.

[4] Giuilo Tononi, "Consciousness as integrated information: a provisional manifesto," *Biology Bulletin* 215, (2008): 216.

[5] David Papineau and Selina Howard, *Introducing Consciousness* (UK: Icon Books, 2000), 5.

[6] John Searle, "How to study consciousness scientifically," *Philosophical Transactions of The Royal Society B* 353, (1998): 1936.

[7] Evan Thompson, *Waking, Dreaming, Being: Self and Consciousness in Neuroscience, Meditation, and Philosophy* (New York: Columbia University Press, 2015), 6.

[8] Rocco Gennaro, *Consciousness* (London: Routledge, 2016), 7.

Similarly, it seems as if consciousness and attention are inextricably linked with each other. Some scholars argue that "attention is necessary for conscious perception".[9] The evidence for this strong argument comes from phenomena like "inattentional blindness", which show that in the lack of attention there is no conscious perception. The invisible gorilla experiment is the most famous example of inattentional blindness. It is a video in which two groups of students, one group in a black shirt and the other in a white shirt, pass the basketball to each other, and the viewers are in demand to count the number of passes among the students wearing white shirt. After a while, a person in a gorilla suit appears in the scene between the students, but many viewers do not notice the person in the gorilla suit.[10] The conclusion of this experiment seems to be consistent with the argument that "attention is necessary for conscious perception", but it does not provide us satisfactory evidence to assume that argument is exactly true, because even if there are viewers do not notice, 42% percent of viewers notice the person in gorilla suit.[11] It seems reasonable to assert that consciousness cannot be restricted with attention because there are further case studies that show the circumstances in which conscious exists without attention, and attention exists without consciousness.

The concepts of consciousness described so far are generally associated with the properties of a creature. However, we make a distinction not only between conscious-unconscious creature, but also between conscious and unconscious states because a creature's being conscious does not mean that all its mental states will be conscious. We know something about the conditions that make a creature conscious being, but the main issue is what condition makes a state a conscious mental state.

In the field of state consciousness there are different concepts referring the property of conscious mental states. The most crucial and frequently used concept is characterized by Thomas Nagel: What is likeness. In his 1974 article "What is it like to be a bat?" he claims that "fundamentally an organism has conscious mental states if and only if there is something that it is like to be that organism – something it is like for the organism".[12] For explaining this claim Nagel uses the example of the bat and argues that even if we, human beings, know the processes of bats' perception and whole facts about them in detail, we cannot know what it is like to be a bat; we cannot understand what it is like to spend a day shimmying from top to bottom, or we cannot know what it is like use echolocation to make prey. While we, human beings, can imagine these states from a third-person point of view, a bat can experience them from its own subjective point of view. When I am in a certain mental state, for example when I smell a cup of aromatic coffee, there is something special to me in that state; what it is like for me to smell that cup of aromatic coffee is my own subjective conscious experience. By using the phrase "what it is like" Nagel emphasizes the subjective character of conscious states. In his view, the criterion of subjectivity or, in other words, first-person perspective is essential to define a state as a conscious mental state. That is, a pain in my neck can only be considered a conscious mental state if there is something that it is like to feel this pain from my perspective.

There are also different terms to characterize consciousness in Nagel's "what it is like" sense, e.g., "qualia". The term qualia (singular: quale) is used by some philosophers to refer to the subjective and qualitative

[9] Arien Mack and Irvin Rock, *Inattentional Blindness* (Cambridge, MA: MIT Press, 1998), 250.

[10] Daniel Simons and Christopher Cabris, "Gorillas in our midst: Sustained inattentional blindness for dynamic events," *Perception* 28, no. 9 (1999): 1062-69.

[11] Christopher Mole, "Attention and Consciousness," *Journal of Consciousness Studies* 15, no. 4 (2008): 95.

[12] Thomas Nagel, "What Is It Like to Be a Bat?," *The Philosophical Review* 83, no. 4 (1974): 436.

nature – "what it is like" character – of conscious states.[13] When you hit your head on the wall, feel a severe headache, or feel dizzy, each of these states expresses a particular raw feeling that is introspectively accessible to you. And some philosophers use qualia to express this aspect of consciousness. Another concept associated with the Nagelian sense of consciousness is phenomenal consciousness. In his works, Ned Block makes a critical distinction between two different types of consciousness, access (A) consciousness and phenomenal (P) consciousness, and he defines *P*- consciousness in the Nagelian sense by asserting that "a state is phenomenally conscious if there is something it is like for one to be in that state". While phenomenal consciousness refers to our conscious experience "when we see, hear, smell, taste and have pains"[14], access consciousness signifies the state's "availability for use in reasoning and rationality guiding speech and action".[15] In his view, *A*-consciousness and *P*-consciousness do not always coincide with each other; these two types are conceptually independent. Block's distinction emerges from the thought that the properties of *P*-consciousness are different from the functional or cognitive properties of consciousness.[16] *P*-consciousness has experiential properties, that is, "what it is like" to have that experience, and this is the reason why phenomenal aspect of consciousness is more puzzling than *A*-consciousness. While access consciousness can be explained by cognitive science, explanation of phenomenal consciousness resists the methods of cognitive science because of its subjective and qualitative character.

As seen in the discussion above, although consciousness is a very common word in everyday language, it is used in different meanings. Even though there are lots of attempts to describe consciousness, it is still a quite ambiguous term for which there is no commonly held objective definition. However, for the remainder of this article, I will use the term consciousness in Nagelian sense, which emphasizes the subjective and qualitative nature of consciousness, because the problem of consciousness essentially focuses on the explanation of phenomenal consciousness, i.e., the "what is like" character of a conscious state.

2. What Makes Consciousness Problematic: The Features of Consciousness

If we want to talk about what generates the hard problem of consciousness, it is required to address the features of it. Presenting the essential features of consciousness both contributes to understanding of what we mean when we talk over consciousness and helps us to clarify the reason why the hard problem of consciousness is so hard.

There are two essential features of states of consciousness that make the question of consciousness and the brain a difficult problem: The first is the subjective character and the other is the qualitative character of consciousness.[17] When we focus on a subject's phenomenal experience of a white rose – what it is like for the

[13] Clarence Irving Lewis, *Mind and the World Order* (New York: Charles Scribner's Sons, 1929).; Frank Jackson, "Epiphenomenal Qualia," *Philosophical Quarterly* 32, (April 1982): 127-36.

[14] Ned Block, "Concepts of Consciousness" in *Philosophy of Mind: Contemporary Readings*, ed. David J. Chalmers (Oxford University Press, 2002), 206.

[15] Ned Block, "On a Confusion about the Function of Consciousness," *Behavioral and Brain Sciences* 18, (1995): 227.

[16] Block, "On a Confusion about the Function of Consciousness," 207.

[17] Joseph Levine, *Purple Haze: The Puzzle of Conscious Experience* (Cambridge, MA: MIT Press, 2001).; Uriah Kriegel "Mysterianism" in *The Oxford Companion to Consciousness*, eds. T. Bayne, A. Cleermans and P. Wilken (Oxford: Oxford University Press, 2009), 461-62.

subject to see a white rose – while for-subject-ness of this state refers to the subjective character of consciousness, the component of what it is like – the whiteness of the white rose – refers to the qualitative character.

There is further problematic feature of consciousness related with its subjective and qualitative nature like immediacy. A subject has direct or immediate knowledge of her/his own conscious phenomena.[18] This means that your knowledge about your phenomenal consciousness is not based on evidence, inference or any other things. If we assume that you have a stomach pain, because of immediacy nature of consciousness you have direct and immediate knowledge of this pain without evidence and inference. This feature distinguishes your conscious phenomena (stomach pain) from physical phenomena (physical condition of your stomach). While the knowledge of your pain is only private to you, you can have evidence like endoscopy results for knowing your stomach's physical conditions.

Because subject, who has conscious phenomena, can have immediate knowledge of this state from the first-person perspective, there are first person-third person distinction in accessing knowledge of conscious phenomena.[19] To illustrate, when you have a stomach pain as we said above, only you have information of this conscious state, your doctor or anyone else cannot have it, and this situation creates first person-third person distinction. While you are the first person because you have direct and immediate knowledge of your mental phenomenon, your doctor or anyone else is third person because he/she can only access to the knowledge of your stomach's physical conditions by using some medical evidence or inference.

In the light of the explanation above, it can be said that although consciousness arises from the brain, a physical system, it has completely different properties from the brain. And this is the core of the puzzle of consciousness. It is obvious that scientific research, based on empirical methods like observation, experimentation and verification, solves the problems of the world in which we live. However, the problem of how something as complicated as consciousness with respect to its features arises from the grey matter in the head is radically different from all other scientific problems. It is believed that phenomenal consciousness or the subjective/qualitative character of consciousness resists to the scientific explanation in metaphysical and epistemological ways.[20] If we look at it from a metaphysical point of view, all entities in the world are shaped according to the fundamental particles of physics and the physical laws they are attached to. There is an intuitional belief by many people that phenomenal consciousness cannot be explained in terms of fundamentals of physical world and the rules upon which they are bound.

It will not be different when we consider this situation from an epistemic point of view. There is a distinction known as "first-person perspective" versus "third-person perspective" in analytic philosophy and science. This distinction is expressed as the "subjective-objective" distinction, as Nagel puts it, or as the "non-scientific-scientific" distinction, since the third-person perspective is considered by many philosophers as a scientific-objective perspective. When questioned as to what makes research on consciousness so interesting and so difficult at the same time, it is thought that the problem arises from the distinction between first-person and third-person perspectives. There is a belief that a scientific explanation of consciousness cannot be made because it is thought that it is not possible to know what it means to be a bat or to know what another person feels

[18] Jeagwon Kim, *Philosophy of Mind* (CO: Westview Press, 2011), 159.

[19] Kim, *Philosophy of Mind*, 162.

[20] Murat Arici, "The Problem of Phenomenal Consciousness," *MetaMind* no. 1 (2018): 6.

and how he perceives the world from the third person view. In other words, while science tries to find solutions to problems from a third-person perspective, consciousness is understandable from a first-person perspective. While the brain is open to scientific investigation by scientific methods due to its observable character, consciousness seems to resist scientific research because of its features which are different from the entities in conformity with the scientific methods. For this reason, the relation between consciousness and the brain is considered as the hard problem of consciousness.

3. Stating the Hard Problem of Consciousness

Consciousness is the most distractive problem in the philosophy of mind. As Chalmers says, if we want to make progress on the consciousness problem, firstly we should make a distinction between the problems of consciousness. Some problems of consciousness are easier than the other to solve; therefore, at first truly hard part of consciousness problems should be separated from the relatively easy ones.[21] Chalmers asserts that some phenomena such as "the ability to discriminate", "categorize or react the environmental stimuli", "the reportability of mental states", "the focus of attention", "the deliberate control of behavior" or "the difference between wakefulness and sleep" are easy problems of consciousness.[22] The reason why he identifies such phenomena as easy is that even though we do not have complete knowledge about them yet, we get an idea on how we can give an explanation to these phenomena by using the methods of neuroscience and cognitive science. For example, to explain the difference between the states of wakefulness and sleep we need only observe the neuro-physical processes leading the contradictory behaviours of organism in these states. Or in a similar way, for explaining the reportability of mental states the only need is specifying a mechanism making achievable the information about the inner states for verbal report.[23]

However, easy problems of consciousness are not the subject of this work. As Blackmore says that the real problem is associated with the questions about what the world is composed of.[24] If the world is purely physical, how can non-physical consciousness be fitted into it? There is no doubt that the brain is the home of consciousness because even if we cannot observe consciousness in the brain, we can introspectively aware the correlation between states of consciousness and the brain activities. However, what is the relation between purely physical brain states and mental states?

Let us take an example, and suppose that *P* is your subjective visual experience of pine-tree in your garden, while you can answer some main questions about what the pine-tree in the world is made of, or its physical properties, spatial dimension and solidity, you cannot answer the same questions for *P*. There is no doubt that *P* is correlated with some set of neural activities in your brain, but while these neural activities have purely physical properties, and they have a place in the brain, we do not have enough knowledge about the nature of *P*. The relation between objective brain and subjective *P* seems like a mystery for us, so the question of how the physical state of the brain leads to mental experience is the most brain-teaser problem of consciousness, and this problem is called by Chalmers the "hard problem" of consciousness.

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[21] David Chalmers, *Philosophy of Mind: Classical and Contemporary Readings* (New York: Oxford University Press, 2002), 3.

[22] Chalmers, *Philosophy of Mind: Classical and Contemporary Readings*, 4.

[23] Chalmers, *Philosophy of Mind: Classical and Contemporary Readings*, 4-5.

[24] Susan Blackmore, *Consciousness: An Introduction* (New York: Routledge, 2013), 8.

Chalmers describes the hard part of consciousness as the problem of experience and explains it in the following words:

> The really hard problem of consciousness is the problem of experience. When we think and perceive, there is a whir of information processing, but there is also a subjective aspect. As Nagel (1974) has put it, there is something it is like to be a conscious organism. This subjective aspect is experience. When we see, for example, we experience visual sensations: the felt quality of redness, the experience of dark and light, the quality of depth in a visual field. Other experiences go along with perception in different modalities: the sound of a clarinet, the smell of mothballs. Then there are bodily sensations from pains to orgasms; mental images that are conjured up internally; the felt quality of emotion; and the experience of a stream of conscious thought. What unites all of these states is that there is something it is like to be in them. All of them are states of experience.[25]

As seen in the quotation above he emphasizes the essentially subjective character of consciousness because the real problem is how subjective character of consciousness emerges from the purely physical process of the brain. Unlike the easy problems, the methods of cognitive science and neuroscience are not sufficient to be able to explain this problem of consciousness. In the pine-tree example above, by doing empirical research we can achieve the information of neuro-physical process of the state – visual inputs coming from the pine-tree to organism's eyes, stimulation of the optic nerve back of the head of organism, neural firing in the brain etc.–, but objective research gives us nothing about the organism's subjective pine-tree experience – what its greenness is like or what it is like to have the smell of pinecone for the organism in that state – we need something new to be able to achieve the satisfactory explanation of conscious experience.

4. Available Theories of Mind That Purport to Solve the Hard Problem of Consciousness

It is possible to divide the proposed solutions to the mind-body problem into two broad categories: The first of these categories represents approaches that preserve the subjective side of consciousness but fail to understand the consciousness-brain interaction since they cannot explain it on a physical basis. The other category represents approaches that ignore or do not give importance to the subjective or qualitative aspect of consciousness while trying to explain consciousness on a physical basis. These two extreme ways of thinking are incapable of solving the hard problem of consciousness, and this inadequacy puts the problem of consciousness into an endless vicious circle that oscillates between two extremes like a pendulum.

4.1. The Approaches That Emphasise the Subjective and The Qualitative Character of Consciousness

There are approaches that prioritize the subjective and qualitative character of consciousness, distinguish it from the physical one and keep it superior. These approaches are examined as dualist approaches that accept consciousness and the brain as two separate substances or properties.

Dualism is a theory that generally emphasizes that the mental and the physical are two distinct realms. This theory divides into two main categories with respect to the ontological properties of the mental and the physical: the first is substance dualism, the second property dualism. While substance dualism claims that there are two distinct substances in the world, property dualism claims that there are two distinct properties but one substance. Although dualism originated in a general sense in Plato's dialogues, modern versions of dualism in philosophy of mind are based on arguments for or against Descartes' substance dualism, known as Cartesian dualism. Substance dualism holds that while the mind and the brain are related to some degree,

[25] David Chalmers, *The Character of Consciousness* (New York: Oxford University Press, 2010), 5.

they are two radically different substances. In general, substance is defined as something that has different properties but can exist independently of the properties it possesses. Descartes also states that "the notion of a substance is just this - that it can exist by itself, that is, without the help of any other substance.[26] This means that the mind as a substance has the ability to exist without the body. The properties that the mind has, e.g., thinking, believing, doubting, judging, etc., can exist independently of the existence of the body. for this reason, a distinguishing claim of substance dualism is that there is a mind that can exist independently of the body and vice versa. we can characterise the thesis of Cartesian dualism by three basic arguments: The first argument asserts that (1) the mind is a distinct substance that can exist independently of the body, and the second emphasises that (2) the mind is non-physical unlike the body. However, characterising the position of the mind and the body according to (1) and (2) leads to some difficulties regarding the relationship between them. That is, the question arises as to what kind of relation exists between these two fundamentally different substances. Descartes does not deny their causal interaction, although he defines the mind and the body as two different kinds of substances. His interactionist argument explains that (3) the mind and the body causally interact in both directions. Mental states causally affect physical states and vice versa.

Descartes explains the mutual causal relation between mind and body through the pineal gland in the brain, but he could not clearly explain the question of how the nonphysical mind and physical brain causally interact with each other, and he could not explicitly define the role of the pineal gland in this causal process. Descartes refers to the pineal gland as the seat of the mentality, but neuroscience now shows that mental states extend to the entire brain and that we cannot refer to a single brain region for mental activity. All this shows that the interactionist view of substance dualism does not provide a satisfactory solution to the problem of interaction between immaterial mind and material body. In response to objections to interactionism, some dualists adopt epiphenomenalism, which rejects the causal role of the mind over the body. epiphenomenalism rejects the thesis that the mind causally contributes to the activation of physical states, it seems to have an advantage over the interactionist view in terms of adaptation to a causally closed network of the physical world. However, epiphenomenalism is also considered a problematic view because it is difficult to accept that mental states have a useless status that plays no impressive role in our physical states.

In addition to epiphenomenalism, there are also some dualistic views that reject the causal interaction between mind and body and justify the existence of this interaction with the intervention of God. Parallelism, generally associated with Leibniz and his theory of "pre-established harmony", for example, asserts that the correlation between the mind and the body is established by God; God initially established the universe in harmony between the physical and the mental. Similarly, according to Malebranche's view of occasionalism, whenever there appears to be a causal interaction between mental and physical states that lead to each other, what is actually happening is the causal power of God over the apparent causal interaction that we observe.[27] That is, the relation between mind and body that appears to humans as a genuine causal relation is actually caused by divine power. Malebrane's occasionalism is also a kind of parallelism, but the difference between the two is as follows: according to Leibniz's theory, God initiates the movement of causality but does not intervene in it later. In the occasionalist view, God initiates the movement of the causal relation between the mind and the

[26] Rene Descartes, *The Philosophical Writings of Descartes: Volume II*, trans. by John Cottingham, Robert Stoothoff, Dugals Murdoch. (Cambridge University Press, 1984), 159.

[27] Kim, *Philosophy of Mind*, 96.

body and constantly controls it as the actual cause of every effect. Apart from this difference, both views argue that Descartes' interactionism is only an illusion; there can be no such causal relation between mind and body.

Not everyone agrees that body and mind are two different substances. In the twentieth century, many philosophers identify what we call mind as physical properties of the brain, behavioral activities, or functional states. According to the arguments we will examine in the next section, everything that exists is composed of a single material substance. However, before we move on to the versions of materialistic monism, it should be mentioned that there are also different types of monism. One of these types is idealism. Idealism holds that only spiritual events or spirits exist. In contrast to the dualistic view, which holds that both the mind and the body exist independently, idealism holds that there are no physical things or states that are not mental. Idealists do not deny the existence of objects in the physical world, but they do deny the existence of physical objects outside of a mind that perceives or thinks about them. The most important and well-known proponent of idealism is George Berkeley. According to Berkeley, the only source of our knowledge about physical things in the external world is our experience. Our experience does not tell us whether physical objects exist independently of our perception of them, so we cannot say on the basis of our experience that physical objects are material substance. By explaining the existence of physical things in terms of the existence of mind, idealism eliminates the problem of mind-body interaction, but it would not have explained it. Also, the view that physical objects do not exist without a perceiving mind is not an accepted approach today. Another type that rejects the existence of body and mind as two distinct substances is the double aspect theory of Spinoza. Spinoza also adapts to the tradition of metaphysics based on substance. In his view, body and mind are two separate and interrelated aspects of one substance, which is neither physical nor mental in itself. However, Spinoza maintains that substance, as a being that needs nothing to exist, is a concept that can only be valid for God. Accordingly, the substance of his monism is only God, not body or mind. The body and the mind are two main aspects of God, who is a substance. Spinoza's view is thus opposed to both substance dualism and idealism.

It is not possible to be blind to the influence of substance dualism on the emergence of modern approaches to the mind-body problem, but substance dualism was generally rejected in the twentieth century. The most problematic aspect of substance dualism is the existence of mind without body. However, it is possible to be a dualist without considering the mind and the body as two different substances. This type of dualism, which is becoming increasingly popular today, is known as property dualism. Unlike substance dualism, which insists on the existence of two different substances, property dualism claims that there is only one physical substance but two different kinds of properties. Property dualists claim that the brain is the only physical substance that has both physical and mental properties. The main idea of property dualism is that mental properties are distinct from, and cannot be reduced to, the physical properties of the brain.

It can be assumed that property dualism is a kind of dualism between substance dualism and materialism. On the one hand, in contrast to substance dualism, it argues that only physical substance exists. On the other hand, in contrast to materialism, it claims that mental states cannot be explained by reducing them to physical states. In this way, property dualism attempts to avoid the problems that dualism and materialism run into. However, although it argues for the existence of a single physical substance, the interaction problem is also valid for property dualism, since it claims the existence of two different types of properties.

Emergentism is an important variant of property dualism advocated by important philosophers such as J. S. Mill, S. Alexander, L. Morgan, and C. D. Broad. The most important factor distinguishing emergentism from the other types of property dualism is the answer of emergentism to the question of why some physical objects have mental properties, but others do not. According to this view, when lower-level microphysical systems or entities come together and reach a certain complexity, a new kind of higher-level property, namely consciousness, emerges from that physical system, and consciousness cannot be explained by reducing it to lower-level physical properties.[28] Emergentism assumes that the emergence of mental properties from the physical system that reaches a certain level of complexity is the fundamental fact of nature. The fundamental facts of nature are facts that cannot be derived from other laws of nature. That is, according to the statement of S. Alexander, we accept the existence of the fundamental fact about the emergence of mental properties with "natural piety".[29] The main problem of emergentism, which is a kind of property dualism, is the same as the main problem of property dualism in general. That problem is to provide an explanation for mind-body interaction.

For some, the only satisfactory approach that overcomes these difficulties is panpsychism, which asserts that everything has some degree of mentality. While emergentism advocates the emergence of mentality from physical particles that reach a sufficient level of complexity, panpsychism holds that all physical things, including atoms, quarks, and other smaller particles that exist at a fundamental level, possess some form of mentality from the beginning. Panpsychists do not think it reasonable to believe that consciousness emerges from the combination of completely unconscious physical things. While the claim that a property like Y emerges from things that do not have that property is true for physical phenomena, it is not possible for consciousness.

Panpsychism also faces the objection referred to by William Seager as the "combination problem".[30] This objection, first raised by William James, states that the emergence of macro-experiences from the combination of micro-experiences is not comprehensible. James expresses his concern about this problem as follows:

> Take a sentence of a dozen words, and take twelve men and tell to each one word. Then stand the men in a row or jam them in a bunch, and let each think of his word as intently as he will; nowhere will there be a consciousness of the whole sentence.[31]

If we transfer the subject to recent period, William Lycan similarly states the following in his 2006 work:

> Suppose I am looking out of my kitchen window, and simultaneously seeing a rabbit in my back yard, hearing my wife's cat yowling that he wants to behead the rabbit, feeling the touch of my fingertips on a bottle of salad dressing, smelling the spaghetti sauce in the pot, suffering an ache in my right shoulder, and imagining in anticipation a very tall frosty beer. In what way could such a mental aggregate consist of or be determined by or otherwise 'arise from' a swarm of smaller mentations? [32]

As can be seen from the above passages, the idea of the emergence of a macro-mind or consciousness from the combination of micro-minds seems as incomprehensible as the idea of the emergence of consciousness from the combination of unconscious things. And this means that the hard problem of consciousness returns to where it began.

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[28] Kim, *Philosophy of Mind*, 97.

[29] Alexander, *Space Time and Deity* (London: Macmillan, 1966), 46-47.

[30] William Seager, "Consciousness, information, and panpsychism," *Journal of Consciousness Studies* 2, no. 3 (1995): 272-88.

[31] William James, *The Principles of Psychology* (New York: Henry Holt and Company, 1890), 160.

[32] Lycan, "Resisting ?ism," 69.

4.2. The Approaches That Ignore the Subjective and The Qualitative Character of Consciousness

The influence of substance dualism on the development of modern views of the mind-body problem cannot be overlooked. However, this kind of dualism was generally rejected in the twentieth century. As a reaction to the problematic aspects of substance dualism in relation to the mental-physical interaction, the materialist approach has become popular among philosophers. Materialism rejects the two distinct substances of dualism, and materialists base their views on monism, claiming that if there is an interaction between the mind and the body, it is unreasonable to define the mind as an independent thinking substance, it must be exclusively material.[33] However, while monistic/materialistic approaches tried to make room for consciousness on a physical basis, they generally ignored the sui-generis phenomenal character of consciousness. Some of them reduced mental states to neurophysiological brain states and remained silent about the subjectivity and the qualitative character of consciousness, and some completely ignored the mental concepts that define consciousness. I will briefly discuss the development of the materialist approach that try to domesticate phenomenal consciousness in the physical world in terms of four main views: Behaviourism, Psycho-Physical Identity Theory, Functionalism and Eliminative Materialism.

Behaviorism: Behaviorism is an approach which is developed as a reaction against the unreasonable consequences of the Cartesian definition of mind. It aims to eliminate the unreasonable consequences of the traditional dualist view by reducing mental concepts to accessible and observable behaviors, rather than explaining them in subjective inner states. In other words, according to behaviorist approach, a mental state like "pain" is explained by some certain publicly observable pain behaviors such as "wincing". There are also strong objections to behaviorism. It seems very plausible to argue that given mental states can be different from given behavioral processes or dispositions.[34] To illustrate, in his work "Brains and Behavior", Putnam imagines some special beings he calls "Super Spartans" He claims that Super-Spartans can "suppress all involuntarily pain behaviour" or behave differently from people who are in pain.[35] As seen in Putnam's example, although these beings have real pain, they do not exhibit pain behavior. Conversely, a perfect actor without pain can behave as if it were in pain.[36] These objections show that it is not a plausible approach to explain the mind by reducing it to behavior. Furthermore, Kim claims that some mental states such as pain can be associated with meaningful behaviors such as groaning, screaming etc., but there are mental states that cannot be readily associated with specific behaviors, which makes the behaviorists' idea very problematic.[37]

Psychophysical identity theory: Psychophysical identity theory, whose best-known advocators are U. T. Place and J. J. C. Smart, asserts that mental states are the physical brain states.[38] It is mostly accepted view that there is a causal relation or correlation between the mental states and the neuro-physical brain states; however, identity theory goes one step further and claims that mentality is totally identical with the neurobiological process in the brain; they are the same and the one. In other words, each of mental states such as "the desire for

[33] Edward Feser, *The Philosophy of Mind: A Short Introduction* (UK: Oneworld Publication, 2005), 46.

[34] Chalmers, *The Character of Consciousness*, 3.

[35] Hilary Putnam, "Psychological Predicates" in *Art Mind and Religion*, eds. W. H. Capitan and D. D. Merrill (Pittsburgh: University of Pittsburgh Press, 1967), 37-48.

[36] Gennaro, *Consciousness,* 43.

[37] Kim, *Philosophy of Mind*, 63.

[38] Ullin Thomas Place, "Is Consciousness a Brain Process?," *British Journal of Psychology* 47, (1956): 44-50.; John Jamieson Carswell Smart, "Sensations and Brain Processes," *The Philosophical Review* 68, (1959): 141-56.

a cookie" or "the belief that it is raining" is supposed to be one and identical with the specific brain process in the brain.[39] It can be more explicitly explained by commonly used example, "pain" and the "C-fiber activation". According to identity theory, "pain" and "C-fiber activation" are two different concepts, but they are totally same things as in the example of "water is H2O". However, there are objections to the identity of the mental states and the brain states as well. Identity theory implies that if there is not C-fiber activation, then there is not pain as well, but there may be some organisms which do not have C-fiber, but have pain experience. For example, some animals' nervous systems are different from human beings, and although they do not have C-fiber activation, they can have pain experience.[40] This objection, which is called "multiple realizability" argument by Putnam. Putnam claims that since some creatures like Martians may have the pain even if they do not have the corresponding brain state, identifying a mental state with a type of physical state is not plausible. The argument of multiple realizability of mental activities makes it necessary to distinguish between two versions of identity theories: Type identity theory and token identity theory. Type and token distinction tells the difference between general types and particular instances. For instance, planet is a type, but Mars or Venus are instances of this type. According to the type identity theory, each type of mental activity is identical to a type of brain activity. The identity theory mentioned above is the explanation of type identity theory in general. However, according to the token identity theory, a particular mental activity is identical with a particular brain activity. That is, for type identity theory, in all circumstances "pain" is a specific physical type, "C-fiber activity", however, for the token identity theory, while an organism's pain state is identical to the E-fiber, another organism's may be identical to a physical particle such as the G-fiber activity. For this reason, while the multiple realizability argument is a strong objection for type identity theory, it seems easier to deal with this objection for the token identity theory.

Functionalism: According to functionalism, we should think of mentality in functional terms. That is, we can explain what we call a mental state by what it does – what its functional role is – rather than what it is made of. Functionalism is an approach that is a descendant of behaviorism and identity theories, but developed in response to them by important philosophers, such as Hilary Putnam, David Armstrong, and David Lewis, in the 1960s.[41] Functionalist theories, contrary to behaviorism, accept the mentality as internal states, and contrary to identity theories, which explains mental states by reducing them to certain physical brain states, functionalist view claims that mental state like pain is not identified with a special physical process in the brain like C-fiber activation, rather it is identified with its function, its causal role in the cognitive system. However, there is a "qualia" obstacle for functionalism. Functionalist view ignores the qualitative characteristics of mental states while identifying them. Since functionalism identifies the mentality with the functional states, two systems which have the same functional state must have the same mental state. However, according to the one of the major objections to functionalism with respect to the qualia, which is called "Absent Qualia Argument" by Ned Block, although the system in which the qualia is completely missing can have exactly the same functional state with a organism with qualia. In his work, "Troubles with Functionalism", Block illustrates this claim with a robot named with a "homunculi-headed robot" whose outer appearance is the same with the human body but internally different.[42] For instance, if we call a particular qualia "Q" and a particular

[39] Feser, *The Philosophy of Mind: A Short Introduction*, 53.

[40] Kim, *Philosophy of Mind*, 112.

[41] Chalmers, *Philosophy of Mind: Classical and Contemporary Readings,* 5.

[42] Ned Block, "Troubles with Functionalism," *Minnesota Studies in the Philosophy of Science* 9, (1978): 275.

functional state "Sq", even if, "the homunculi headed system" is functionally equal to a conscious individual, i.e., both are in "Sq", a conscious individual can be in "Q" while "homunculi-headed system" cannot be in.[43] The other objection which is known as "inverted qualia" or "inverted spectrum" hypothesis claims that "two systems could have the same relevant functional states as a conscious system while having different qualitative states".[44] This claim is illustrated by Martine Nida-Rümelin with the "psedunormal people" who see green what we see red and see red what we see green. Even though pseudonormal people and the normal people use the same colour names and share the identical functional state, they are exactly in different qualitative states.[45] And if these objections are true, functionalism is not satisfactory in explaining qualitative mental states by reducing them to functional states.

Eliminative Materialism: It would not be wrong to say that eliminative materialism, which defends the falsity of "our ordinary or common-sense understanding of the mind",[46] is the most radical response to the hard problem of consciousness. Earlier suggestions of eliminative materialism had been made by Paul Feyerabend and Richard Rorty; however, more recent, prominent proponents of this position are Paul M. Churcland and Patricia S. Churchland. P. M. Churchland asserts that the concepts of consciousness constituted by "folk psychology (FP)" will ultimately be replaced with physicalistic concepts "constituted by a matured and successful neuroscience".[47] FP is a theory constructs the commonsense conceptual framework to explain the human (or animal) behaviour and understand the cognitive nature of people. It could be said that the one-sentence summary of eliminative materialism is that folk psychology is an inadequate and "a radically false theory".[48] P. M. Churchland thinks that none of the previous major positions doubts the falsity of FP. The identity theory optimistically argues that FP can be unproblematically reduced to the completed neuroscience. The dualist view, on the other hand, argues that FP cannot be reduced to neuroscience because it corresponds to the non-physical domain of natural phenomena. Functionalism also agrees with its irreducibility, but argues that FP can be explained by functional organizations. However, eliminative materialism, unlike them, argues that FP and "[i]ts principles are radically false", "and that its ontology is an illusion".[49] The irreparably wrong and unrealistic FP is eventually replaced with a better one. However, there are also some objections for the eliminativist position of materialism. For instance, some argue that the claim of eliminative materialism is self-refuting. That is, the eliminativist believe that mental concepts such as thought, desire, belief or the other concepts of FP do not correspond to the reality. However, if the eliminativist has a belief about the non-existence of "belief" as a mental state, then his claim must be contradictory and eliminativism must be false. As another common objection to eliminativist position is that it is very difficult and utopian to imagine a future in which mental concepts are not used at all.[50]

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[43] Block, "Troubles with Functionalism," 278.

[44] Chalmers, *Philosophy of Mind: Classical and Contemporary Readings*, 6.

[45] Martine Nida-Rümelin, "Pseudonormal Vision: An Actual Case of Qualia Inversion?," *Philosophical Studies* 82, (1996): 145-50.

[46] Gennaro, *Consciousness,* 45.

[47] Paul Montgomery Churchland, "Reduction, Qualia and the Direct Introspection of Brain States," *The Journal of Philosophy* 82, no. 1 (1985): 8.

[48] Paul Montgomery Churchland, "Eliminative Materialism and the Propositional Attitudes," *The Journal of Philosophy* 78, no. 2 (1981): 75.

[49] Churchland, "Eliminative Materialism and the Propositional Attitudes," 72.

[50] Gennaro, *Consciousness,* 46.

Conclusion

As I made clear at the beginning, the main purpose of this article is to present an explanatory and categorical analysis of the puzzle of consciousness. In line with this goal, I first tried to explain the meanings of the concept of consciousness in the literature by emphasising phenomenal consciousness, which is the leading role in the problem known as the hard problem in the literature of philosophy of mind. Then, I underlined the features of conscious states such as subjective and qualitative character as a ground for the hard problem of consciousness. And I touched briefly on the question of why consciousness resists to the scientific explanation. In a final step, I focused on the traditional solution-oriented approaches to the consciousness problem. I think it is possible to analyse the proposed solutions to consciousness-brain problem by dividing them into two broad categories: The first category represents approaches that do not ignore the subjective and qualitative character of consciousness and even attribute special importance to it, while the second category represents methods that ignore the subjective and qualitative character of consciousness. Unfortunately, the persistent failure of these extreme categories to try to solve the problem has turned into an endless cycle oscillating like pendulum between the two extremes. These two categories seem to be trying to understand consciousness as a whole by focusing on its different parts, just like a group of people trying to define an elephant as a whole by focusing only on its tail or only on its trunk. And it seems clear that unless this attitude is abandoned, the problem of subjective consciousness will continue to be referred to as the hard problem in the literature. My intuitive approach to this issue is that the solution lies in designing a holistic approach that promises to explain consciousness on a scientific basis without ignoring its subjective and qualitative side. As our knowledge of the physical world and its objects evolves and changes with new research, advances in science and technology, it is not inconceivable that in the near feature phenomenal consciousness can be explained as an object of the physical world. Therefore, even if it is accepted that there is only one kind of fundamental category of being, if it turns out that this category has a meaning beyond being physical in the sense that we currently know it, it will not be hard for us to explain consciousness on a physical basis with its subjective and qualitative character.

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