



BUNDLE THEORY: A REACTION AGAINST CARTESIAN DUALISM

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Abstract

One major problem in the Philosophy of mind concerns the nature of the human mind. Descartes argued that the mind is that, which exist in a way that it does not need any other thing for its existence. While it thrives in conscious acts like thinking and having ideas about something, the body is not conscious and is simply mechanical (dualism). However, Hume asserts that we cannot explain the unity of what we call the mind even though people may see ideas as subsisting into a substance. He argued that such a claim is an unknown something in which ideas inhere and are henceforth called a bundle of perceptions. The author aims in this article to examine Hume's concept of Bundle theory and his claim that nothing holds our ideas together hence cannot be a mind. Using the Philosophical and content analysis method, the author demonstrates that Humes argument against the Cartesian dualism cannot stand because something holds those bundles together and cannot operate on nothing. The author uses wave theory to argue that Descartes dualistic interactionism is defensible because it provides opportunity for an interaction between the mental and bodily substances in spite of their separations or differences.

Keywords: Bundle Theory, Descartes, Mind, Substance, Wave theory, Dualism, Science.

Introduction

Descartes defined substance as something which exists in a way that does not depend on anything else for its existence. But on a strict analysis, only religious God could fit into this description since only God does not need any other thing to depend on, for its existence. In an analogical sense, Descartes claimed that created things are also called substances. For him, we have two major categories of substances: mental substances and physical substances. The implication is that the mental (mind) and the physical realms are two completely different entities. Mind is differentiated from the body and it does not need the body to be because it has different attributes of consciousness. While the mind thrives in conscious acts like thinking about something, believing, and being willing to do something, the body is not conscious and is simply mechanical in its movement when acted upon. In an attempt to solidify his dualistic concept of the human mind, Descartes stated thus:

For if that were not exact when my body is injured by something, I, who am ordinarily a thinking thing, would not be able to feel pain, but I perceive this pain through the understanding, the same way sailors perceive by their sight when something is damaged in the vessel (Descartes, 147-148).



Based on the above, Hume has totally different conception of the mind as made manifest in his *Treatise to human knowledge*, where he wanted to show that we cannot account for the mind since all he is aware of, is the perception of love, hate and so on. In an effort to further destroy the foundation upon which the notion of the mind stands, he stated thus:

The idea of substance or a mode is united by our imagination with a name given to them to understand them. What makes the difference among these ideas is that even though people may see these ideas as subsisting into a substance but such a claim is an unknown something in which the ideas are seen to inhere (Hume, 1958: 2)

Hume gave example with an apple suggesting that these qualities are held together by the idea of an apple. Hume's stance implies that what we call the mind is ordinarily a bundle of or a collection of perceptions (Hume, 1993: 49). Why did Hume take this position? He did this because for him, we cannot explain the unity of what we call the mind and in so doing, Hume applied a scientific approach to the problem of mind but in so doing, he became skeptical on the problem and knowledge of the human mind. In an attempt to solidify his scientific view of the nature of the human mind, he further declares: Any time I enter into myself, I stumble into the perceptions of love, hatred, heat, cold, light, etc. But I cannot catch myself at all apart from perception of this or that and there is nothing like a mind because it does not exist. Having stated that what we call the mind is ordinarily conceived as bundles of hate, love and so on, Hume fails to explain what holds them together and in what do they inhere which is a problem for Hume's empiricist inclination.

In his book "*The Concept of Mind*", Gilbert Ryle stated categorically that his book offers a solution to the problem of mind. He opined that what he wants to offer is not a new information about the mind, but concepts already known by all (Ryle, 1963). In an attempt to deal with Humes attack against the reality of mind, Ryle opines:

A foreigner visiting Oxford or Cambridge newly may be shown several museums, playing fields, colleges, libraries, scientific departments, and administrative offices. He may ask, where is the university? After seeing members of the colleges separately, I am yet to see the university itself. In this situation, it is at this point that he should be told that the university is not another collateral institution or ulterior counterpart to the colleges, but how all that he has already seen is put together or organized. His mistake is that he saw these parts of the university as different from it (Beakley & Ludlov, 2006, 80).

The work sets out to discover flaws in Humes assertion that the human mind does not exist because what is obtainable is a bundle of perceptions. It intends to defend the Cartesian dualistic nature of the mind hence, he question is, what is it that unifies these bundles of love, hate and so on? Why do I remember the past? This implies that there is a substrate as opposed to humean assertion that the mind is just a bundle of perceptions. To achieve this task, we shall discuss: (i) the nature of the mind as conceived by different Philosophers (ii) examine Humes Bundle theory (iii) defend Cartesian dualistic interactionism using the wave theory. It is hoped that our findings in this paper will provide answers for solving the problem of the nature of the human mind as found in Descartes.



The concept of the Human Mind

Lucretius thinks that there is no way mind could be separated from the body. This could be traced from the fact that as an atomist, Lucretius sees mind as located in the body and that mind is a product of matter. He thinks that the soul is found in the body, and do not control the body as in Plato. In support of the Lockean conception, Lucretius explains:

Now, I say that mind and soul are held in union, one with the other, and they form for themselves, a single nature. But the head is, as it were, and lord in the whole body is reason, called understanding and it is strongly seated in the middle region of the breast (Lucretius, 1948: 110).

It is not a question of mind, controlling body or vice versa, but what obtains is that the soul and mind are of bodily nature. One of the reasons why Lucretius said this is that for him, the soul having the same nature with the mind is disseminated all over the body. In so doing, the inclination of the mind is spread throughout the body at the same time and produces bodily responses or effects. Based on this, Lucretius seems to disagree with Humes argument that the mind is not unified and ordinarily a bundle of perceptions.

The task before Rene Descartes was to achieve certainty in Philosophy. After doubting all things, Descartes redefined reality as “that which exists in a way that it does not need any other thing for its existence.” Rene Descartes, divided reality into three basic entities or substances – God, mind and body. For Descartes, all existents must fall within or become a modification of one of these substances. While body’s attribute is extension, the mind is a thinking substance and apart from admitting that these substances are not the same, Descartes conceived them as causing each other citing that when he is hurt, he feels pain. This dualistic position of Descartes became the genesis of the conflict among philosophers who think that mind interacts with the body(dualists) and others who are of the view that mind does not interact with the body (non- dualists). The implication of Descartes claim for modern science is that in the natural world, distance is not a barrier to things in space. In short, it seems to agree with the cotemporary view that science now sees all things as inter- related in spite of being separate. This is a serious problem to the Humean assertion that the mind does not exist because only bundles perception prevails.

Minds are capable of conscious acts like thinking, doubting, willing and so on. Bodies in Descartes are not conscious and are simply moved by mechanical forces which act on them. Minds are not extended and cannot take up space. Because mind is not extended, it is not made of parts and cannot be divided unlike Humes bundle of perceptions. Because mind is not extended, it is not made of arts and cannot be divided. Furthermore, bodies are constantly extended because it occupies space and can be divided into more elementary particles. The picture that emerges is that human beings are made up of two different kinds of reality that are somehow, linked together. In his attempt to solidify his claims of the distinction between mind and body, Descartes states:

It does not matter by what power this separation is made for my essence consists only in my being a thinking thing. Even though I certainly do have a body, with which I am closely



conjoined, it is certain that I am entirely and truly distinct from my body and may exist without it (Descartes, 1989: 147).

Since, human beings are made up of both mind and body, how does mind and body coexist and interact with one another? Descartes thought that the pineal gland was affected by “vital spirits” and that through this intermediary; the soul could alter the motions in human brain which could subsequently affect the body and vice versa (Lawhead, 2002). This implies that the so-called division of the mind into bundles in Hume is not a problem for Descartes. According to Spinoza, our idea of division and God are incompatible attributes since modes are not what make up substance itself. Spinoza does not regard the human mind as separate substance from God. Instead, mind is a mode of God and subsequently an idea of the body. In this way, Spinoza reminds Descartes that both thought and extension do not necessarily mean two different substances. Therefore, they are just two attributes of one substance, God. (Dual aspect) (Maritain, 2005).

Substance in Spinoza also has infinite attributes, consequently there is only one substance and that substance is God in whom all things reside because God is infinitely indivisible. Definitions in Spinoza shows that everything which exists must fall within the classification of either “substance” or a “mode” since they are the only options available for existence. The second definition implies that something must be understood either in terms of itself or something else of which it is a feature. The final definition means that of two things having nothing in common, definitely they cannot be said to be in relation of substance and its mode. With these definitions and axioms, Spinoza establishes the nature of substance as follows:

1. A substance must exist.
2. God exists.
3. It is not possible to have two or more substances.
4. Only God exists, and individual things are just modes of God which could be understood in terms of thought and extension (Njoku, 2010: 38).

These modes are also understood as attributes which means different ways of understanding mind and body even though they are one in Spinoza. Here, the first few propositions finally prove that substances are independent from one another, if at all, two or more exists. Therefore, if two substances having different attributes are conceived, they definitely have nothing in common since each substance is strictly understood through itself ordinarily as attributes. Substance in Spinoza also has infinite attributes, consequently there is only one substance and that substance is God in whom all things reside because God is infinitely indivisible. If things are indivisible in Spinoza, it further implies that Humes concept of bundle perception cannot stand because the perceptions are just modes of other things that are not completely separate according to Spinoza.

Locke thinks that any knowledge found in the human mind must have been deposited through ideas. Hence, the mind in Locke is like an empty container that holds our thoughts. The implication is that our ideas are both gotten from external objects and through introspection,



reflection, or inner states. The simple ideas in Locke are gotten from our sensations and they include ideas we conceive through the qualities of yellow, soft, bitter, cold, heat, white, sweet, and others that are dependent on other things. Locke is of the view that they must have arrived through reflection in our mental states in what is called introspection and that complex ideas are the functions of the human mind in unifying these simple ideas into a complex form.

In Delbruck, the mind's perception is the intrinsic qualities of objects that are abstracted from data that are raw even though they are not introspected. For him, our consciousness has no access to raw data but only gets processed inputs. Turning to the concept of quantum physics, Delbruck saw Heisenberg's uncertainty principle as "complementary" which is a conspiracy of nature and this hinders us from fully explaining or understanding the natural world. Hence, in his terms, we cannot observe reality in its fullness without disturbing our scientific arrangement which becomes part of the reality to be observed. This is why the difference between such an instrument and the material examined becomes a subjective choice of the observer. Using Cartesian dualism as an example, Delbruck condemned both realism and Descartes' separation of mind and matter which divided reality into the internal world of thinking, emotions, and physical reality. Delbruck does not agree with Descartes's concept of mind having divided the mental and the physical world and for him, such as an illusion because, for him, there is only one reality as depicted in quantum physics (Delbruck, 1986: 15). In artificial intelligence, Delbruck saw progress being made in computer programming where the computer can now decide sentences and memorize linguistic symbols. Notwithstanding, one of the problems facing artificial intelligence is the inability of computer processes to decode a straightforward logical analysis of syntactically connected words and symbols. But despite this, Delbruck saw strong improvement in Artificial intelligence. For Delbruck, the mind is not more than anything material machine having complex cyber circuitry. He thinks that the way we conceive the mind as a computer is just different from the way our heart is called a pump. Hence, the mind in Delbruck is not just a part of the machine but of its entirety through space and time, the same way quantum mechanics and its entirety cannot be dissected into position and momentum. In Delbruck (1986), the mind arose from organic solution, through natural selection.

Rorty's starting point was to provide criteria for the human mentality (Rorty, 1980: 17). The need for this criterion was made manifest in the fact that some people are not yet aware of what it takes for the human mind to be distinguished from the body. Consequently, the right thing to do is to use a more suitable word like dispositions to behave for easier understanding. Furthermore, we do not only have limited knowledge about "intuition" of what "mind" is but that it has something to do with non-spatiality. Therefore, the solution to the problem of the nature of the mind can ordinarily be a linguistic one (Rorty, 1980: 17). Rorty (1965) traced the problem of human mentality from the Greeks who failed to distinguish between the inner and outside world of a person, Descartes' division of mind and body, and Locke who had no alternative than to make use of the word "idea." Hence, those who object to the reality of mind and other idealistic concepts (reductionists) are conceptually mistaken, confused, and suffer from category mistakes.



Putnam's approach to the mind problem stemmed from his idea that the internal states of a Turing computer, viewed as the abstract machine, are comparable to mental states. The physical states of a hardware machine are therefore compared to the condition of the brain. That's what Hillary Putnam used to demonstrate that the mind-body puzzle is a purely 'verbal', linguistic, or logical puzzle, requiring additional consideration beyond the Turing machine example. Putnam thus disapproved of the notions that robots are thought to be thinking, that people are machines, and that machines may converse in human language (Gualtiero, 2004: 814). In his work, *The Mental Life of Some Machines*, which he presented at the Wayne State University symposium in the philosophy of mind and which was published in early 1962, Putnam (1967) proposed the idea of functionalism about minds. Ultimately, Putnam abandoned his definition of functionalism, which he defined as the functional organization of the human mind, and said that what is necessary is that the descriptions of a system's functional organization differ logically from either its actual or potential behaviour or from its physical-chemical composition. Later, in 1967, Putnam departed from computational functionalism and asserted that the functionalist concept is probabilistic (Gultiero, 1967: 810).

Putnam found that functionalism does not provide a precise description of the nature of mental states. He continued by demonstrating the error in functionalism's association of mental states with computational ones. To support his claim about mental state, Putnam says the following:

Mental states cannot ordinarily be "Programs", this is because physically possible systems may be in the same mental state while having, unlike programs. There is no scientific theory forthcoming that can apply a reductive method of propositional attitudes in the computational term (Putnam, 1988: xiv).

According to Putnam, programs and computational states cannot typically reveal the contents of attitudes. According to him, meaning and reference relate to both emotional experiences and spoken language, which are not comprehensible within the computationalist framework. His implication was that meaning and sameness of meaning are beyond our translation and interpretation, and that there can be no theory of meaning. Putnam (1992) declared:

The best way to handle people who speak other languages or those who even speak your language differently is to find an equivalent between such language so that due allowance for the difference in your belief and desires should result to the responses that are similar to what one would expect if he spoke his speech community and had said in his language.

Putnam believes that functionalism falls short of semantic requirements in this way. Materialists who believe that mental states are dependent upon facts learnt by material means make up the majority of functionalists. Moreover, because causality seems to be a material phenomenon, functionalists believe that a mental state's functional role is typically its causal role (Crowford, 2011). According to Searle, a common error individuals make when discussing consciousness is to try to portray it as an objective third-person entity while ignoring its fundamental subjectivity. According to Searle, misconceptions regarding the nature of consciousness can also be traced back



to the behavioural and computational theories of the mind. In his critique of computationalism, Searle (2002) believes that:

The question of whether consciousness is a computer program lacks a clear sense. Computation exists only relative to some agents or observers that impose a computational interpretation on a given phenomenon.

Some philosophers believe that having the appropriate computer program with input and output systems is both essential and sufficient for a system to be conscious of anything. This is why Searle views consciousness as the capacity to feel the experiences of animal subjects. A neurobiological process in the brain gives rise to consciousness and other states of mental experiences, which are manifested in the organization of the brain. Although brain functions contribute to the conscious mind, consciousness is a higher order or attribute of the brain. Four characteristics of mental events, according to Searle's mind-body philosophy, have caused them to seem to defy our scientific understanding of reality. Physical processes lack consciousness, although there are mental states of consciousness in the world. All facets of human existence, including language, are centered on awareness; without it, none of them could be conveyed (Searle, 2003). Intentionality, or the direction of one's mental states, is the second characteristic. Beliefs, wants, hopes, fear, and other emotions are all included. The subjective awareness of one's own state as being different or independent from that of other people is the third characteristic. The act of mental causation is the fourth. This suggests that our emotions and thoughts have an impact on a variety of things, including our actions. Despite being with us, these states for Searle are not provided to scientific witnesses.

At this point, Searle (2003) attempted to encapsulate his case by arguing that the mind functions similarly to the brain as a program does in computer hardware. According to him, no computer program can spark a mental system since they are completely insufficient to support minds and are not minded themselves. According to Seale's theory of freedom of the will, the most crucial factor is how we see ourselves as free agents. The inference is that regardless of how we interpret the physical world to be predetermined, we are unable to behave otherwise than to believe that we are free beings. According to Searle, the reason materialism and dualism, along with other isms, haven't been able to resolve issues pertaining to the mind and body is because they still cling to antiquated notions such as spirit, matter, body, and soul. It is intended for these categories to be mutually exclusive and that they cannot be combined. It is better to think of consciousness as a brain condition rather than as an extra material from the brain. According to Searle (2015), conventional mind-body issues will vanish once people understand this.

According to Thomas Nagel, consciousness is what renders issues with the mind and body unsolvable. According to him, the case put forth by reductionists has produced a number of studies of mental states that offer a practical materialist and psychophysical identification or reduction of the mind. "What is it like to be a bat" is his book. According to Nagel (1974), philosophers attempt to explain the incomprehensible as if it were clearly known, despite the fact that this is not the case. This is a typical human flaw. Nagel declared that his only argument is that certain people are



unable to understand awareness. He believed that materialism cannot be justified by any explanation of mental processes that does not fully address their subjective nature.

He said that bats, for instance, sense their surroundings by looking for reflections of items that are inside their field of vision. Their entire brain structure is based on their extroversion and the information they take in, which helps them perceive things precisely. Nonetheless, Nagel noted that the notion of what it is like to be a bat has an issue because bat sonar, a type of experience, differs from human perception. According to Nagel, we have to examine whether the method we use will allow us to extract or explore the inner life. However, Nagel's view of human experience merely yields or supplies our imagination of something that is limited in this case. It is implied that one is limited to what one's intellect can create. Although bats have a basic pattern of experience, humans and other animals do not share this pattern. It is nevertheless unlikely that any experience one gets from a different mental state and the assumptions involved could take the place of or function as a substitute for the subjective state of a bat in this situation. Nagel believed that the greatest source of experiencing consciousness should come directly from bats, particularly if we could only imagine what they were like. Bats may not be able to comprehend the mental structure of humans due to the structure of their own minds. They will also be incorrect in their attempts to draw exact conclusions about human minds since they lack any concept of what it is to be human. This is the case because bats may be unable to succeed due to the structure of their thoughts. Nagel's understanding of the relationship between conceptual representation and facts is thus brought to light. Since they share a comparable subjective condition, but are not identical to bats, one can discern the caliber of other people's experiences.

The general challenge of psychophysical reduction is what we have here. The true nature of physical bodies must be distinct from their perceptual appearance and may not resemble themselves, according to Nagel, since the same bodies that cause perceptions in us also have different effects on other physical things and can exist without causing perceptions at all. It is necessary to get an understanding of that actual nature that is apart from how it seems to us or to other observers. This implies that we should assess things structurally based on their fundamental traits rather than just our opinion or broad perception.

Nagel believes that the philosophy of mind is full of wildly impossible viewpoints because of the way that things are evaluated from people's perspectives. Nagel claimed that one of the most crucial aspects of creativity is our capacity to separate ourselves, particularly from our hunger. Similar to physical events, an objective understanding of mental phenomena cannot be predicated on abstraction from the particular form of our external awareness of them, according to Nagel (1979). In the sense that each of us is the subject of unique experiences and that understanding others requires delving into experiences outside of our own, it also seems to be issues of other minds. Thirty. The inference is that the objectivity of the mind has boundaries and that it is impossible to imagine our own and other people's thoughts from the outside without slipping into unstable perspectives and viewpoints. For Nagel, the world exists regardless of how it seems to us. These are our objectivity's measuring sticks.



Nagel (2012) posited that awareness is an essential component of the world in his book *Mind and Cosmos*. He believes that the material nature of the universe validates his point of view. According to Nagel, evolution is an atheist theory and anything with sentience cannot be described by matter alone. Nagel is not concerned that humans depend on their material nature; rather, he is concerned that the broad facts of evolution fail to account for awareness and reason. Nagel says that evolution requires a stronger explanation at this point. Nagel chose to examine the evidence in a way that does not aim to uphold the traditional theistic notion of a created universe or to refute an attack on religion through reductionist accounting. For these and other philosophical as well as technical reasons, Nagel denied any accidental and material Darwinian evolution of consciousness. It will never be the same to compare the mind to a computer composed of a massive stack of transistor-like homonculi. This is because it leaves out knowledge of the subjects and premises of reasoning that are fundamental to reason.

An examination of Nagel's writings reveals that the primary goal of his book *Mind Cosmos* is to establish the validity of natural laws and address the challenge of providing an explanation for issues relating to the mind and body. Even while other philosophers did not agree with Nagel's natural approach explanatory method, some believed that Nagel's failure stemmed from his endeavour to bring these disparate worlds together into a cohesive, holistic whole. He stated unequivocally that the evolutionary theory's exploits, which align with the beliefs of artificial intelligence, had an impact on him. In yet another shift in perspective, Nagel disassociated himself from the theistic understanding of reality as well as the artificial intelligence approach's hypothesis.

It follows that people who criticize him for believing in supernaturalism are mistaken because he once said that the scientific sciences cannot adequately explain divine agency because they are not based in fact. This is the idea of God as a magician. Nagel was therefore perceived as serving two masters; yet, Longino and Chang chose to maintain a wide range of dramatic possibilities in favour of Nagel's method because the things we want to understand are invariably vast or gigantic.

Bundle Theory: A Reaction Against Cartesian dualism

Hume distinguished between two types of human senses in his *Treatise on Human Knowledge: impressions and concepts*. According to him, the strength and vitality with which perceptions and ideas impact the mind or our consciousness distinguishes them from one another (Hume, 1968) Ideas are hazy representations of our thoughts, reasoning, etc., whereas strong impressions are referred to as sensations, passions, or emotions that arise on the soul (instead of mind). Even when they take the shape of feelings or perceptions, simple ideas remain simple ideas and are not distinguished from complicated concepts, which are divided into components such as colour, smell, tastes, etc. Hume provided an example of an apple to illustrate how they hold themselves together, implying that the concept of an apple serves to hold these characteristics together. He goes on to say:

The idea of substance or a mode is united by our imagination with a name given to them to understand them. What makes the difference among these ideas is that even though



people may see these ideas as subsisting into a substance but such a claim is an unknown something in which the ideas are seen to inhere.

According to Hume's position, the mind is typically only a bundle or collection of perceptions. Why did Hume adopt this stance? Hume used a scientific approach to the problem of mind because, in his opinion, it is impossible to explain the unity of what is known as the mind. However, this led him to lose faith in the problem and our current understanding of the human mind. He goes on to say, trying to bolster his scientific theory of the nature of the human mind: "Whenever I go inside myself, I fall into the perceptions of love, hatred, heat, cold, light, etc." However, I am unable to recognize myself outside of my view of this or that.

Although Hume claims that the mind is typically thought of as a collection of hate, love, and other emotions, his argument falls short of explaining what keeps these emotions together, which is problematic for Hume's empiricist leanings (Copleston, 1997). The self gets divided up into different "perceptions." If the self is composed, as Hume claims, of a sequence or bundle of perceptions, then there is nothing about which it can be fairly claimed that the self has a predisposition to construct a meaningful connection between the perceptions. Hume does recognize the challenge. He frankly admits his confusion and that he has no idea how to make his beliefs more coherent or accurate. However, it is clear from this admission that his phenomenistic analysis of the self will not stand. Furthermore, this finding calls into question the widely held belief that distinct, atomic sensations are the ultimate building blocks of the human experience. Is there no subject that goes through these psychological experiences? This is a question that arises when one claims that the human mind is nothing more than a collection of perceptions (Omoregbe, 2011).

Defensibility of the Cartesian Notion of Mind

Cartesian Dualistic claim is gaining ground hence, in his *Theory of Mind, A Case for Interactionism*, Agbakoba (2001) argued that the Cartesian dualistic interactionism, in contrast to Hume's view, takes place between the self-conscious mind and the brain outside of the modules and that Descartes dualistic interactionism is tenable. He states that the self-conscious mind searches for signals within the liaison brain's modules, interprets those signals, and communicates with them. Based on this, he affirms that, despite using the first law of thermodynamics to criticize Descartes's dualistic interactionism, Cartesian dualism is still tenable because reality is an open system where interconnectivity prevails. This is obtainable because the first law of thermodynamics that conceived reality as a closed system no longer holds. But the second law of thermodynamics suggests that even at a distance, the ontologically distinct mind and body interacts: a benefit of Cartesian dualism. In support of the above claims, contemporarily, it has been discovered that sufficient condition is the only thing needed for any causation from a distance. For example, the causation of fire only needs the presence of heat, oxygen, and combustible materials to occur. Since mind and body exist within the same quantum entanglement as in above, the burden and problem of dualism: how material and immaterial entities cause each other seem to be no more.



Hodgson in his *Mind Matters: Consciousness and the Choice in a Quantum World*, sees separation at the quantum level as irrelevant because entities at different locations are immediately correlated or connected (Hodgson, 1991). The implication for this is that objects observed are ordinarily three-dimensional images formed by waves under the influence of electromagnetic or other nuclear approaches. Furthermore, the conception of matter has shifted from Newtonian to Einsteinian space-time matter which is seen as field singularity instead of separate entities (Theodosiou, 2010). In this kind of reality, interaction between mind and the body becomes easy since reality is now conceived as a singularity. If reality is equally conceived as a singularity, what do we do with cartesian dualism?

For Cartesian dualistic interactionism, having two different substances does not pose a serious problem for the relationship between mind and body. This is because modern science sees mind and body as interacting through fundamental forces (Alison, 2019). Furthermore, the quantum theory of physics states that particles do not possess definite positions when measured instead; they are controlled by wave functions which only give a probability of the possibility of finding the position of a particle (*Quantum Mechanical Description*, 2019). The implication is that the separate conception of mind and body in Descartes does not in any way; stop the interaction between mind and body. Hence, waves spread in and out and particles become indistinguishable, inseparable, and are inter-connected. Other implication lies in the fact that there is no complete cut out (separation) between particles, there is no need for a bridge between mind and body, consequently, mind and body are united by the function of waves and are not interactively exclusive.

What is the Nature of the Human Mind?

According to Roy, we still don't fully comprehend the neurological processes that give rise to consciousness. To emphasize the issue of consciousness even more, he goes on to say:

We do not understand the nature of the physical and chemical interactions which produce mental experience. We do not know how big a neuronal system must be before it can sustain the critical reactions, nor whether the critical reactions depend exclusively upon the properties of neurons or only require a particular organization of energy and matter (Velmans, 2012).

Velmans, however, believes that only a small percentage of brain activity—such as the outcomes of perceptual processing—seems to be eligible for consciousness at the level of activation. Neurons fire synchronously but remain unconscious because normal brain functions that are successful have to compete with one another for consciousness in the form of attentional processes. The question now is how does brain activity turn into consciousness? The solution, according to philosophers, lies in the integration of working store theory and primary memory into what Baars dubbed the "global workspace" architecture of the brain. The human brain is made up of hundreds of distinct unconscious, specialized processors that may detect stimuli and function alone or in concert with one another to achieve consciousness. These processors have the ability to accept global messages and send them via the global workshop, which is comparable to a social theatre of awareness. Prior theories reduced consciousness to "information," however information



workspace is said to correlate with conscious contents by Baars and McGovern. As a result, consciousness takes center stage in the global workspace, or economy of thought. Putting new and complicated tasks in order requires this (Velmans, 2012). This is just one of the numerous arguments against Hume's bundle theory, which also rejected the existence of human organized consciousness as a substrate. This essay explicitly calls for a return to the Cartesian understanding of the mind as a substance in humans. In support of the above claims, Ryle opines that A foreigner visiting Oxford or Cambridge newly may be shown several museums, playing fields, colleges, libraries, scientific departments, and administrative offices. He may ask, where is the university? After seeing members of the colleges separately, I am yet to see the university itself. In this situation, it is at this point that he should be told that the university is not another collateral institution or ulterior counterpart to the colleges, but how all that he has already seen is put together or organized. His mistake is that he saw these parts of the university as different from it (Beakley & Ludlov, 2006, 89).

Summary

Hume contended that the mind is usually nothing more than a group of perceptions grouped together under a single title, in opposition to Cartesian substance. He maintained that the oneness of what is known as the mind defies explanation. He claims that because he always gets lost in his own thoughts and experiences love, hate, heat, cold, light, and so on, only bundles are real. On the opposite, the human brain is made up of hundreds of different unconscious, specialised processors. These processors can recognize stimuli and combine or operate independently to induce consciousness. Similar to a social theatre of awareness, these processors can receive global messages and transmit them via the global workshop. Previous theories confined consciousness to "information," but Baars and McGovern claim that information workspace correlates with subjective contents.

The Cartesian Dualism can be justified by using the second law of thermodynamics. This is because the first law of thermodynamics, which originally conceived of reality as a closed system, no longer holds true; instead, reality is now thought of as an open system in which interconnectivity is dominant. This suggests that even at a distance, the ontologically distinct mind and body interact with one another.

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