

DESCARTES' INTERACTIONISM AND THE CHALLENGES OF ARTIFICIAL INTELLIGENCE

BY

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Abstract

The mind-body problem is basically the problem of providing adequate explanation for the basic constituents and composition of the human person. This attempt generated a lot of controversies on the nature of the human mind and its possible relationship with the body in the history of Western philosophy. The mind-body problem became a major concern for metaphysicians and philosophers of mind in the 17th century. The problem was brought into focus by Rene Descartes who was concerned with providing explanation to the question of the fundamental nature of the human mind and how it is related to the body. In this case, Descartes developed a dualistic thesis called interactionism. He argues that though mind and body are separate entities, they causally interact. However, the possibility of providing a convincing explanation for this causal interaction between two different substances remains a very difficult task for Descartes and his contemporaries hitherto. As a result of this inadequacy, various theories that were put forward alternatively to Cartesian interactionism were succinctly considered in this respect. However, to further problematize the discourse, the paper relates the problem to contemporary cybernetics or artificial intelligence as a recent development of materialism in order to see how it attempts to undermine the Cartesian interactionist theory. However, the intractability of the problem remains intact as scholars attempt to compare human intelligence and artificial intelligence. This subsequently creates a conflict of superiority between men and machines. The research therefore argues that in spite of the difficulty of providing satisfactory explanation for the possibility of causal relationship between mind and body, Descartes interactionist theory appears more plausible and holistic in that it does not only fits nicely the commonsense notion but also pays sufficient attention to the relationship between the immaterial and material aspects of man in relation to his moral status.

Introduction

In the month of July 2020, I encountered some persons in a public place discussing many issues that concern human existence and one of those issues that drew my attention to join the discussion was the question of the nature of the human mind. In this case a question was directed to one of the people as to when he intends to marry and his response was that “it does not come from my mind to marry any time soon”. This response generated serious argument among them and led to several questions as follows: Does the mind exist? What is the nature of the mind and where is it located in the human body? What is the relationship between the mind and body? These and other questions culminated the mind-body problem in philosophy. The above concerns therefore motivated this research. It is important to mention that these apparently simple philosophical questions attracted a

plethora of responses and answers from philosophers and scholars alike down the ages and across cultures. Thus, the attempt at providing answer to the preceding questions divides scholars into different camps, namely, monistic idealism, monistic materialism and the dualist camp (the camp to which Descartes belong).

Although, there were multifarious assertions and contributions to the hot-boiling discussion of the mind-body problem in the medieval and modern period, it was Descartes who brought the problem to a conscientious focus. Towards this bent, Rene Descartes of the modern period of philosophy raised a legitimate question as regards the problem of determining how body and mind are related.¹ In this case, with the influences of Pythagoras, Plato, Augustine and Aquinas who held similar views prior to him, Descartes developed a dualistic thesis called interactionism.

Descartes, as a foundationalist, sought to lay a new foundation for philosophy using the dual method of intuition and deduction. His foundationalism began with the radical quest of Descartes to attain the apodictic certainty upon which other beliefs can be based. The quest involved the denial of the certainty of all beliefs except such a denial become explicitly senseless. The intention of Descartes is to accept as evident such beliefs that cannot be questioned and to establish them as the foundation of other beliefs. The conclusion of this quest is apprehension of self-evident position which is related to the process itself. The fact that one is involved in a process of doubt, for him, cannot be logically doubted. The certainty of the doubting is, therefore, self-evident.² However, from the indubitability of the subsistence of the mind, Descartes was able, to in a manner akin to the mathematical method deduce the existence of the physical world which he proclaimed interact with the mental world of the mind. Hence the formation of his interactionist dualism.

Origin of the Problem

Almost everybody allude to the mind when it comes to decision making. For instance, when Mr Y is asked to attend a party, he may reply that “it does not come from my mind to attend such a party” our minds, so it is said, seem to be the major determinant of all our actions. But when we talk of the mind certain metaphysical and epistemological questions are raised. These include: where is the mind? How do I know the mind? What is the relationship between the mind and the body? It would be difficult for most people, if not all, to locate or show where the mind is in the body. Yet many people believe that the mind exists.³ It is in view of this that Descartes developed his interactionist theory in addressing the above concerns. The problem identified in this study therefore, is Descartes' inability to account sufficiently for the possibility of causal interaction between the immaterial (mind) and the material (body) aspect of man. The question then is: How can a non-physical substance that is out of space and time affects causally a material substance that occupies space? Is mental causation realistic? At what point does the interaction take place?

Anaxagoras (500- 497 or 533 BC), an ancient Greek philosopher was the first to postulate the mind in order to account for the ultimate constituent of reality. He referred to it as “Nous”. He took a deviant departure from the positions of the earlier Ionian materialist philosophers who tried to explain the ultimate constituent in terms of matter such as water, air and so forth.⁴ Anaxagoras must have been forced to this conclusion on the basis of the fact that material things perish and they change from one state to the other⁵.

According to Anaxagoras, the mind (nous) is infinite and self-powered. Mind is the supreme principle, the greatest power, that is mixed with nothing but it exists alone by itself. Mind is the purest of all entities, with a unique authenticity. It rules over all entities that have life, both greater and less, as the superb creative power, which controls the function and the activity of everything and puts all things in order, setting them in a continuous motion. This position upholds the mind as the ultimate cause and the primary stuff of which every other thing is made. This is not in agreement with Descartes' position as he did not view the mind as the supreme principle and the ultimate cause of everything. The bifurcation of the human person into two disparate realities reflected prior to Descartes in the philosophy of Pythagoras and Plato. Before Descartes, Pythagoras conceived the soul to have a long lasting existence more than the body. The soul to Pythagoras can be immortalised and can be purified through mathematical number and made to exist in another body, in another existence or life. In this Orphism which is the religion of purification, the soul is believed purified in order to avoid been existing in an animal body after the death of its first body. It is believed by this liturgy that if the soul has greater records of evil act before the death of its first body, it must by necessity exist again in the body of either spider or ant⁶.

Plato (427-347) is perhaps the first great systematic philosopher in the western world. His view on man is principally elucidated in his theory of knowledge, which is anchored on his thought of reminiscence or the process of recollection. For Plato, the essential core of the person is his or her psyche. This is usually translated as "soul".⁷ Following the Pythagoreans, Plato maintains that the human soul pre-existed in the world of ideas before it came into this world to be imprisoned in the body (for the body is like a prison to the soul). Knowledge is therefore the process of recollecting or remembering what man once knew during this imprisonment. Plato thus maintains a dualistic conception of man and could be regarded as one of the patriarchs of dualism. He holds that man is a composition of two disparate substances, namely, the soul and the body. However, the body is seen as the less notable part of this union which imprisons the soul like an Oyster. The soul is considered as being entirely superior to the body⁸. In this regard, man is portrayed as "a soul using the body for the exercise of its terrestrial activities."⁹

The Methodic Scepticism and the Problem of Certainty

The primary conviction which Descartes has is that his intuitive and deductive methodology grounded in mathematics would lead him to a very successful end. Primarily, Descartes sees that the doubts that suffuse the whole learning process are as a result of lack of a foundation that is good enough¹⁰. It is on this basis that Descartes decided to demolish the philosophical edifice in order to reconstruct it. This demolition consisted in sweeping away, by doubt, everything he ever knew which could be put to doubt. His principle was: whatever can be doubted should be doubted and rejected. This doubt which Descartes decided to undertake is geared towards a goal. He separates himself significantly from the sceptics who doubt for the sake of it and yield no result. He is clear in defending his position with the sceptics as follows:

Not that I imitated the sceptics who doubted only that they may doubt and seek nothing beyond uncertainty itself: on contrary, my designs were singly to find grounds or assurance and cast aside the loose earth and sand that I might reach the rock

or the clay.¹¹

By the end of the first meditation, Descartes finds himself in a morass of wholesale doubt which he dramatises by introducing an imaginary demon of the utmost power and cunning who is systematically deceiving him in every possible way. Everything I believe in the sky, the earth and all external things might be illusions that the demon has devised to trick me. Yet this very extremity of doubt when pushed as far as it will go, yield the first indubitable truth in the Cartesian quest for knowledge- the existence of the subject. Let the demon deceive me as much as it may, it can never bring about that I am nothing, so long as I think I am something. I am, I exist, is certain, as often as, it is put forward by me or conceived in my mind¹². Hence, the aphorism: 'Cogito ergo sum' (I am thinking therefore exist). Descartes thus writes:

I do not now admit anything which is not necessarily true: to speak accurately I am not more than a thing which thinks that is to say a mind or a soul or an understanding, or a reason which are terms whose significance was formally unknown to me. I am however a real thing and really exist, but what thing? I have answered a thing which thinks.¹³

Before setting out the method, Descartes remarked seriously on the need for a foundation: a solid foundation. It is based on this solid foundation that certainty will emerge. Therefore, he decided to make this indubitable truth (Cogito ergo sum-I think, therefore I am) the foundation of philosophy and of all knowledge. From this basic and indubitable truth which is absolutely certain, other truth would be deduced with the dual method of intuition and deduction¹⁴. By intuition, Descartes means intuitive perception of things by the light of reason. It is clear and distinct perception which is free from error. The mind can then, make deductions from this truth, bringing out by inference other truths that follows necessarily from it. From the indubitability of the subsistence of the mind, Descartes was able, to in a manner akin to the mathematical sciences, to deduce the existence of the physical world which he proclaimed interact with the mental world of the mind.

As a rationalist, Descartes relied so much on reason as if reason itself were infallible. What is the guarantee that my reason is not deceiving me? How do I know that what I perceive clearly and distinctly must be true? To answer these questions, Descartes resorts to proving the existence of God that is not disposed towards deceiving him. According to him, a finite being like him could not possibly have an infinite idea of God's existence if, in reality, God does not exist.¹⁵ Thus, the affirmation of God's existence. Descartes went further to remark on the non-deceitful nature of God. In this case, he reverts to his idea of God as an infinitely perfect being, who has no defect of imperfection and non-existence in His essence.

On Descartes' Notion of Dualist Ontology of Person

The "*Cogito ergo sum*" only led Descartes to the conclusion that he was existing as a thinking being whose nature is essentially to think and since thinking does not necessarily required having a body Descartes was not sure whether or not he had a body. All he was sure of was that he existed as a thinking being.

He however, later perceived clearly and distinctly that he was performing certain activities which required a body, defined as “an extended substance”. He therefore concluded that he had a body, though not as part of his nature or essence as a thinking being (mind). Thus, the body, according to Descartes is not an essential part of man nature. Man is essentially a thinking being, i.e essentially a mind.¹⁶ In a similar way, according to Joseph Omoregbe:

Descartes perceived clearly and distinctly that he was receiving impressions from outside him. These impressions impress themselves on his sense organs, and he inferred that they must be coming from other extended substances outside him. He then concluded that there must be other material bodies, extended substances outside. The material world therefore exists¹⁷.

It is clearly stated in our earlier discussion that Descartes affirmed God's existence which he referred to as an infinitely perfect being, in proving the reliability of his reason against deception. It follows necessary by the existence of the material body and the material world. The whole drift of Descartes thought is in the direction of dualism, the notion that there are two different kinds of substances in nature. We know a substance by its attributes, namely thought and extension, there must be two different substances, the spiritual and the corporeal, mind and body. Because Descartes defines a substance as “an existence thing which requires nothing but itself to exist”, he considers each substance as thoroughly independent of the other. To know something about the mind, therefore, we need make no reference to the body, and similarly, the body can be thoroughly understood without any reference to the mind¹⁸. Descartes maintain that mental and material substances are distinct by the virtue of their properties such as extension, thinking and indivisibility. In corroboration, Sober points out, plausibly, that there seems to be no reason to accept that mind is indivisible or lacks extension unless one believes that the conclusion (dualism) is true¹⁹.

On Descartes' Notion of Interactionism

As we stated earlier, the inescapable conclusion that Descartes comes to is that he possesses mind, his thinking being, as distinct from his body, the extended substance. This depicts that there are two aspects of man, existing independently of the other: Spiritual substance (mind) which has thinking as its essential attribute and material substance (body) with extension as it's essential attribute. It is on the basis of the independent existence of the mind and body that Descartes established and sowed the seed of dualism.

The thrust of the matter now lies the Cartesian mind-body quandary. Having established the existence of these independent and distinct substances, Descartes focus now is the question as to whether there is any possibility of interaction between them (mind and body). He admits that mental and material substances, although utterly distinct, causally interact. Your body respond to your plans and decisions. Your mind received signals from your body in the form of sensory experiences that provide you with

information about the state of your body and indirectly the state of the world outside your body. The world casually impinges on your mind by way of your senses: your eyes, ears, nose, and your sense of touch²⁰. In defence of the interaction between mind and body, Descartes asserted: when for instance, I am hurt, I feel pain. As a result, the mind reacts to what happens to the body. The fact that what happens to the body also affects the mind and vice-versa shows that there must be a close affinity and interaction between the two²¹. It seems that Cartesian dualism fits nicely with common sense notion. In Descartes letter to reigns in January 1642, he asserts:

That there is an interaction between the mind and the body. For him, not only does the body influenced the mind, the mind too influences and moves the body to action: but the mind is superior to the body in this interaction²².

At this juncture, Descartes is now faced with the difficulty of explaining how this causal interaction takes place, which he could not provide satisfactory explanation that is immune to criticism. If minds and bodies are distinct kinds of substances, it is hard to see how such causal interaction could occur. You will recall that minds are immaterial substances possessing the attribute of extension. Material bodies, on the other hand, are extended but lack thought. The questions, then, are: How could entities of such utterly different kinds affect one another casually? How could an event in an immaterial mind alter a material object? How could a physical event cause a change in an immaterial mind? According to Heil, the metaphysical distance Descartes places between minds and bodies seems to preclude their casually interacting²³.

Descartes answer to the above question is that the interaction takes place at the pineal gland which is located in the inner-most part of the brain. It is here, according to him, that the mind comes into contact with the body through the animal spirit²⁴. Descartes had not solved this problem; he had only pushed it a step forward for further inquiry. If one may ask, are the animal spirits spiritual or physical? Or is the pineal gland a spiritual or material substance? Descartes, in defending his interactionist position held that:

The machine of the body is so formed from the simple fact that this gland is diversely moved by the soul, or by such other cause, whatever it is, it thrust the spirits which surround it towards the poves of the brain, which conduct them by the nerves in to the muscles by which means it causes them to move the limbs²⁵.

Descartes interactionism has raised problems which have almost led to the rejection of his theory. As we pointed out earlier, is the pineal gland physical or non-physical thing? If it is the former, then exactly how does a non-physical mind 'act' on it, and vice versa? This is not a point, though till date, this problem assails the staunchest protagonist of the view of Descartes. Until Descartes or else his protagonist is able to show us "how a non-spatial (unextended) substance, which cannot thereby be in motion, can cause the motion of extended substance or how motions in our bodies can cause changes in consciousness"²⁶ his view may not be acceptable. Thus several theories that were put forward alternatively

to Descartes' dualism will be examined.

Descartes' Dualism and Other Theories of Mind

When it was pointed out to Descartes that his solution to this mind-body problem was quite unsatisfactory, he became vague about the matter, insisting that the fact of interaction is known to everybody; that we experience in all time but how mind and body are united, he admitted its most difficult to explain.²⁷ For this reason, many dualists rejected Descartes' interactionist theory and put forward various theories alternatively. Hence, Descartes followers Guelinex and Malebranche rejected his solution to the problem. They agreed with him that the mind and the body are two separate and different substances, but they denied any interaction between them. The mind, according to them, cannot get on the body or cause the body to act nor the body act on the mind; they have no direct causal link with each other. When for example I decide in my mind to stand, this decision (a mental act) is followed by my body moving. It is not my mind that has moved the body, according to them, rather it is God who has moved my body on the occasion of my mind wishing my body to stand or move. The real cause of my movement is God who is the only cause of all events in the world. This theory is known as occasionalism.²⁸ This view may not be acceptable by the existentialist who failed to reckon with anything transcendental. There were concerned with human existence and discouraged the idea of pushing responsibilities to God.

Similar to occasionalism, Leibniz also denied any interaction between the mind and the body and postulate the pre-establishment harmony theory. Leibniz presume that both mental and physical event constitute unites of monad. Each monad has its own life and does not influence any other entity. However there is kind of pre-establishment harmony among the mental and physical events. Accordingly there are body and mind monads. When God influences one of them there is a corresponding influence on the other.²⁹

A proponent of Parallelism accepts Descartes bifurcation of the world into extended material substance and unextended substance. Parallelists deny, however that mental and material substance interact casually. This appears to fly in the face of ordinary experience. It surly seems that what is going on in your mind affect your body, and through it affect the material world beyond your body. It seems no less clear that events and objects in the world have an impact on your mind by the way of their effects on your body.³⁰ Mind, Parallelists contend appears to interact with the material world, but the appearance sequence of events involving minds, material events and sequence of material events run in parallel.³¹ for instance when you decide to swing your hand subsequently swinging. It feels to you as though your decision caused your swinging, but it did not. This theory holds that event in the mind has no casual connections with material event.

A somewhat physicalist theory with a dualist connotation is epiphenomenalism. The epiphenomenalists maintain that it is only the physical event that casually affects the mental event. This means that mental events are always the effect of the physical changes. This situation can be linked to the fire and smoke. The fire is seen as the physical body while the smoke is the mind or mental event produced as a result of the physical changes.³² Epiphenomenalism can be traced back to Hobbes, who held that all that exist is matter and the changes occasioned by the motion of matter: Mental event and processes were, for

him, mere appearances.

The problem associated with the theory is the one sided interaction that physical events cause mental events, but, it seems to me however that there are some circumstances where mental events probably cause physical event for instance, if I decide in my mind to stand it follows subsequently by my body moving. This implies that my mind probably causes my body to act. Hence, this theory seems implausible and may not be accepted as an alternative to the Descartes' interactionism.

Materialism is perhaps as old as dualism since it is conceived as the traditional rival of dualism. Materialists are of the view that the mind like the body is material, most commonly the brain. They locate the mind within the natural physical world and see it to be subject to all the laws that govern that world. A modern adherent of this view is Thomas Hobbes, who believes that everything in this world could be explained in terms of matter in motion. In other words, everything in this world, including the mind exists as matter. This materialistic conception of mind "is what has given rise to a mindless world. In other words, human beings are mindless creatures that are not different from other object in the universe."³³ However, the question of whether machine could be made to think like man has generated a lot of controversy among scholars.

It is important to state here that the materialist's denial of the 'immaterial mind' has serious implication for the doctrines of reincarnation, immortality of the soul and the notion of 'afterlife' in Igala metaphysics even though these concepts fail to pass the test of verification as the empiricist may claim. However these doctrines are regarded as part and parcel of the region-metaphysical belief of the Igala which must not necessarily satisfy any scientific or logical analysis. It is therefore appropriate to say that Descartes' dualism unlike materialism seems to endorse some of the metaphysical beliefs and practices among the Igala people.

The challenges of Artificial Intelligence

The mind-body problem has been addressed from a perspective different from the Descartes' notion of interactionism and other dualistic conception of the ontology of the human person in the contemporary times. As we have discussed in the previous page, this contemporary view denies the immaterial mind and proclaimed the mind as an activity of the brain process. In other words, man is simply matter and nothing is spiritual about him. When we talk of the mind, it is nothing but the brain that can be subjected to empirical verification. This view is represented by the materialists or the neuroscientists. This materialistic conception of the mind advocated for a mindless world and has given rise to the development of artificial intelligence (cybernetics).

Artificial intelligence has been in crude form since the industrial man developed simple machine. But the concept came into full blossoming in the 20th century with the development of sophisticated machines such as computers, robots, etce tera. Artificial intelligence involves the use of machines from the simplest to the most complex ones, in executing the jobs which man performs through physical and mental efforts. The skills of the machines, which have been made possible by astute researchers, are both intellectually impressive and practically useful.³⁴

The attempt to equate machine with man was triggered off by the second half of the nineteenth century with the development of a computer called perception.³⁵ The breakthrough in information storing, processing and retrieving information brought

about these crises.³⁶ According to Herbert Simon:

It is not my aim to surprise or shock you...but the simplest way I can summarise it is to say that there are now in the world machines that think, that learn and that emulate. Moreover, their ability to do these things is going to increase rapidly in a range of problem feasible future, the range of problem they can handle to which humans has been applied.³⁷

George maintains a radically materialistic position. He argues further that there is no aspect of human behaviour that cannot be mirrored by artefacts (machines). He believes that our trouble emanates from the beliefs that machines are constructed and that we forget also that we (human organisms) are also constructed. Just as the machines do what has been programmed into them, so also human beings do the same. Some psychologists attempt to corroborate this fact by arguing that human beings operate on the same basis as in inductive logical machines.³⁸ George sums up as follows:

We can quite obviously construct a machine that plays the human role when we are capable of describing that role. The fact that machines are not, so far, constructed by the same protoplasmic means as humans are constructed, should not be any hindrance to the mimicking of the thinking operations.³⁹

However, some scholars have argued against the above claims and see it as an absurdity of equating man with machine. Could machines be made to think like man? To what extent can computer think and learn? Hence according to Sluckin, machine never felt pain nor suffered, thought nor dreamed, but never fail to give sign. They can plough, harvest and imitate, but not feel pleasure or self-pity.⁴⁰

Similarly, according to Balogun, it must be noted that intelligent machine cannot learn, think or reflect on their own, they cannot criticize or know anything outside the purpose of which they have been designed or programmed.⁴¹ This implies that they cannot know anything beyond the human knowledge stored in them. However, the question then is: can we actually ascertain that human beings were not equally designed or programmed to act in such a way that they do in whatever situations or circumstances? Hence, the problem of mind-body remains intractable.

Evaluation and Conclusion

Descartes arrived at the mind-body dualism through what he termed 'methodic doubt' or 'systematic doubt of old beliefs'. After subjecting all his previous beliefs to doubt, he therefore realised in the process that he was thinking and could no longer doubt the fact that he was thinking, hence the aphorism: "Cogito ergo sum"—I think therefore I exist. After the affirmation of the existence of the thinking being (mind) whose nature is essentially to think, he thereafter, perceived clearly and distinctly that he was performing certain activities which required a body (an extended substances). He therefore concluded that he had a body, though not as part of his nature or essence as a thinking being. Thus, he sowed the seed of dualism with the establishment of the mind existing independently of the body. However, his attempt at resolving the riddle of interaction between them was unsuccessful. Similarly, also, more of the theories that have been put

forward alternatively as considered in our discussion to Descartes "account" has been able to solve the problem not even scientific studies have been able to resolve the issue hitherto.

The fact remains that if the reductionist position of the scientists or materialists is accepted, it depicts that only the physical, materials or corporeal things such as the brain, body etc exist. As the scientists would hold, if the brain dies, the entire thought system stops working; thus, personhood resides with the brain. This position has serious implication for the doctrines of reincarnation, immortality of the soul and the notion of 'afterlife' as prevalent beliefs and practices in Africa and some part of the world. It is therefore appropriate to say that Cartesian dualism unlike materialism seems to endorse some of these beliefs and practices in Africa.

It is equally important to note that the problem with occasionalism championed by Nicholas Malebranche and pre-established harmony of Leibniz, stem from the need to postulate a "transcendental intervention". Their positions seem incredible outside their theistic frameworks. Again, the problem associated with parallelism is the one sided interaction that physical events cause mental event, but, it seems to me however that there are some circumstances where mental events probably cause physical event for instance, if I decide in my mind or stand it follows subsequently by my body moving. This implies that my mind probably causes my body to act. Hence, this theory seems implausible and may not be accepted as an alternative to Cartesian interactionism. It will suffice therefore to state that that in spite of the difficulty of providing satisfactory explanation for the possibility of causal relationship between mind and body, Descartes interactionist theory appears more plausible and holistic in that it does not only fits nicely the common sense notion but also pays sufficient attention to the relationship between the immaterial and material aspects of man in relation to his moral status.

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