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# THE ASYMMETRY BETWEEN RES COGITANS (THINKING THING) AND RES EXTENSA (EXTENDED THING)

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Descartes, Arnauld, thinking thing, extended thing, doubt, clear and distinct perception, indivisibility, immortality

**Anahtar kelimeler:**
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## Abstract

At the beginning of modern philosophy in the seventeenth century, Descartes established his own metaphysical system strongly on the basis of the existence of God. In his project, God is an all-knowing, omnipotent, benevolent, non-deceiving and perfect being. However, besides this foundation the philosopher wished to supply an explanation which fundamentally depended on mechanical and mathematical principles. For, all natural phenomenon in the physical world were to be apprehended by appealing to the attributes of matter (length, breadth, depth), which were claimed to be 'quantity' and the subject-matter of pure mathematics. On the other hand, mental phenomena, Descartes claimed, have a special and different status. For the real component of a human being is the mind, that is, the conscious, thinking self and each person has a simple, transparent and immediate awareness of his own nature. Hence, according to Descartes, mental phenomena do not have any room in the quantifiable world of physics. In the sixth Meditation Descartes arrives at the real asymmetry between 'thinking thing' and 'extended thing' by using at least three different arguments. In this article, after a brief chronological survey of the passages where Descartes develops the hypothesis of the real contradistinction between 'thinking thing' and 'extended thing', or the thesis that man is a being composed of two substances with diverse natures, I shall try to expose some problematic aspects of the theory.

## Özet

### Res Cogitans (Düşünen Şey) ve Res Extensa (Uzamlı Şey) Arasındaki Asimetri

17. yüzyıl modern felsefenin başlangıcında, Descartes kendi metafiziksel sistemini esas itibariyle Tanrı'nın varoluşu temeli üzerine dayandırmıştır. Onun projesinde, Tanrı mükemmel, asla aldatmayan, cömert, her şeye gücü yeten ve her şeyi bilen bir varlıktır. Fakat filozof bu temel yanında esas itibariyle matematiksel ve mekanik prensiplere bağlı bir açıklama da temin etmek istemiştir. Çünkü ona göre, fiziksel dünyadaki bütün doğal olaylar ancak saf matematiğin konusu olan ve 'nicelik' olarak nitelendirilen derinlik, genişlik ve uzunluk gibi maddenin özniteliklerine başvurarak anlaşılabilirdi. Diğer taraftan

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Descartes, zihinsel olayların farklı ve özel bir statüye sahip olduğunu iddia etmiştir. İnsanın asıl bileşenini oluşturan şey akıl yani bilinçli, düşünen bendir ve her insan düşünen ben olarak kendi doğasının basit, açık ve doğrudan bilincine sahiptir. Bu nedenle onun sisteminde zihinsel olayların, ölçülebilir fiziksel dünya içerisinde hiçbir yeri yoktur. Altıncı meditasyonda, Descartes üç farklı akıl yürütme kullanarak 'düşünen şey' ve 'uzamlı şey' arasındaki gerçek asimetriye ortaya koyar. Bu makalede, Descartes'in 'düşünen şey' ve 'uzamlı şey' arasındaki asimetri hipotezini, ya da insan farklı yapılara sahip iki ayrı tözün birleşiminden oluşan bir varlıktır tezini geliştirdiği metinleri kronolojik olarak kısa bir incelemesini yaptıktan sonra, teorinin bazı problematik yönlerini açığa çıkarmaya çalışacağım.

## 1. THE ARGUMENT FROM DOUBT

Having applied his standard 'Method of Doubt' in his *Meditations*, Descartes found himself capable of doubting the existence of material objects or the physical world and the existence of his body, however he was not capable of doubting the existence of himself as a thinking substance, a thinking self that is immune from any reasonable doubt. In the *Discourse on Method* he points out that;

> Next I examine attentively what I was. I saw that while I could pretend that I had no body and that there was no world and no place for me to be in, I could not for all that pretend that I did not exist. I saw on the contrary that from the mere fact that I thought of doubting the truth of other things, it followed quite evidently and certainly that I existed; whereas if I had merely cease thinking, even if everything else I had ever imagined had been true, I should have had no reason to believe that I existed. From this I knew that I was a substance whose whole essence or nature is simply to think, and which does not require any place, depend on any material thing, in order to exist. Accordingly this 'I' - that is, the soul by which I am what I am - is entirely distinct from the body, and indeed is easier to know than the body, and would not fail to be whatever it is, even if the body did not exist.[1]

1 Descartes: (AT VI 32: CSM I 127). 'CSM' designates John Cottingham, Robert Stoothoof, and Dugald Murdoch (eds. and trans.), *The Philosophical Writings of Descartes* (2 vols., Cambridge: Cambridge University Pres, 1985). Throughout this article, references to Descartes' writings are made in parenthesis in the main body of the text, giving short work or section, followed by part and article number where appropriate (e.g., *Principles of Philosophy* or *The Passions of the Soul*), followed by volume (in Roman numerals) and page number (Arabic) of the Standard Franco-Latin and English editions of Descartes – AT and CSM or CSMK respectively. Passages are generally quoted verbatim from the translations in CSM and CSMK. 'CSMK' designates volume three of the *The Philosophical Writings of Descartes*, by the same editors-translators and Anthony Kenny (Cambridge: Cambridge University Pres, 1991).

From all these considerations, the philosopher concluded that having a body was not part of his essential nature, so he arrived at the non-materiality of the mind or soul.[2] Antoine Arnauld, who was a theologian and one of the authors of the objections, claimed that Descartes' argument was not valid. He re-words the argument as following;

> I can doubt whether I have a body, and even whether there are any bodies at all in the world. Yet for all that I may not doubt that I am or exist, so long as I am doubting or thinking. Therefore I who am doubting and thinking am not a body. For, in that case in having doubts about my body I should be having doubts about myself.[3]

According to Arnauld, one might be capable of ' doubting 'whether he has a body or not - he could be fancying or dreaming that he still exists without a body. However, from this fact he cannot genuinely imply that having a body is not an essential part of him. It would be better to say that his ability to doubt that some object X (e.g. mind) possesses Y (e.g. body) does not really prove that, X could in fact exist without Y or Y is not an essential part of X. At this point, let us consider a parallel piece of reasoning concerning a right-angled triangle. One might be capable of doubting that a right-angled triangle has the 'Pythagorean property' - that is 'has the property of having the square on its hypotenuse equal to the sum of the square on its other two sides. 'However, it does not follow that this property is not essential to the triangle. According to geometry, it is evident that this property is a necessary part of a triangle's essence. Similarly Descartes' argument leaves open the possibility that despite one's capability to imagine oneself without a body, the body is really an essential part of him.[4] Descartes replied Arnauld' objection as follows:

> My answer to this objection is that in that passage it was not my intention to make those exclusions in an order corresponding to the actual truth of the matter (which I was not dealing with at that stage) but merely in an order corresponding to my own perception. So the sense of this passage was that I was aware of nothing at all that I knew belonged to my essence, except that I was a thinking thing.[5]

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2 Gilbert Ryle's first book which appeared in 1949, is an attack on the 'Cartesian Dualist' conception of man, characteristically labelled 'the dogma of the ghost in the machine'. See G. Ryle, *The Concept of Mind*, p. 17.

3 Descartes: (AT VII 198: CSM II 139).

4 J: Cottingham, *Descartes*, pp. 112-13.

5 Descartes: (AT VII 8: CSM II 7).

It appears that in the relevant part of the of the *Discourse*[6], Descartes was trying to establish a conception of himself which excludes all corporeal things and body. In addition, in the Second Meditation, the philosopher appears only to be reflecting his subjective perceptions concerning his nature or essence. But Descartes himself is well aware of the fact that this is not objectively the case. By using the method of doubt, one can arrive at a conception of himself that excludes all body.[7] But this conception may not correspond to the way things really are? Thus, it has yet to be demonstrated whether this idea of excluding all bodies is a true representation of reality. In the Second meditation Descartes had claimed that 'I am in *the strict sense only a thing that thinks*'[8]. According to some commentators, this statement seems to imply a total exclusion of body from one's own essence.

The meditator's ability to doubt that he has a body, while being unable to doubt that he exists, displays the fact that 'he is a substance whose whole essence or nature is to think, and which does not require any place or material thing in order to exist, and ... would not fail to be what it is, even if the body did not exist'[9] This argument is not convincing, because one's ability to imagine himself without a body may be the result of ignorance of his nature. If one possessed more knowledge about his own true nature, he might come to realise that the hypothesis of continued existence without the body was unintelligible. To be sure, in the Cartesian project the process of systematic doubt leads to the well-known dictum 'I am thinking, therefore I exist' (*Cogito Ergo Sum*). Here, the meditator performing this process comes to acknowledge that 'thinking' (thought alone) cannot conceivably be separated from him in any special scenario, no matter how 'hyperbolical', that he can invent. However, the application of that programme does not prove the fact that one's own essence consists *only* in thought alone. In his critique of the Meditations,[10] Pierre Gassendi had considered the term 'only' as having a restrictive force. The term 'only' excludes other properties that might be

6 Descartes: (AT VI 33: CSM I 127).

7 Unlike the Cartesian project, the Aristotelian approach insists that the soul *qua* form must be embodied in matter in order to produce a living, functioning human being. In short, for the Aristotelian, talk of 'soul' does not imply any separate spirit. Cf. Aristotle *De Anima* Bk. II. However, Aristotle maintained that pure intellect or *nous* was 'separable' from the body. Cf. De Anima III 5.

8 Descartes: (AT VII27:CSM II 18).

9 Descartes: AT IV 33: CSM I 127).

10 Before publishing the *Meditations*, Descartes circulate his manuscript asking readers for their objections. He also gave a copy of the manuscript to Friar Marin Mersenne (1588-1648) – Descartes' main correspondent – requesting him to further circulate them. In a letter of 28 January, 1641, he writes to Mersenne: 'I will be very glad if people put to me many objections, the strongest they can find, for I hope that in consequence the truth will stand out all the better from them. Descartes: (AT III 297: CSMK 172).

attributed to one's own true nature.[11] Descartes tries to get rid of the implication of this thesis. But his efforts for this are not fully convincing. In this regard he states that 'When I said that the soul knows itself as an immaterial self, I did not at all mean an entire negation or exclusion ... for I said that in spite of this we are not sure that there is nothing material in the soul'[12] From the fact that he could doubt that he had a body, but not that he was thinking thing or substance, it does not really follow that the soul is immaterial. Descartes could not establish a clear and strong evidence of the corporeality of the soul.

Perhaps Descartes wised to support the 'immateriality' of the soul in the traditional Christian belief. He claimed that the soul or mind was a substance, which was meant by Descartes to be a thing that exists without depending on the existence of any other thing. From the definition of substance, he believed that he had found a proof of the immateriality of the mind. When he was claiming that 'I am a substance whose whole essence is to think, ... which does not depend on any material thing, in order to exists'[13], he might mean that all mental functions, i.e. doubting, understanding, affirming, denying, willing, unwilling, imagining, will survive even in the absence of any physical body. In other words, all intellectual perceptions are carried with the immortal mind or soul after the body dies. So, his view seems to support the idea of hereafter where one's soul will be able to have many enjoyments and rejoin other souls. But it remains to be proved how can they enjoy themselves and communicate with each others after body is dissolved.

In addition to this idea, Descartes believed that his idea of the soul as a thinking substance constituted a proof of the indestructibility of the soul which also supported the idea of immortality in the Christian belief. He says in the Synopsis of the following Six Meditations:

> These arguments are enough to show that the decay of the body does not imply the destruction of the mind, and are hence enough to give mortals the hope of an after-life....But the human body is simply made up of a certain configuration of limbs and other accidents of this sort; whereas the human mind is not made up of any accidents in this way, but is a pure substance...And it follows from this that while the body can very easily perish, the mind is immortal by its very nature.[14]

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11 Descartes: see notes at CSM II 18, 276, 268.

12 Descartes: (AT IX 215: CSM II 276).

13 Descartes: (AT IV 33: CSM I 127).

14 Descartes: (AT VII 14: CSM II 10).

Some interested groups might believe that Descartes' hypothesis is true. However, Descartes himself acknowledge the fact that the argument in the *Discourse* was not adequate. Thus he provides another proof known as the 'Argument from Clear and Distinct Perception', in the *Meditations* so as to support the idea of real distinction between two substances, or the thesis of immateriality. Now, it is time to turn our attention to this argument.

## 2. THE ARGUMENT FROM CLEAR AND DISTINCT PERCEPTION

To be sure, in the Sixth Meditation Descartes undertakes to prove the thesis that the mind or soul is immaterial and 'really distinct' from the body. Where the philosopher states the proof as follows:

> I know that everything which I clearly and distinctly understand is capable of being created by God so as to correspond exactly with my understanding of it. Hence the fact that I can clearly and distinctly understand one thing apart from another is enough to make me certain that the two things are distinct since they are capable of being separated, at least by God. Thus, simply by knowing that I exist, and seeing at the same time that absolutely nothing else belongs to my nature or essence except that I am a thinking thing, I can infer correctly that my essence consists solely in the fact that I am a thinking thing ... I have a clear and distinct idea of myself, in so far as I am simply a thinking, non-extended thing; and on the other hand I have a distinct idea of body, in so far as this is simply an extended, non-thinking thing. And accordingly it is certain that I am really distinct from my body and can exist without it.[15]

One is instantaneously inclined to investigate the validity of this argument. Is it true that the fact that 'I can clearly and distinctly understand one thing apart from another is enough to make me certain that two things are distinct'? How does Descartes' premise that I can clearly and distinctly understand my mind as a 'thinking thing' apart from body imply that they are genuinely independent things or two different and separate substances ?

It is clear that in Descartes' argument the existence of God takes an important place for the separation of the mind and body.[16] The truthfulness of his clear and distinct ideas is guaranteed by the perfect being, God, who created him and gave all his powers including his reasoning power, in order to originate

15 Descartes: (AT VII 78: CSM II 54).

16 To understand the role of God in Descartes' philosophy see Meditation III and V in CSM II.

clear and distinct ideas. So he points out that 'Everything which I clearly and distinctly perceive is of necessarily true'[17] because of non-deceiving God. He further writes;

> Thus I see plainly that the certainty and truth of all knowledge depends uniquely on my knowledge of the true God, to such an extent that I was incapable of perfect knowledge about anything else until I know him. Now it is possible for me to achieve full and certain knowledge of.... matters, God himself, other things whose nature intellectual.[18]

According to Descartes one can be clearly and distinctly aware of himself as a pure thinking thing or a 'complete substance' by which he means that a substance can exist without needing any other properties of body.[19] In other words, as a thinking substance one does not require the possession of a body in order to exist. He could still continue to exist without having a body, since he has a clear and distinct perception of his mind. However it is important to understand here that Descartes does not actually deny that we have a body. He only claims that the body is not an essential part of our existence as a thinking self conscious being. It would be better to say that it is an accidental property rather than essential one.

For Descartes, it is logically possible that one might exist as a purely immaterial or incorporeal substance. If we take his argument into consideration in terms of logical possibility, then his mind and body dualism seems to be true. For if one could imagine or conceive that the mind and body could exist separately then, essentially they must be different substances. If the soul can exist as a 'complete' substance on its own, without depending on the existence of body, then it seems to follow that body cannot be an essential part of the soul. The philosopher believed that he is capable of forming a clear and distinct idea of himself as a thinking thing, since he has the assurance of God. The mind and body could be separated by God; therefore they could continue to exist separately. He says that; 'If we suppose that God has joined some corporeal substance to such a thinking substance so closely .... no matter ... things which God has the power to separate or keep in being separately are really distinct'[20]

Despite the argument seems to be different from the earlier argument from doubt, Antoine Arnauld argues that it can be easily harmed by a very similar

17 Descartes: (AT VII 70: CSM II 48).

18 Descartes: (AT VII 71: CSM II 48).

19 See, J. Cottingham, *Descartes*, p. 114.

20 Descartes: (AT VIII 29: CSM I 213).

objection. Of course, the logician Antoine Arnauld, who was an acute critic of the Cartesian philosophy, did not agree with Descartes' assertion. For it is logically possible for a person who is following Descartes' reasoning 'from clear end distinct perception' to imagine that the 'Pythagorean property', i.e. 'the property of having the square on its hypotenuse equal to the squares on the other two sides' does not have any relationship with a right-angled triangle. Surely, he would not be right. Even though he could conceive or imagine that the right-angled triangle could exist without having the Pythagorean property, geometry truly proves that this property is a necessary part of the triangles essence. This point was well expressed by Arnauld in the Fourth Objections:

> Although the man ... clearly and distinctly knows that the triangle is right-angled, he is wrong in thinking that the aforesaid relationship between the squares on the sides does not belong to the nature of the triangle. Similarly, although I clearly and distinctly know my nature to be something that thinks may I, too, not perhaps be wrong in thinking that nothing else belongs to my nature apart from the fact that I am a thinking thing? Perhaps the fact that I am an extended thing may also belong to my nature[21]

If Arnauld's objection is valid then, Descartes' argument for body and mind dualism turns out to be false. However, Descartes rejects his objection in his reply: 'So neither the triangle nor the property can be understood as a complete thing in the way in which mind and body can be so understood; nor can either item be called a 'thing' in the sense in which I said 'it is enough that I can understand one thing (that is a complete thing) apart from another.'[22]

By 'a complete thing' or 'a thing' Descartes means 'a substance' which is described to be something that can exist on its own or without depending on the existence of some other things. The mind or soul is a pure substance and perceived by means of "thinking' alone. It does not require the body in order to exist. But, how does Descartes come to know that he could still continue to exist without having a body? How can he get to know that his mental function or his thinking process would continue even in the absence of a physical body? Without having a brain which is the most fundamental condition for our mental processes, could Descartes still claim that 'I am thinking, therefore I exist'? Thomas Hobbes, who was a belligerent opponent of Descartes in the seventeenth century, writes:

> It seems to follow from this that a thinking thing is something corporeal. For it seems that the subject of any act can be understood only in terms of something corporeal or in terms of matter, as the author

21 Descartes: (AT VII 203: CSM II 142).

22 Descartes: (AT VII 224: CSM II 158).

> himself shows later on his example of the wax, despite the changes in its colour, hardness, shape, and other acts is still understood to be the same thing, that is the same matter that is the subject of all these changes.[23]

Indeed, why should not 'mind' or 'thought process' be dependent upon a physical system, like brain which is just a combination of a very large number of atoms?[24] At the present time mental processes are identified by many twentieth-century thinkers with purely physical process in the central nervous system. The mind (i.e. intellectual activity) which consists of thoughts, feelings, sensations, perceptions, emotions, and dispositions, could be explained in terms of purely physical conceptions, rules and laws, just as physical events. It could be said that mental events are combination of atoms in motion in the brain.

'Thoughts' or 'ideas' may be produced by the certain physical matter of facts or phenomenon which occurs in the brain or in our higher nervous system. In the light of scientific researches, it is claimed that certain light waves, for instance, produce a sensation of red by stimulating the optic nerve system that brings into being an electrical pattern in the brain.[25] Of course, such physicalist accounts of consciousness are also subject to objection, since it denies any distinction between our mental life and physical developments in the brain, and furthermore carries serious implications for ethics. But, on the other hand, once immateriality thesis is accepted, Descartes too faces with a real difficulty in giving account of mental processes. For the Cartesian argument from clear and distinct perception certainly rules out the possibility that that which is thinking is in fact a physical or biological system of some kind.[26]

The second difficulty in Descartes' reasoning is his description of the mind. He believes that 'thinking 'or' thought' consists of what one is directly aware of when he doubts, understands, affirms, denies, imagines and meditates. Therefore, it is assumed that thinking is a special kind of intellectual process of which all individual human beings have an immediately and transparently clear understanding. In other words, one has an immediate and indubitable access to his thoughts or mind. However, how could Descartes be sure that 'thinking' is a clear process of which every individual has transparently and directly clear understanding? For, indeed today many people following scientific research accept that the mind or

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23 Descartes: (AT VII 173: CSM II 122).

24 According to Gassendi, it is not possible to produce a mental operation without the brain. For his materialistic comments on this matter in the Fifth Objections see Descartes: (AT VIII 269: CSM II 122).

25 See Paul M. Churchland, *Matter and Consciousness*, Cambridge: The MIT Pres, 1988, pp. 13-17.

26 J. Cottingham, *Descartes*, pp. 113-15.

thought is extremely complicated and more difficult to know and to understand than, for example, to know and apprehend any other physical objects or body.

## 3. THE INDIVISIBILITY ARGUMENT

In the *Meditations* Descartes' third argument, namely 'indivisibility' for the immateriality of the soul comes from the 'definition of mind and matter' and supports the view that the soul is really distinct from body and could survive without it. According to Descartes, mind and body are not only separate things, but also they can be defined in different terms. From a careful scrutiny of physical objects in the external world, he concludes that everything material is necessarily extended and therefore divisible, but, on the contrary the mind or consciousness is totally indivisible. He writes at the and of the Sixth Meditation;

> There is a great difference between the mind and the body inasmuch as the body is by its very nature always divisible while the mind is utterly indivisible. For when I consider the mind or myself in so far as I am merely a thinking thing, I am unable to distinguish any parts within myself; I understand myself to be something quite single and complete. Although the whole mind seems to be united to the whole body, I recognise that if a foot or an arm or any other part of the body is cut off nothing has thereby been taken away from the mind.[27]

Unlike Plato, who believed in three parts or the soul, namely, the rational, the spirited and the appetitive parts, Descartes maintains that the different faculties of the soul do not mean that there are actually three different parts in the soul. On the contrary, there is only one mind which performs all mental activities such as understanding, willing, imagining, having sensation and so on. All mental activities occur in an unique consciousness, therefore 'I' ( mind ) is not divisible.

In spite of the fact that the idea of the indivisibility, homogeneity and purity of mind seem to be intuitively acceptable, recent scientific research shows a scheme which demonstrates that a brain which contains a mind, having the power to reason, speech, understanding, remembering, volition e.g. wanting, intending, etc. and having sensation, imagination, is eventually produced by successive additions of neutrons at the cephalic end of the neuralis with a shifting forward of function. Each part of the brain is a sub-system, is interrelated with one another. For example, the limbic system which elevates the mood which interrelated with the pyramidal and extra pyramidal system and vice versa.[28]

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27 Descartes: (AT VII 86: CSM II 59).

28 Modern scientific research demonstrates a scheme according to which each part of the brain is a sub-system, all interconnection with each other and whose functions give rise to different mental activities. See R.J.A. Berry, *Brain and Mind: or the nervous system of man*, pp. 4-5.

The hypothesis of the Cartesian thesis that the mind is a unity and indivisible thing, does not appear to prove that the essence of the mind is completely independent from body. It might be possible that the consciousness or mind might be simple and fundamentally one, however, in order to perform a higher and complex mental activity it must be dependent on a corporeal system, e.g. brain. It would be better to say that the mind could be an indissoluble or inseparable attribute of the brain which is totally an extended and measurable and divisible thing.

The concluding part of the 'indivisibility argument' seems to be unsatisfactory. Where Descartes argues that 'although the whole mind seems to be united with the whole body, I recognise that if a foot or an arm or any other part of the body is cut off nothing has thereby been taken away from the mind.'29 According to Descartes, it clearly seems that even if the whole body or any part of the physical body is annihilated, there is still one thing, 'thought' or the 'thinking-self' which is immune from any reasonable destruction, and that could still exist; therefore, 'thought' cannot be property of body.

In this case Descartes seems to suppose that if the mind and body had come into existence as one and the same thing, then they necessarily would share each other's properties or characteristics. Let us suppose the mind (M) has the properties of thinking (T), imagining, (I), and understanding (U), but not the characteristics of length (L), breadth (B) and depth (D). But, on the other hand there is a body (B) which has the features of L, B, D, but lucks the attributes of T, I, U. From this consideration, Descartes concludes that if they do not share each other's characteristics then, they must be different, i.e. the mind is not a body or vice versa. The defining characteristics of mental substance is 'thinking' and the defining characteristic of corporeal substance is 'extension'. Here Descartes' reasoning seem to be intuitively plausible, it really represents nothing more than his 'expectation'. He cannot prove that they do not share each other's properties, but only use different vocabularies for mental and physical phenomenons. It would be better to say that the philosopher cannot show the fact that the removal of one of the physical properties would leave all his mental properties unimpaired. Hence it does not logically or empirically follow that there are two different separate substances which do not share each other properties.

According to psychology and physiology there might be possible situations in which a person could lose his arms, legs, teeth, eyes and so on without having lost any of his mental attributes. But it is claimed that the cerebral cortex is the most important part and 'the outer layer of the brain, associated with higher mental functions and sensory perception, and especially developed in man'. If one's cerebral cortex is removed or destroyed, could Descartes still claim that 'nothing is thereby taken away from the mind' and one still continue to think and to exist.

29 Descartes: (AT VII 86: CSM II 59).

It is clear that any damage or change in the brain, or in parts of it, especially in the cerebral cortex or in the cerebral hemisphere in which different mental activities occur, diminishes mental functioning. Even Descartes himself accepted the importance of the brain.[30] In the *Passion of the Soul* he points out that;

> Although the soul is joined to the whole body, nevertheless there is a certain part of the body where it exercises its functions more particular than in all the others.... It is rather the innermost part of the brain, which is a certain very small gland situated in the middle of the brain's substance and suspended above the passage through the spirits in the brain's anterior cavities communicate with those in its posterior cavities[31]

He further adds;

> We can easily understand that these images or other impressions are unified in this gland by means of the spirit which fills the cavities of the brain[32]

As Descartes himself recognised that the brain is the most fundamental source of our physiological activities, such as imagination, sensation, or sense-perception, which are considered as 'certain special modes of thinking.'[33] These special brain activities occur in the 'pineal gland', a structure near the top of the brain. Without having a brain it would be impossible for human being having sensation and imagination. Furthermore, he points out that;

> When external objects act on my senses, they print on them an idea, or rather a figure of themselves. And when the mind attends to these images imprinted on the gland in this way it is said to have sense perception. When, on the other hand, the images on the gland are imprinted not by external objects but by the mind itself, which fashions and shapes them in the brain in the absence of external objects, then we have imagination. The difference between sense-perception and imagination is really just this, that in sense-perception the images are imprinted on the brain by external objects which are actually present, while in the case of imagination the images are imprinted by the mind without any external objects.[34]

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30 For Descartes' view of the role of brain events in sensation and imagination, see J. Cottingham, 'Cartesian Trialism', *Mind*, 1985.

31 Descartes: (AT XI 352: CSM I 340).

32 Descartes: ibid.

33 Descartes: (AT VII 78: CSM II 54).

34 J. G. Cottingham (ed.), *Descartes' Conversation with Burman:* (AT V 162 / 3 ; CB 27).

According to psychology and neurology it is so evident that many emotion-controlling chemicals such as alcohol, cocaine, narcotic, amphetamine, lithium, chlorpromazine perform their work when they enter into the brain, and impair, disable or even destroy one's capacity for rational thought. Indeed the weakness and degeneration of consciousness by the result of these chemicals shows that our thinking processes or mental activities are very closely dependent upon neural activities which takes place in the central nervous system or brain.

But, even though Descartes accepts the function of the brain in our psychological activities, he still insists that 'individual consciousness', 'pure thought' or 'abstract perception of intellect' does not depend on any physical organ, or particular conditions. Even if the whole body is completely destroyed, the mind i.e. pure intellectual activity will continue to exist, because of its nature. The bodily destruction does not affect the existence of mind or soul is a result of the belief the immateriality of the mind, that supports the immortality of the soul. Actually before Descartes, the idea of the immortality of the soul is well demonstrated in the Plato's view. In the *Phaedo* Socrates makes a distinction between soul and body as follows: 'Soul is most similar to what is divine, immortal, intelligible, uniform, indissoluble, unvarying and constant in relation to itself' and 'Body ... is most similar to what is human, mortal, uniform, non-intelligible, dissoluble, and never constant in relation to itself' (Ibid., 29). Socrates draws a conclusion 'When death attacks a man, his mortal part, it seems, dies; whereas the immortal part gets out of the way of death, departs and goes away intact and undestroyed (Ibid., 61).[35]

Thus, it is clear that the doctrine of the immortality of the soul is based on an *a priori* ground rather than *a posterior* ones. It is not necessary that one's body should exist, since it contains completely contingent or accidental attributes, and temporally connected with the soul. On the other hand, it is necessary that one's soul should exist even before birth.

A similar idea has been put forward by Descartes in the Synopsis to the Meditations:

> But the human body ..., is simply made up of a certain configuration of limbs and other accident of this sort; whereas the human mind is not made up of any accidents in this way, but is pure substance. For even if all the accidents of the mind change, ... , it does not on that account became a different mind, whereas a human body loses it identity merely as a result of a change in the shape of some of its parts. And it follows from this that while the body can very easily perish, the mind is immortal by its very nature.[36]

35 Plato, *The Phaedo* (trans.), D. Gallup (Oxford, 1975).

36 Descartes: (AT VII 14: CSM II 10).

It appears that all the empirical evidence (i.e. physical damage or distraction of the brain causes mental impairment or mental extinction ) does not seem to affect Descartes' view that the soul is immaterial, immortal and therefore it is quite different from the body, since like Plato, his thesis depends on an a priori foundation. The soul is a part from the body and always continue to think (before birth, during and after life).[37]

None the less surviving after death does not constitute and adequate reason for believing that the soul is immaterial. One needs independent evidence which really proves that the soul is immaterial and survives after the death of body. Without giving a good reason for the claim that the soul is independent from the body, Descartes' belief does express nothing more than his personal fantasy.

## 4. CONCLUSION

As can be seen in the *Meditations* and his other works, the fundamental metaphysical foundations of Descartes' dualist system is not only dependent on the existence of an all-powerful, all-knowing, and non-deceiving God, but also on the mathematical principles and mechanical modes of modern science. Although all physical phenomena were to be explained in terms of the quantifiable world of physics, mental phenomena were to be considered in a completely different category. Thus Descartes claims that there are only two fundamental kinds of substance: physical or extended substance and thinking, unextended, non-corporeal substance. The human body, including the brain and the whole nervous system, is considered to be an extended substance (*res extensa*) i.e. that which has the characteristics of length breadth, and depth, so that it can be measured and divided into parts. However the mind with its different kinds of intellectual activities is claimed to be a thinking substance (*res cogitans*), which is unextended and indivisible. But, if, as many thinkers now believe, mental properties arise from the activity of a brain or nervous system then, there would seem no reason why such properties should not be subsume under physical characteristics.

By using some traditional sceptical arguments in his Meditations, Descartes concluded that all his 'former beliefs', especially his beliefs in the existence of the material world and the existence of his body are subject to 'metaphysical doubt'. However, he found, his belief in the existence of himself as a thinking thing was not shaken by the most powerful sceptical arguments. Therefore one fundamental reason that Descartes had for believing his mind to be essentially a non-physical thing or substance is that he found himself capable of doubting the existence of all material things including his body with its the whole nervous system and brain, but not capable of doubting the existence of himself as a

37 J. Cottingham, Descartes, pp. 116-18.

thinking substance. This reasoning implied that having a body is not a necessary part of his essential nature.[38] However, as has been critically discussed, this argument does not seem to be valid. For, one's ability to doubt that a real person or mind, e.g. X, possesses the property of body, e.g. Y, does not indeed prove that X could actually exist without having the property of Y.

Thus, consciousness might indeed be an essential attribute of a functioning brain system, but not a different entity such as an immaterial substance. It still remained to be demonstrated how one can perceive his mind apart from the body, when his brain that contains the mind, and many intellectual activities and bodies, are closely connected with each other. In the light of scientific research it is clear that intellect, mind, mentality, understanding, conception, and rationality, can be regarded as properties of the brain. They are inseparable properties of the brain just as calculation is an essential property of a computer or liquidity is an essential property of water. No one can reasonably say that the liquidity is a 'thing' which exists apart from water, or the calculation is a 'thing' that exists apart from the computer. On the contrary, the liquidity is an inseparable property of water or the calculation is an inseparable property of the computer, something without which the computer could not exist. Similarly, mind or mental functioning might be an essential property of brain.

Moreover, how can Descartes be so sure that his nature or essence is simply to think? He claims that each of us has immediate, indubitable and transparent access to his thoughts and therefore with a special certainty every individual person apprehends that he is a thinking thing. However, there is nothing to stop us from raising this basic question; does the premise that I know that I am a thinking thing entail that I know that my nature is simply to think? Why should not a thinking thing be something that has some essential attributes in addition to that of which one is directly and immediately aware?

Furthermore, Descartes took into consideration the possibility of the indivisibility of mind in order to prove its non-corporeality. Yet, his divisibility argument remains lacking in strength and seems question-begging. For, indeed, from the fact that the mind is indivisible, it does not necessarily follow that the mind is some kind of non-physical or insubstantial entity. Today modern science seems to prove that consciousness is a property of a physical system, that is, the brain. The fact is that if a thing that performs the thinking activity is a physical system, then, the thing which thinks will be divisible.

Furthermore, the problem of causal interaction is one of the important issues in Cartesian dualism. Our experience confirms that mind and body do not work in a complete separation, but interact with each other. We know from our

38 Descartes: AT VI 33: CSM I 127).

experience that a physical event can cause a mental change and, conversely, a mental change can cause a physical action. Descartes himself recognised this reality by claiming that '...Nature also teaches me, by these sensations of pain, hunger, thirst and so on, that I am not merely present in my body as a sailor is present in a ship, but that I am very closely joined and, as it were, intermingled with it, so that I and the body form a unit'.[39] Despite his attempt, it always remained to be proved that there could be such a union and interaction between these two distinct and incompatible substances.[40] In *The Passions of the Soul*, he tries to solve the problem of causal interaction and union by appealing to the pineal gland that is one particular part of the brain, where the soul exercises its function. But this idea re-imports the problem. So Descartes becomes more and more obscure and vague about this problem.

As a result it could be said that Descartes' account of the soul cannot give a sufficient and adequate explanation of these and many other difficulties. Despite the influence of Descartes' thesis on theories of mind through the later history of philosophy, most scientists and philosophers would regard his thesis that mind is essentially immaterial substance that 'needs no place and depends on no material thing' (i.e. brain, or nervous system) as not a plausible theory of the mind or soul. But, despite the shakiness of Descartes' dominant arguments, there is no need to deny the enormous influence of his theory on many thinkers throughout the years.

39 Descartes: (AT VII 81: CSM II 56).

40 How can the mind interact with the body, given their completely different essences? Three hundred years later, Gilbert Ryle observed that 'the connection between [mind and body] is ... a mystery. It is a mystery not of the unsolved but soluble type, like the problem of the cause of cancer, but of quite another type. The episodes supposed [by Descartes] to constitute careers of minds are assumed to have one sort of existence, while those constituting the careers of bodies have another sort; and no bridge-status is allowed. Transactions between minds and bodies involve links where no links can be'. G. Ryle, *The Concept of Mind*, p. 65.

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**Abbreviations:**

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'CSMK' designates volume three of the preceding, by the same editors-translators and Anthony Kenny, *The Philosophical Writings of Descartes*, (Cambridge: Cambridge University Press, 1991).

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