

**ASPECT MONISM: TOWARDS A NEW UNDERSTANDING OF MIND-BODY
RELATIONSHIP IN HUMAN PERSON BASED ON THE CONCEPT OF
EMERGENCE AND NEUROSCIENCE**

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ABSTRACT

The mind body interaction has been a major discussion in the field of philosophy. The proposed solutions, like dualism and physicalism, have pulled us into two opposing directions. This topic became even more important with the progress of Neuroscience. The author sees that insights received from the neurosciences can help us to re-look into the whole question of mind body interaction. In this essay, we can see how Aspect Monism challenges the both extremes positions and brings a middle path among them. In fact, it opposes dualism for splitting mind and matter into two polarized entities and physicalism for reducing the mind into a heap of atoms. Further the author discusses the significance of Aspect Monism and how it can positively address the problem of interaction between mind and matter .

Key words: Diffraction; Intentionality; Materialism; Monism; Physicalism; Psychosomatic; Supervenience

1. INTRODUCTION

The mind-body problem has puzzled the Philosophy of Mind for many centuries. This essay is an attempt to spell out a new understanding of relationship between mind and body based on the scientific understanding of *emergence* and the functioning of the brain. This new understanding will pave way for a profound and holistic understanding of the person in a new perspective. The title of this essay may raise some immediate questions in our mind like: why is there an urgent need to find a new perspective? This challenging question has arisen as the reduced (physicalism) and the divided (dualism) mind-body positions have dichotomised and tarnished the understanding of person. In fact one of the important criticisms of dualism and

physicalism is that dualism has split the person into two polarized entities and physicalism has reduced person into a heap of atoms.

*Aspect Monism*¹ attempts to elucidate and consolidate the vacuum created by dualism and physicalism and to provide a new understanding of mind-body relationship. It has a special feature to show the indestructible relationship between mind and matter. It roots itself on *neuroscience* and the scientific *theory of emergence*. We shall begin with extreme positions.

1.2 EXTREME POSITIONS

The mind–body relationship has been an unsettled question both for science and philosophy. It has been a herculean task for both scientists and philosophers, who were greatly involved in unlocking the issue of the relationship between mind and body. There are two sets of opposing ideologies proposed; namely dualism and physicalism.

1.2.1 DUALISM

Dualism simply means a condition of being double. Dualism comes from Latin word *duo* meaning ‘two’ which denotes a state of two parts. It was originally coined to highlight the co-eternal binary position. Dualism wildly can mean moral dualism, mind and body or mind and matter or physical dualism.² The moral dualism began as a theological belief. In philosophy it is a world view that the world consists of or is explicable as two fundamental entities, such as mind and matter, the condition of being double or duality. From the point of theology, it speaks about that human being have two basic natures, the physical and spiritual. One of the major objections in dualism is the problem of interaction.³

1.2.2 PHYSICALISM

Materialism or Physicalism came to existence against the idea of dualism. Philosophers and scientists have different views on materialism regarding constitution and behaviour of materials objects and over whether every material thing is a body or whether forces or waves or fields of force are also realism.⁴ Materialism is formally a doctrine concerning the nature of the world that gives matter a primary position and accord to mind a secondary, dependent reality or even none at all. Materialism holds that everything that exists is material. Such idea

¹The phrase *Aspect Monism* is taken from the class notes of Dr Roy Pereira SJ on Neurochemistry taught in JDV on 27/02/2012, which refers to mind as the other aspect of materialism. Roy Pereira, “Aspect Monism,” in *Course notes on Neurochemistry* (Pune: JDV, 2012).

²*Encyclopedia Britannica* (London 1957), s.v. “Dualism.” 696

³*Encyclopaedia of Philosophy* 2nd ed. (New York: Thomson Gale, 2006), s.v. “Dualism.”

⁴*Encyclopedia of Philosophy* 2nd ed. (New York: Thomson Gale, 2006), s.v. “Materialism.” 7-11

came up, in order to counteract dualistic properties.⁵ In the modern world the Physicalism has claimed triumphalism over dualism because of the success of the science, which makes materialism true. Materialism is preparing to deny what has been held true so far by religion. In the realm of the mind, a new challenge for immaterialist has also developed. The abstract theory of mechanism threatens the idea of a special status for mental activity. Materialism is a strong version of naturalism –whatever occurs in the world is a result of physical force in accordance with physical laws. Scientists have seen changes in central nervous system linked to changes in mental state. Such changes will systematically violate the probabilities for neural change that physical laws set for and that defy any modification to accepted physical laws.

Such radical materialism may bring many objections too. From a theological point of view, there is no supernatural intervention in the course of nature and there can be no divine beings of any kind. In such cases how we can deny the religious experience which has been experienced by many in the world. Secondly, if we take materialism seriously, the question of survival of body after death has no meaning. The fundamental Christian faith must be at stake. Among them more problematic is how one can explain the human experience of consciousnesses.⁶ Alone with it the feeling of love, angry, pain cannot be explained that easily. Such difficulties call for a higher explanation of Physicalism.

1.3 BEYOND DUALISM AND PHYSICALISM

The new challenges posed by neuroscience have necessitated us to take steps beyond dualism and physicalism. One of the major objections both dualism as well as physicalism faced is the problem of interaction. In order to solve this problem, followers of both streams applied many theories. Somehow those theories did not adequately address the problem. Dualism still has not addressed the questions like: how do dissimilar things like the physical body and immaterial soul interact? Or what is the relation between the mental and the physical properties? Physicalism understands that reality is composed of a minimum number of kinds of entities or substances. This claim is usually metaphysical. It is a form of monism. According to physicalism all objects, properties and events can be reduced to a single substance as against dualist reality which is composed of mind and body. However the ontological reductionism believes that higher-level, more complex entities are nothing but complex organizations of simpler entities, i.e., the whole is nothing but the sum of its parts.

⁵*Routledge Encyclopedia* (London: Routledge, 1998), s.v. “Materialism.” 176

⁶*Encyclopedia of Philosophy*; *ibid.*,14-15

For them, everything can be simplified down to one main element, or two for a dualist. The neuroscientist finds it very difficult to explain the central executive to perform such a unifying act than to accept the problem with all its complexity. This complexity poses a severe threat to materialism. Now Descartes' solution in terms of a dualism of substances, interacting at the conation, is now considered a relic of a very distant past. Some of the scientists and philosophers have turned into materialist. They believe that all that exists in space and time have to be considered fundamentally physical.⁷ Therefore, there is a need to go beyond dualism and physicalism.

1.4 FUNCTIONAL UNDERSTANDING OF *ASPECT MONISM*

We have seen above that neither dualism nor physicalism could effectively establish the relationship between mind and body. They also could not effectively tell us about the origin of consciousness. *Aspect Monism* is a new venture in this context to explain their relationship which establishes consciousness as the other aspect of material reality. So, this section deals about the meaning and theory of *Aspect Monism*. It also extensively speaks about the function and characteristics of *Aspect Monism*.

1.4.1 MEANING OF *ASPECT MONISM*

The *Aspect Monism* is combined of two words *aspect* and *monism*. The word *aspect* can be seen in two ways; as a verb and as a noun. According to the Advanced Learners Oxford Dictionary, the word *Aspect* as a verb means 'a particular part or feature of a situation, an idea, or a problem etc. a way in which it may be considered.' The second meaning of the word is: the appearance of a place or a situation. The third meaning is: a particular look or facial expression. The word *aspect* as a noun refers to a distinct feature or an element in a situation. The second meaning is a facial expression. Here the *aspect* means the otherness of the same reality. A thing can express itself in many ways. Some are known to us and others are unknown. But it is the same reality. Some are familiar to us and others are not. By *aspect* we mean other than something that we normally expect.

Monism is a known word. It comes from the Greek word *monos*, which means 'single.' In philosophy, monism refers to the ultimate reality which is composed entirely of one substance.⁸ It is opposed to dualism and pluralism. It was first used by Christian Wolff, a

⁷Maurice Schouten and Huib Looren de Jong, "Mind Matters: The Roots of Reductionism," in *The Matter of the Mind: Philosophical Essays on Psychology, Neuroscience, and Reduction*, ed. Maurice Schouten and Huib Looren de Jong (Oxford: Blackwell Publishing Ltd, 2007), 1.

⁸Frank Thilly, *A History of Philosophy* (Allahabad: Central Publication House, 1999), 20.

German philosopher, in the 18th century, to designate a type of philosophical thought in which an attempt was made to eliminate the body and mind dichotomy.⁹

By *aspect monism* we mean that, mind is the other aspect of material reality. Though monism is a single reality yet it can exist in other forms. The difference is that it's one state of form is not interchangeable with the other form of existence.

1.4.2 THEORY OF ASPECT MONISM

The theory of *Aspect Monism* is effective only in the context of consciousness. If any theory dealing with the consciousness needs to be effective, it must touch upon both mind and body and their relationship. The *Aspect Monism* seems to be a better candidate for it. It says that mind is the other aspect of material reality. Thus, it promotes a new understanding of the relationship between mind and body. The theory of *Aspect Monism* suggests that there is only a single kind of thing that exists yet that reality is in a process of disclosing and evolving.¹⁰ It denotes that the mental properties are the other aspect of material reality which emerged through a complex process and they are not two separate entities. Over and again the neuroscientists have proved that the activities of the mind and body are interrelated as well as correlated. By the word 'interrelated' we mean they closely affect each other for their functioning and by word 'correlation' we mean that they not only affect each other, they are depended on each other for their functions. In short we can say that consciousness is the other aspect of material reality. Here, when we say that the consciousness is other aspect of material reality, we mean that it came to its existence through a complex process of emergence. We shall elaborate the theory of *Aspect Monism* through the example of wave aspect of electron. It was thought that electrons are particles. A very many experiments have proved that it was true. But the experiments like *Interference and diffraction, Double-Slit experiments* and the final experiment of Einstein have shown that electrons can behave like waves as well as like particles. In this situation, the wave position of electron does not cancel the other positions of being particle. Similarly, the consciousness is the other aspect of material reality. From the point of evolution, when emergence reached a certain level of complexity, the consciousness sprang forth. Philip Clayton and G.B Barhour have alluded to this theory. They held the view that: "There is only one being whose organizational complexity, hierarchy of levels and the constitutive relationship between them gives rise to

⁹"Monism," The Basics of Philosophy http://www.philosophybasics.com/branch_monism.html (accessed 10th December 2012).

¹⁰Pereira.

new levels of higher properties.”¹¹ By *higher level properties* they mean the consciousness. They say that consciousness of the human person depends on the higher level properties but now they are irreducible to their base level properties. For example, Clayton accepts the direct dependence between the mental and the physical which we may call as *strong supervenience*.¹² Thus *Aspect Monism* can exist as the mental aspects of human person and regard it as real: as it emerges as a higher level property out of the basic level components. As we know the material reality exists in two ways; matter and energy. *Aspect Monism* can be seen as a third way of being reality i.e. consciousness. In a way, it is a combination of matter and energy. The *Aspect Monism* sees conscious experience as an emergent property of complex computation in networks of brain neurons. In these approaches consciousness is viewed as a higher order effect emerging from lower level, non-conscious entities.¹³ Now we shall examine different dimensions of *Aspect Monism*.

1.5 DIFFERENT DIMENSIONS OF ASPECT MONISM

The *Aspect Monism* has different dimensions. They actually qualify different aspects of this theory and portray how it is connected with the other characteristics of consciousness. They, in a way highlight the importance of *Aspect Monism*. Now, let us discuss this in detail.

1.5.1 ASPECT MONISM AND IRREDUCIBILITY

The Mind is irreducible. This quality of mental process is ‘something new, a fresh creation’, that emerges out of matter. Neuroscientists have closely observed these facts in their efforts to understand the mind-body problem. Therefore *Aspect Monism* holds that mind is the other aspects of the material reality. It is neither pure dualism nor monism. It accepts both aspects as two different realities but not separate. We shall place two philosophical concepts to substantiate our stand that *Aspect Monism* may be able to uphold the mind as the irreducible. The two concepts are *qualia* and *intentionality* of Husserl. For him intentionality is very crucial to his phenomenology. The intentional state of seeing is focusing one’s attentions to an object with the intention to know more about it. We live in a world where our sceneries are overloaded and bombarded with stimuli. If we pay attention to all stimuli, we wouldn’t be

¹¹Tiji A Thanniyeil, “Neuroscientific Perspective on Human Person,” *The Living Word* 115 no. 2 (2009): 73.

¹²Philip Clayton, “Neuroscience, The Person and God: An Emergentist Account,” in *Neuroscience and the Person: Scientific Perspectives on Divine Action*, ed. Robert John Russell et al. (Vatican City: Vatican Observatory Foundation, 1999), 199.

¹³Stuart R. Hameroff and Jonathan Powell, “The Conscious Connection: A Psycho-Physical Bridge between Brain and Pan-experiential Quantum Geometry,” in *Mind that Abides: Panpsychism in the New Millennium*, ed. David Skrbina (Amsterdam: John Benjamins Publishing Company, 2009), 115.

able to function. Therefore we focus on a few strong external stimuli; which involves certain conscious decision.¹⁴ For such functions, the brain has a special capacity. It can give a self-direction and shut down other activities. The neuroscientists say that these are specific features of brain which cannot be reduced to physical level. *Aspect Monism* too upholds this special feature of brain without reducing them.

1.5.2 ASPECT MONISM AND PROCESS OF EVOLUTION

Aspect Monism allows space for evolution. Both the mental as well as the material are the result of an evolutionary process. Clayton would say: “Biological evolution adds an importantly new dimension into the productive process that is natural history.”¹⁵ Darwin had propagated this idea. With the new knowledge of DNA, the evolution has gained a strong and undeniable foundation. In this context, any theory that is trying to study consciousness needs to base itself on evolution. In other words it has to be around evolution. It is more important to speak about biological evolution. In fact, what is biology? Biology could be seen as physics elaborated through chemistry.¹⁶ It does not mean that we are reducing the content of biology into physics and chemistry but instead affirm that evolution has happened within the laws of physics and chemistry. When we are talking about evolution, we are not merely talking about the physical evolution but about the minute and mysterious changes that are taking place within DNA. Therefore we may not isolate consciousness as a single entity. We need to address the entire aspects in its totality. In fact *Aspect Monism* takes evolution very seriously. It addresses the whole process of evolution unlike other theories.

1.5.3 ASPECT MONISM AND COMPLEX REALITY

The theory of *Aspect Monism* seems to uphold complexity as the special feature of the reality. This theory gives space for the organism to keep its information within the self because it gives importance to complexity in both micro level and macro level. In micro level, it is the gene and in macro level, it is the brain that keeps the information. *Aspect Monism* is very particular about its special feature of non-reductionism.¹⁷ It does not allow for a reduction of brain and gene’s activity into mere chemical activities. It upholds that the highest degree of complexity is possible because it has certain amount of order which is true in its perfection.

¹⁴Nancy Murphy and others, *Downward Causation and the Neurobiology of Free Will* (California: Springer-Verlag Berlin Heidelberg, 2009), 66-67.

¹⁵Philip Clayton, *Mind and Emergence: From Quantum to Consciousness* (Oxford: University press, 2004), 84.

¹⁶Lynn J. Rothschild, “The Role of Emergence in Biology ” in *The Re-Emergence of Emergence*, ed. Philip Clayton and Paul Davice (Oxford: Oxford University Press, 2006), 151.

¹⁷Evandro Agazzi, “What is Complexity?,” in *Complexity and Emergence*, ed. Evandro Agazzi and Luisa Montecucco (New Jersey: World Scientific Publishing Co.Pte.Ltd., 2002), 7.

When we look at this theory from the perspective of neuroscience, they say that neurones do not work in isolation moreover they work as *a pack of neurones*. The brain has the special capacity to keep its memory which is coded in genes. When the time comes, it decodes according to its need. This theory adequately gives space for it too. In this process, proceeding and procedure are held within the capacity of brain. It needs no external or foreign element to play a role. In short, *Aspect Monism* seems to affirm the complexity of the reality without reduction.¹⁸

1.5.4 Aspect Monism and Emergence

Aspect Monism believes that consciousness emerges from the material reality. Emergence needs certain space to establish itself within a theoretical framework. Dualism and physicalism cannot easily provide this space because of their limitations. Clayton would say consciousness as, “a collection of highly convoluted processes that produce remarkably complex kind of combinatorial novelty.”¹⁹ This complexity shows that emergence is a highly convoluted process. Unpredictability is the one of the salient features of this process. The theory of *Aspect Monism* gives ample space for convoluted process and unpredictability because it is mutable within the limits of material aspects with the help of quantum jump. “*Emergence* in evolution suggests that we group under the heading of evolutionary biology, particular features can be discovered that are aptly described as emergent.”²⁰ The *Aspect Monism* can clarify these features and to show how and why the phenomenon of *emergence* is significant to an understanding of the biosphere. Therefore the emergence may be the backbone of the theory *Aspect Monism*. The difference between *emergence* and *Aspect Monism* is that *emergence* speaks about the process through which the consciousness comes about and *Aspect Monism* speaks about the relation between mind and body.

1.5.5 ASPECT MONISM AS A BETTER OPTION

When we compare the theory of *Aspect Monism* with other theories it has some edge over others. It seems to amalgamate some aspects of all theories. It admits the global workspace theory as far as mind is projected as cognitive architecture which plays a role of a screen.²¹ *Aspect Monism* goes beyond theatre model to an all-inclusive model of subjective experiential model. The working memory, mental functioning and consciousness become single activity of the brain. They become different aspects of the same activity. The

¹⁸Thanniyiel: 75.

¹⁹Clayton, *Mind and Emergence: From Quantum to Consciousness*, 84.

²⁰Ibid., 86.

²¹Rocco J. Gennaro, “Consciousness,” <http://www.iep.utm.edu/consciou/> (accessed 3rd December 2012).

dichotomy between mental and material state in the theory of representational model of consciousness is done away with *Aspect Monism*. It sees no more the mental and the material as two separate entities instead the mental is seen as the other aspect of material reality which is separate but not different.

1.5.6 ASPECT MONISM AS A BRIDGE BUILDER

Aspect Monism does the bridge building between mind and body through quantum mechanics and biological functioning of neurons. Dualism and materialism are the two extreme positions suggested as solution to the problem yet they could not address the problem amicably. *Aspect Monism* takes the middle path. However, it is a middle path but it is not a compromise between them. It keeps up the irreducible nature of the complexity and at the same time acknowledges the reducible content of the material aspect. As it stands, a total reduction of the consciousness will not have the quality of complexity and a pure dualism will tear apart the reality into two. *Aspect Monism* neither tears apart nor reduces the reality instead it celebrates the reality as it is. It keeps up the mystery part of it and at the same time answers some leading questions and solves certain problems.

1.6 NEW PERSPECTIVE OF PERSON

Our experience of personhood has been a collective one. *Aspect Monism* tries to explain the collective experience of the personhood by saying that the mind is the other aspect of the material reality. It acknowledges the unity of the person. In a new perspective, the person is a *psychosomatic* and dynamic entity. This *psychosomatic* unity of person is the core of *Aspect Monism*. Now we shall discuss their unity in detail.

1.6.1 PSYCHOSOMATIC UNITY

The human person is a *psychosomatic* unity in which both body and mind interact in an interconnected manner.²² This is a new perspective about human person. Clayton would say that “the study of the human person therefore involves not only all the knowledge we can glean about the brain and its workings, but also study of the emergent level of thought, described and explained not only in terms of its physical inputs and nature, but also in terms intrinsic to itself.”²³ Here our task is to argue for the existence of both levels; mental and physical, and integrate these two levels. From this framework we try to understand the notion of the human person. Though the concept of personhood is basic to research in the social

²²Clayton, “Neuroscience, The Person and God: An Emergentist Account,” 197.

²³Ibid.

sciences, these are philosophical questions too. With the help of neuroscientists, theologians and philosophers we may try to define personhood. To do so, we have to find a common ground for it. We also need to understand the word *person* from a new perspective. A dynamic definition of human being would be one which attempts to define the human reality in terms of our basic anthropological drive. Thus the *psychosomatic* unity of human person becomes a cradle of every experience. Our *psychosomatic* unity provides us the experience of unified personhood. “According to *aspect monism*, there is a particular *psychosomatic* unity in the case of human being. They, as organisms, can do things both mental and physical; although mental functions supervene upon a physiological basis, the two sets of attributes are interconnected and exhibit causal influence in both directions. Here person follows a physical process within organisms and mental capabilities like intentions, *free will* and ideas like justice or the divine are constructs of the complicated manifestations of neural processes. Looking at the danger of this position, Clayton says, “Neuroscience does tend to push one in the direction of physicalism, the view that all things exist are physical. For it is a basic assumption of good neuroscience, as with the other natural science, that only traceable physical causes be employed and that only physical mechanisms be introduced in explanations.”²⁴ This advice from Clayton is to avoid the over emphasis in understanding human person from neuroscience perspective.

1.6.2 DYNAMIC ENTITY

Aspect Monism accepts the continued process of evolution and emergence. Human being emerged through complex evolutionary process therefore the dynamism of the evolution still continues. It is an ongoing process. The theory of supervenience helps us to understand how the evolution is still going on. *Aspect Monism* is at home with the theory of supervenience. The theory of supervenience gives a basis for the dynamic process that goes on within human being. When *Aspect Monism* says that mind is the other aspect of material reality it presupposes that whenever a change takes place in material parts there is also a corresponding change takes place in mental aspect and vice versa. It is because the supervenience provides a space for dependency relationship. It says that there is a direct and full relationship of dependence between the mental and the physical. This dependency is typically held to obtain a balance between sets of properties. The dependence or supervenience of this kind does not entail reducibility through law or definition. There are both weak and strong supervenience which are at work in different levels. In strong

²⁴Ibid., 211.

supervenience, there is a strong relationship between physical and mental activities. The strong supervenience says that physical properties cause the mental action and all its subsequent behaviour. It also says that the micro-properties determine completely the macro-properties. Weak supervenience speaks about a relationship that actually holds in the world where subvenient property basically determines the supervening properties. It says that even if there is only a slight change in subvenient properties, there could be a completely reverse result possible.²⁵ Here weak supervenience or subvenience is the stepping-off point for an emergentist theory of supervenience and it will lead to the understanding of human person as dynamic entity. Since, any of these two superveniences is possible at any time, there could be many internal changes taking place within the system and these changes keep the dynamism of the system to go on. These changes can be at molecular level, in any physical or biological level. There is a continued chain of changes taking place in subvenient property levels which are minute. Human creative ideas could be seen as part of this dynamism. Everyday new creative ideas emerge and through those ideas human dynamism goes on. Therefore we can say that a human being is a dynamic entity.

1.7 CONCLUSION

The main focus of this paper is to explore the issue of mind-body relationship in order to understand the human person in a new perspective. We have critically looked into the unsettled issue of mind-matter interaction and have learned that dualism and physicalism have pulled us into two opposing directions. The challenges from the neurosciences have forced us to re-look into these positions. *Aspect Monism* has challenged both extremes positions and brought a middle path among them. In fact, it opposed dualism for splitting mind and matter into two polarized entities and physicalism for reducing the mind into a heap of atoms. The significance of *Aspect Monism* is that it has become a 'middle path' between dualism and physicalism and there is no compromise made between them. *Aspect Monism* has tried to keep up the special nature of mind. It has also succeeded in founding the mind on material reality. It could positively address the problem of interaction between mind and matter by asserting the unity between them.

²⁵Jaegwon Kim, "Supervenience," in *A Companion to the Philosophy of Mind*, ed. Samuel Guttenplan (Oxford: Blackwell Publishers Ltd., 1996), 577-78.

Aspect Monism has opened a new understanding of anthropology that a person is a *psychosomatic* unity by confirming that mind is the other aspect of material reality. It goes beyond the biological basis of understanding about a person to the fundamental properties of the brain-behavioural systems that involved. The *psychosomatic* unity provides a basis for a unified experience of personhood. Thus, *Aspect Monism* has brought an underlying unity among them and has as well shown that their difference is only in degree through complexity.

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