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Redefining Consciousness

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ABSTRACT

This Paper examined hot topics of Consciousness, emergence, supervenience, terrestrial planets, fine tuning of earth, the Goldilocks, and the concept of dualism, all of which physicists now consider worthy of scientific inquiry. Analysis of these topics led to many findings namely, how the earth acquired high level of fine tuning (from the Sun's energy) while earth's 3 terrestrial neighbors Mercury, Venus, and Mars, failed to achieve fine tuning as reason there is life on Earth, but there is no life on other 3 terrestrial planets. This Paper examined the Goldilocks and found earth's central position in the Goldilocks as the main reason earth alone acquired favorable fine tuning for life to appear on earth. This Paper has traced the origin of Consciousness to the concept of emergence. This Paper found that Consciousness is an emergent property of a fine-tuned earth. Hence, Consciousness is not fundamental. This research has answered one of the most fundamental questions about Consciousness that; Consciousness is not monist but dual. Consciousness consists of 2 different and opposite parts namely, Cosmic Consciousness and Objective Consciousness. Objective consciousness is the type of consciousness derived from the brain known to physicists, psychologists, neuroscientists, and everyone else. This Paper found that dualism and dual Consciousness underpins every living organism in nature through the dual principles of Opposites and Complementarity of opposites such as, matter/energy, body/mind, male/female. Hence, the Supremacy of Dualism prevails. This Paper examined supervenience and how Consciousness supervenes matter similar to how magnet supervenes a loadstone.

Keywords: Consciousness; Supervenience; Terrestrial planets; Goldilocks; Cosmic

INTRODUCTION

Redefinition of Consciousness?

Class: This lecture about the new definition of Consciousness is going to blow your mind. So, let us take a look at the complete facts about the definition of Consciousness with regards to the question; what is Consciousness? But first, let us find some existing definitions of Consciousness in the literature and from the dictionary:

a) "Consciousness is a central nervous system function based primarily on vigilance, mental contents and selective attention, thus providing the subject with a fluctuating image of the inner and outer world" (Google Scholar).

b) "What is the scholarly definition of consciousness? as being 'aware of' something, and to refer to a property of mental states, such as perceiving, feeling, and thinking, that distinguishes those states from unconscious mental states" [1].

c) "Consciousness-Having of perceptions, thoughts, and feelings; awareness. The term is impossible to define except in terms that are unintelligible without a" [2].

d) Three Basic Meanings of Consciousness: Awareness, experience, and self-consciousness refer to different things. Perhaps no other word has more confusion surrounding it than consciousness. The word is so fraught that many books on the topic will avoid specifying what it means [3].

e) The term "consciousness" occupies a major portion of the work of clinical neurologists, neuroscientists, psychologists (and especially neuro-pscychologists), psychiatrists, biophysicists, and philosophers. It is "both the most obvious and the most mysterious feature of our minds". For

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philosophers, consciousness has become a battlefield between monists, reductionists, who reduce it to neuro-physicological phenomena, and dualists, who separate the nonphysical mind from the brain's action. Interactionism, and parallelism epitomize the dualistic view whereas most neuroscientists lean to the monistic approach ("mental processes are brain processes") [4].

f) Niedermeyer's definition of consciousness can be taken as being more representative of the current understanding of consciousness by scientists, philosophers, and psychologists. However, this Paper's understanding of consciousness goes much deeper than the confusion and disagreements between scientists, philosophers, and psychologists. "Mental processes may be indeed brain processes" as Niedermeyer pointed out, but human consciousness comprises more than just brain processes. In fact, the proper definition of Consciousness begins with the concept of the dual nature of Consciousness rather than the arguments for and against "Dualism of Consciousness" [5].

Consciousness

Class: To redefine Consciousness from what the term implies or generally means, a short historical background of the term Consciousness is needed. Shortly put, consciousness is the new term scientists apply to the old term mind used by the old philosophers in describing our human awareness of ourselves and the world in general. Scientists replaced the term mind with the word consciousness because they did not like how philosophers and religionists mixed the unknown soul with mind. Hence scientists, especially neuroscientists want to limit consciousness as arising out of the brain or brain functions only. However, consciousness as used in this Paper is synonymous with mind. Consciousness and mind are used interchangeably in this research. On the other hand, cell-based theory of consciousness (as opposed to emergent theory of consciousness by this Paper), claims that "...Humans and other creatures with brains perhaps aren't the only beings on the planet to experience consciousness, says a study in. And that consciousness instead underpins all life forms, from the smallest cells to the most complex organisms" (the journal EMBO Reports). With regards to the journal EMBO Reports, I am honored to see Hayley Jarvis, (2023) confirm similarly (as I have stated) that consciousness underpins all life forms from the smallest cells to the most complex organisms". Furthermore, "Far from being limited to creatures like ourselves, the cell-based theory of consciousness frames the phenomenon a fundamental part of life itself. Conventional thinking about consciousness, called the standard model of consciousness, focuses on the brain, supposing only complex organisms like humans and animals have it. But the new Cell-based theory argues that consciousness started with the very first cells that emerged about 3.8 billion years ago and plants, bacteria and even amoebas have it", namely, consciousness (Brunel Varsity's Slijepcevic, 2023).

Dualism of Consciousness

Binary nature of cells: First of all, like the atoms of matter, cells are the basic forms of all living organisms and cell division also known as binary fission is a form of natural dualism that indicates natures' adoption of dualism, the duo, a pair, and dual clonning of DNA, as an unavoidable process of creation. "Binary fission is a type of asexual reproduction, where the offspring are genetic clones of the parents" .So there is dualism of cells as much as there is dualism of consciousness. Nature itself at the basic level makes dualism its supreme process of expansion for the perpetuation of life. Furthermore, "the binary system is the basis of digital computers that is used to represent data or instructions in a machine-readable form". This Paper started the analysis and redefinition of Consciousness with the analysis and explanation of the dual nature of Consciousness that falls under the concept of dualism. The fact is that the principle of dualism of Consciousness underpins rigorous scientific analysis of Consciousness from any standpoint. There is no escape from dualism of Consciousness (as neuroscientists are about to find out). With regards to the proper definition of Consciousness, there is no way of glossing over the dual nature of Consciousness since rigorous scientific definition of consciousness cannot endure any mischaracterization of the facts. So, let us face the fact of the dualism of Consciousness head on in beginning of the scientific analysis of Consciousness.

Thus, the first and most important question to consider about Consciousness is whether Consciousness is monist or dual. And the indisputable and inescapable fact is that Consciousness is dual-not monist but dual (as the proof of the dualist nature of all living organisms) will be illustrated in this Paper beyond any scientific doubt. More importantly, Consciousness is not only dual, Consciousness consists of two different parts that are opposite and complementary to each other in the form of primary consciousness and secondary consciousness. The two parts of Consciousness denote the dual nature of Consciousness that comprises a 1st or primary consciousness and a 2nd or objective consciousness. Primary or 1st Consciousness is the type of Consciousness that has long been known in philosophy and psychology as The Subconscious Mind but this Paper refers to it as Cosmic Consciousness. The secondary Consciousness is the brain-derived Objective thinking mind of every person that is known by scientists especially by neuroscientists as a person's Consciousness which derives solely from the human brain and is the immediate cause of human behavior. In other words the secondary human consciousness is "Niedermeyer's consciousness" (quoted above) in reference to the secondary Consciousness derived from a person's brain and characterized by this Paper as the brain-derived Objective Consciousness whose activity of thinking directly causes the active behavior of any child or adult person. These two different parts of Consciousness namely primary consciousness and secondary consciousness that are referred to herein as, a) Cosmic Consciousness and, b) the brain-derived Objective Consciousness clearly illustrate the dualism of Consciousness of the human mind.

The dualism of Consciousness (of the human mind) was hinted at not long ago by the Psychologist William James (1895), who wrote about the 2 aspects of the mind which he called the two selves of a person [6]. Remember William James' 2 aspects of one self, namely, the knowing self and the known self as in 'the 'I' that knows the 'me', or the 'I' as the knower, and the 'me' as the known'. The 'I' as the doer and the 'me' as the observer. The next Psychologist who identified what can be interpreted

as dualism of Consciousness (mind) is Sigmund Freud (1905) whose theory of mind consists of Instincts, Ego, and Superego, where the Superego acts as Chastiser of the Ego [7]. These two types of faculties of mind namely, the ego and superego are the two major parts of human awareness and thinking that suggests two types of consciousness or two thinking systems within the human mind. When psychoanalysts take a look at the relationship between Freud's Ego and Superego, what does this relationship pertain to other than two types of Consciousness, or two types thinking systems? Again, when psychoanalysts examine the actions of the Ego, they see the Ego as the bumbling ineptitude pusher of a person's behavior. Psychoanalysts see the other faculty of mind namely the Superego as the sane Overseer and corrector of the actions of a person's Ego. Other Psychologists see the Ego as the bad guy and the Superego as the good guy. Thus, deduced form Freudian psychology and psychoanalysis, the ego and superego that are the sources of good and bad behavior in human nature correspond to the dual nature of consciousness or dual selves of a person's mental system. These two selves or dual selves or dual consciousness namely, Cosmic Consciousness and the brain-derived Objective Consciousness that we find in each person underscores the inescapable fact of dualism of Consciousness. This Paper continued to provide many more proofs about the dualism of consciousness beyond any rigorous scientific arguments in alignment with the requirements of "the scientific method" of inquiry.

Therefore, the next point of argument about Consciousness is the verification of whether Consciousness is actually dual or not. It is important to point out that some philosophers, psychologists, scientists, and especially, neuroscientists have taken for granted that Consciousness is monist; or that Consciousness is a single compact mental thinking mechanism that arises from a single monist brain. However, the human brain itself is not monist but dual. This is an indication of the underlying dualism of Consciousness that is missing in the debate about the two parts of the human brain. According to anatomists, the human brain is divided into 2 or dual parts namely, left-brain and right-brain. Each part of the brain controls the opposite side of a person's body. Thus, the left-brain controls the right side of the body and the right-brain controls the left side of a person's body. Each side of the brain maintains specialized and distinct functions separate from its counterpart that indicates a division of labor between the left-brain and right-brain duopoly of the human brain. It seems that the left-brain, right-brain, divide does not affect only the physical body of a person, but the divide brain affects how people think, where some people are labeled as left-brain thinkers and others are labeled right-brain thinkers [8,9]. The dual nature of the brain is akin to the dual nature of an egg. An egg may be single and monist in appearance, but scientifically speaking an egg is dual in nature with egg-yolk, and egg-white that are opposite but complementary to each other that combine to form a chicken in the birth of a baby chicken from a single egg. Thus, Consciousness, the brain, an egg, the Chinese symbol of yin-yang may all appear to the layperson as monist, but again, scientific analysis reveals that these objects have dual natures wrapped in monist gabs. However, they are dual and not monist.

Hence, the proper definition of Consciousness can only be defined as dual with 2 definite parts that are by no means monist. The problem is that only the workings or actions of the brain-derived Objective Consciousness of a person is so obvious to general observation that even scientists assume that human thinking is generated only in the brain (head) apparently in a monist brain without knowing the fact that the brain itself is not monist but dual as indicated by the divided (left-bran and right-brain) structure that jointly produce a person's thinking system.

On the other hand, Cosmic Consciousness or The Subconscious Mind has been known by philosophers, psychologists and theologians as part of the human thinking system for a long time. However, scientists, especially neuroscientists and physicists who consider themselves experts of Consciousness have no idea about the existence of Cosmic Consciousness or what Cosmic Consciousness is and does in the thoughts of a person. This is because scientists have always falsely assumed that Consciousness is monist or that Consciousness is a single compact mental state that arises directly out of the neurons of the brain ("conscious processes are brain processes"), when in fact that is not the case as further proofs of the dualism of Consciousness are indicated in this Paper. If something as fundamental and as irreducible as Consciousness is not monist but dual, (as shocked scientists are going to find themselves in bind), and something as inseparable as the human brain is also not monist but dual, what organism in nature does not have dual nature one way or the other? The interesting fact is that only a few researchers have known that the single brain that can be held in the palm of a person's hand is paired together like a pair of scissors (with distinct left-brain functions and opposite right-brain functions). This definitely makes the brain dual and not a monist object of mechanism for human behavior. Furthermore, the problem is that a lot of people including some scientists have never heard about the different functions of the left-brain in controlling the right side of the human physical body nor the right-brain's control of the left side of a person's body. So, the human brain which looks single and can be held in a person's hand, has dual parts like an egg that is apparently single in appearance but consists of dual parts of egg-white and egg-yolk packed together inside a single monist egg.

LITERATURE REVIEW

Origins of Secondary Consciousness or the Brain-derived Consciousness

In explaining the origins of the dual consciousness in the beginning of this Paper, we start with the origin of the secondary Consciousness this Paper has categorized as the brain-derived Objective Consciousness of a person. The secondary consciousness of a person is the type of intelligence that arises directly and exclusively from the brain of each person's physical body. The question that arises in connection with a person's physical body, the brain, and its brain-derived objective Consciousness is; which came first, the brain or its Consciousness? In other words, which instantiated the other, the body or Consciousness, the body or the mind? Here is the sequence of the formation of a fetus after insemination, a blob

of blood forms the body of a fetus, then a brain forms out of the body of the fetus and out of the brain of the newborn fetus emerges the baby's Consciousness. Clearly, since a developing brain forms within the body of a fetus, and Consciousness arises out of the brain, the body came first. What is also clear is that the body and its brain are physical substances but Consciousness is a nonphysical substance. Then the follow up question is how do you know which came first? Well, according to the sequence of the formation of a baby it starts with physical blood forming a physical body that forms a physical brain within the body before the nonphysical Consciousness emerges out of the physical brain. So, nonphysical Consciousness can only emerge out of a physical body and not the other way round.

In other words, a human physical body instantiates the non-physical (Consciousness), or rather a nonphysical Consciousness cannot instantiate a physical body. This is how the Consciousness of a newborn baby that gives the day-old baby its self-awareness appears later after birth out of a fully developed brain of a fully developed newborn baby. We know this through the natural limitations of the Consciousness of the brain of a newborn baby. This is because both the physical body and its brain have to be fully developed and ready to function at birth (but not before birth to enable the brain-derived Consciousness to function properly. A good analogy of a baby's brain-derived Consciousness appearing later after birth will make this clear. A day-old baby is born without teeth and pubic hair. These appear later after further development of the physical body. The same thing applies to the brain-derived Consciousness under discussion here. This means without a brain fully developed brain and a fully developed physical body of the fetus at birth, the newborn baby's Consciousness (from its brain) cannot start to function properly as seen in autistic children and other ill-formed births. Since the brain and its Consciousness depend entirely on a fully developed physical body of a newborn baby, the slow appearance of the baby's Consciousness to direct the activities of the newborn baby corresponds to the slow development of the baby's physical body and brain.

Meanwhile, the physical body and the brain of a day-old newborn baby have already spent approximately 9 months in gestation where the brain and its brain-derived Consciousness of the developing fetus took no part in the development of the fetus. From this standpoint the obvious question is; during the approximately 9 months of pregnancy in the womb of its mother was the fetus and its developing brain conscious or unconscious? The answer to this question is that a fetus and its brain that took 9 month to develop in the womb of its mother had consciousness all along during the approximately 9 months of gestation (*in-vitro*) in the womb of the mother. Then, the follow up question becomes; did the brain and its brain-derived Consciousness of the developing fetus provide any assistance to the developing fetus? And the answer is clearly no. Neither the brain of the developing fetus nor its brain-derived Consciousness could assist in the development of the fetus in the womb because the brain was not fully developed and its Consciousness was yet nonfunctional. Both the brain of a fetus and its Consciousness become functional only after birth. Therefore, the type of consciousness that provided assistance to the developing fetus in the womb of the mother that maintained the autonomic system of both the mother and the developing fetus during the 9 months of pregnancy is clearly a different type of consciousness from the brain and its brain-derived Consciousness of a newborn baby that scientists and neuroscientists are familiar with. The next follow up questions is; what type of consciousness controlled the autonomic systems of a developing fetus, its developing brain, as well as the autonomic system of a fetus to function with precision in the womb (as well as out of the womb) without any assistance from the pregnant mother?

The answer is that, the type of consciousness that controls the autonomic systems of a fetus and its developing brain during pregnancy is the type of consciousness this Paper has referred to as Cosmic Consciousness which is also the primary Consciousness or first Consciousness of a newborn baby or an adult person. As explained above, it is only after birth that the brain-derived Objective Consciousness of the newborn baby which is also the newborn baby's secondary brain-derived consciousness starts to function on its own. Therefore, at this point we are speaking about two different types of consciousness of a newborn bouncing baby. There is a 1st or primary consciousness that maintained the autonomic systems of the developing fetus and its brain in the womb of the mother before being born as a bouncing baby. This primary consciousness is called Cosmic Consciousness also known by philosophers and psychologists as The Subconscious Mind. Then there is a second consciousness that slowly develops out of the brain of the newborn baby that gives the baby self-awareness of its immediate environment. This secondary consciousness is what this Paper has called the brain-derived Objective Consciousness of the developing mind of a child that we have just described. It is this secondary consciousness which arises from the brain of the newborn baby to begin to perceive objects of its immediate environment that John Locke (1788) referred to as a newborn baby's mind that was empty as a "tabla razar" devoid of any knowledge of the world, but primed to be filled with knowledge of the world through gradual learning [10].

Therefore, it was the primary Cosmic Consciousness that maintained the autonomic systems of a fetus' physical body and brain that are sensitive to reflex actions of a newborn baby. And it was through the autonomic reflex actions to external stimuli by the Cosmic Consciousness of babies and animals that the psychologist/psychoanalyst Freud mislabeled as Instincts or instinctive actions of human beings and animals. So, it is clear that Cosmic Consciousness or the primary consciousness that maintains the autonomic system of a developing fetus through reflex actions is different from the brain-derived Objective Consciousness of a newborn baby. On the other hand, a baby or a person's intentional decisions to walk or run, sit down, or reach out and grab something or do anything they want, arises from the secondary consciousness or the brain-derived Objective Consciousness of a baby or an adult person. It is with this second brain derived consciousness that all types of decisions of intentional acts of behavior and interactions with other people in society arises from as the active behavioral consciousness of a person. Again, it is through this second active brain-derived Objective Consciousness that a growing child comes to realize that it can intentionally select the things

that gives it pleasure to play with including playing with other children (for pleasure), as part of the 1st lessons in the life of a growing child. Furthermore, it is from this same active brain-derived Objective Consciousness of a growing child that a child learns that food gives it pleasure but not everything gives it pleasure. That, some things hurt and produce pain which must be avoided that registers as the second lesson of life on the brain-based Objective Consciousness of a growing child. So, the first big difference between Cosmic Consciousness of child and the brain-derived Consciousness of the same child is action and intention. The Cosmic Consciousness of a child maintains the autonomic system of the physical body and the brain to make the body function normally all the time through reflex action [11].

But it is the brain-derived Objective Consciousness that pushes the child to act with the intention to interact with objects and people in their immediate environment, and behave towards people and the rest of the world that we see babies and children do. Furthermore, this shows that the effect of a child's Cosmic Consciousness is internal within the physical body of the child, whiles the effect of a child's brain-derived objective Consciousness are external towards objects as well as other people and the rest of the world. This is a clear division of labor between the basic influences of the two different types of consciousness or two different faculties of mind in each person from childhood to adulthood. This is also how the first type of consciousness of a person whose influence is internal in maintaining the autonomic systems within the physical body of the child is categorized as Cosmic Consciousness, but the second type of consciousness whose influence is external towards other people and objects in their environment is characterized as the brain-derived Objective Consciousness. Now, both of these two types of consciousness work together to jointly direct and maintain a person's autonomic systems as well as a person's thoughts, actions, and behaviors as seen in children and adults. Thus, Cosmic Consciousness controls the functioning of the autonomic systems of a person, while the brain-derived Objective Consciousness generates the thoughts and behavior of a person. However, these two distinct activities of these two different types of consciousness work in alignment in each child or in each person's life right after birth and throughout the entire lifespan. It can be seen whether this principle of joint influence of the two types of consciousness work smoothly or not in directing the thoughts and behavior of a person, or whether things get more complicated in the reasoning of an adult person with regards to the thinking processes of the human mind and Consciousness. Having explained the origins of the secondary consciousness as the brain-derived Objective Consciousness that emerges directly from the body and brain of a newborn baby, the next big question is; what is the origin of the first consciousness or the primary consciousness that maintained the autonomic systems of the body and brain of the developing fetus in the womb, known to philosophers and psychologists as The Subconscious mind that this Paper has referred to as Cosmic Consciousness?

Origins of Cosmic Consciousness

Bucke's (1901) book, states that he discerned three forms, of consciousness: Simple consciousness, possessed by both animals and mankind. Self-consciousness, possessed by mankind, encompassing thought, reason, and imagination, and Cosmic Consciousness, which is "a higher form of consciousness than that possessed by the ordinary man". In other words, Cosmic Consciousness also called The Subconscious mind is known to philosophy but not definitively accepted by science. However, abilities of Cosmic Consciousness as it relates to a comatose patient and the patient's own brain-derived consciousness makes the difference between Cosmic Consciousness and a person's brain-derived objective consciousness clear in this research Paper. So, the next important question about Consciousness is in regards to the origins of the first or primary consciousness known as Cosmic Consciousness or the Subconscious Mind. And the question is; what is the source and origins of Cosmic Consciousness? Where did Cosmic Consciousness come from? The answer is that Cosmic Consciousness is first and foremost an emergent property (of intelligence) of a physical body. Then the question becomes, Cosmic Consciousness is an emergent property of what physical body? And the inescapable answer is that Cosmic Consciousness is the emergent property (of intelligence) of our Planet Earth just as the brain-derived Objective Consciousness is an emergent property of the physical body of each person child or adult. This means as an emergent property, Cosmic Consciousness derives directly from the earth. Cosmic Consciousness does not originate from the Universe or from Mars, or Venus, or Jupiter or from any other planet in the Solar System except from our Planet Earth alone. So, with regards to the full consciousness of a person, each person has two different types of consciousness with two different origins. Cosmic Consciousness is a macrocosm consciousness whose origins is from the macrocosm material body of the earth. Similarly, the origins of the brain-derived Objective Consciousness of each person is from the microcosm brains of each living human being. So, human beings have a macrocosm consciousness (namely Cosmic Consciousness) from the macrocosm planet earth, and a microcosm Consciousness from our microcosmic brains in our physical bodies.

On the other hand, when it comes to Consciousness and the various constants of the Anthropic Principle, scientists speak about them in terms of being universal instead of being earthly and being out of this world. The various Constants are called Universal Constants and not earthly constants when in fact the so-called universal constants do not extend beyond the earth. As a matter of fact there been no experimental evidence that the universal constants that exist on earth also exists on earth's terrestrial neighbors Venus and Mars or on any of the planets in the Solar System. If the universal constants found on earth exist on Venus or Mars, would the atmospheres of Venus and Mars not be similar to the earth's atmosphere? Nonetheless, the origins of the universal constants can only be found on. And Cosmic Consciousness can also only be traced to the Planet earth as the emergent property of intelligence of the earth. Thus, this Paper has identified the origins of one of the dual consciousness under discussion namely Cosmic Consciousness with the material physical earth. Proof of the origin of Cosmic Consciousness is that as a an emergent property and a nonphysical substance, Cosmic Consciousness can only emerge out of the physical body (of the earth) and not the other way

round. A nonphysical emergent substance cannot instantiate a physical body into existence.

The point is that just as the brain-derived Objective Consciousness of a person can only originate from the physical body of a fully developed fetus into a newborn baby, so the emergent Cosmic Consciousness can only originate from a material physical body (of the earth) and not the other way round, since physical objects and material bodies cannot be instantiated out of nonphysical immaterial substances. That would be reversing 'the theory of history' as well as 'the arrow of time' both of which are so improbable they do not occur. According to the theory of initial conditions, Consciousness was non-existent at the time of the big bang explosion that set off plumes of hot molten dust of matter and energy into space that kept whirling round until it gradually settled down into galaxies, suns, moons, and planets. Furthermore, being the emergent property of intelligence of the earth is what allowed Cosmic Consciousness to infuse and supervene in all organisms that also emerged as products of the earth including us human beings. That is how Cosmic Consciousness can be called the common denominator of intelligence as well as the intelligence that maintains the autonomic system of animals including us humans. However, each individual animal or human being has their own brain-derived Objective Consciousness (in addition to their Cosmic Consciousness) that drive their intentional acts of survival that is apparent in all living organisms.

How Popular is Cosmic Consciousness?

As one of the two types of human consciousness, Cosmic Consciousness is very popular with mystics, religionists, mystic-philosophers, theologians, alchemists, metaphysicians, Sufis, Hindus, and Buddhists. On the other hand, scientists, physicists, and especially neuroscientists are unaware of the existence of Cosmic Consciousness as a significant part of the human mind. What are the mechanisms by which mystics and religionists claim to know or experience the existence of Cosmic Consciousness? Here are some of the various ways or mechanisms that Cosmic Consciousness supposedly speak to mystics, religionists and devotees of the so-called spiritual realm namely, intuition, clairvoyance, gut feeling, ESP, 6th sense, telepathy, vision, psychic powers, precognition, presentment, premonition, inspiration, foreknowledge, hunch, remote viewing, psycho-kinesis, and even instincts.

Out of all of these various ways Cosmic Consciousness expresses itself to human beings the single most outstanding mechanism of expression thought that is recognized by both philosophy and the scientific community is the faculty of Intuition common to everyone. Intuition is a very curious mental phenomenon due to the fact that it is recognized as part of the human thinking system by philosophers, cognitive psychologists and neuroscientists without any of them bothering to analyze where it comes from and how it works, or how intuition produces ideas similar to cognition, a hunch, 6th sense, or ESP. Here is one important fact about Intuition, it does not work for only mystics or any group of special people. Intuition works for everybody or any person in the world who focuses their thoughts on any specific topic regardless of what the topic is, or what intuitive ideas are produced. Intuition is that curious mental phenomenon which has assisted many scientists in a lot of scientific discoveries over the years whose full explanation goes beyond the confines of space in this Paper. It is the faculty of Intuition that people sometimes call a hint, a hunch, gut feeling, or instincts. Remember the ancient Greek mathematician Archimedes' 'Eureka moment' or sudden discovery of the principles of buoyancy? That is what intuition feels like and that is exactly how intuition works in the human mind and in the thoughts of the human thinking system. For example, the answer to what a person has been thinking about and deeply focused on suddenly pops up in mind out of nowhere. On the other hand, such intuitive answer feels so true and it is always proven to be the right answer. That is how intuition works. And where does intuition come from? The indisputable fact is that intuition comes from a person's Cosmic Consciousness which is the primary consciousness of the two or dual consciousness of each person.

Class: We have now introduced two different types of consciousness that jointly operate the human physical body as well as a person's thoughts and behavior. The 1st is the primary consciousness called Cosmic Consciousness that controls the autonomic systems of a person, and the secondary consciousness is the brain-derived Objective Consciousness that provide the perceptual and intentional behaviors of a person that neuroscientists can observe as issuing out of the brain which makes a growing child aware of its immediate environment that Locke pointed out as starting off as an empty table-raza.

Evidence of Division of Labor between Cosmic Consciousness and the Brain-derived Objective Consciousness of each Person (The Comatose Patient Example)

The practical example of a clear division of labor between a person's Cosmic Consciousness and their brain-derived Objective Consciousness is the example of a comatose patient. A person in a coma scientifically demonstrates the limits of the ability or inability of a person's brain-derived Objective Consciousness to intentionally move the hand (i.e., supervene) in any part of the human body in the case of a comatose patient. When a person falls into coma (due to some accident or a devastating disease), what has happened is that the downward and upward supervenient capability of the brain-derived Objective Consciousness (of the comatose patient) to transmit neuronal information from point A to point B (supervene) within the physical body has been disrupted, traumatized, or blocked. That is why a patient lies inert in a coma.

The same can be said about a person who suffers a stroke that paralyzes half or some part of the physical body. However, both a stroke patient and a comatose patient are still alive, neither is dead, they are both alive. How is that possible, in spite of the fact that a comatose person and a cadaver both lie limp, inert, both have lost their brain-derived Objective Consciousness' ability to move them to action. What is keeping a comatose patient alive or rather, what type of Consciousness is still working the physical body of the comatose patient? On the other hand, why is a comatose patient only somewhat dead or "half-dead' but not completely dead; since a comatose patient's brain-derived Objective Consciousness has lost its

downward and upward causation supervening capacity to move any part of the body to action?

The reason a person who has fallen into coma is not dead is that one of the two (dual consciousness) of a person that is responsible for maintaining the autonomic systems namely, Cosmic Consciousness is still at work and that is what is keeping the comatose patient alive. However, the second type of consciousness of the dual consciousness of a person that is in charge of intentionally moving the person to action namely the brain-derived Objective Consciousness of person has suffered shock that has led to the loss of its supervenient causation capacity to move any part of the body to action which has resulted in the condition of comatose. And the specific type of consciousness of the comatose patient that has lost its supervenient capability to intentionally move any part of the body (through thinking) is the comatose patient's brain-derived Objective Consciousness. So, in a comatose patient, it is only one of the two types of consciousness namely, the brain derived Objective Consciousness that has been incapacitated i.e., lost its supervenient capability to move the patient to action. The Cosmic Consciousness of a comatose person which is the second type of consciousness is still active and working hard to keep the autonomic systems of the physical body of a comatose patient to operate with great precision. Thus, it is the hard work of a person's Cosmic Consciousness that keeps the comatose patient alive. The situation of comatose scientifically demonstrates how dependent the brain-derived Objective Consciousness is on the Cosmic Consciousness ability to maintain the autonomic systems of a person going without any assistance from the person's brain-derived Objective Consciousness.

Thus, like two pilots of an airplane, when one type of consciousness namely, the brain-derived Objective Consciousness is incapacitated and loses its supervenient capability to move the patient to action through thinking, the other type of consciousness known as Cosmic Consciousness keeps the autonomic systems of the physical body functioning perfectly to keep the comatose patient alive. Physicians can attest to comatose patients as regular occurrences in hospitals around the world. This explanation has solved the mystery of comatoses. In other words, a human being comes into the world as a newborn baby with dual or two-pilot consciousness that consists of Cosmic Consciousness and the brain-derived Objective Consciousness. The scientifically testable demonstration of dual consciousness in comatose patients where one of their consciousness is disabled, while the second consciousness works fine to keep the patient alive is the unknown fact that scientists, physicians, and especially neuroscientists are unaware of. The example of how Cosmic Consciousness sustains the autonomic systems of a comatose patient when the brain-derived Objective Consciousness of the same patient has lost its supervenient downward and upward causation capability to move any part of the body of person in a coma can be called the comatose patient demonstration. We have now illustrated a clear evidence of the existence of two different types of consciousness (as demonstrated in a comatose or a stroke patient) that together constitute the complete human Consciousness that jointly operate the human mind as well as the physical body. This is how the two different types of consciousness that make up the totality of consciousness perform two different tasks within the body and mind of a person. This is how Cosmic Consciousness maintains the autonomic systems of the physical body, while the brain-derive Objective Consciousness is in charge of the intentional actions of a person's thinking apparatus to determine the meaning and nature of objects far away or close by. Furthermore, while it is the Cosmic Consciousness that maintains and sustains the autonomic systems of a normal person's body whether a child or adult, it is their brain-derived Objective Consciousness that moves a person to action and behavior towards a favorable thing such as food, but flees out of pain or fear from pain, self-destruction or from a predator. So, these two areas of the two different operations that goes on within a person's mind and body by the dual Cosmic Consciousness and brain-derived Objective Consciousness of a person are as clear as day and night. Thus, the intentional, perceptual behavior of a person (Qualia) arises from the brain-derived Objective Consciousness, whiles Cosmic Consciousness maintains the autonomic systems that work with precision without any contribution and often even without the awareness of a person's brain-derived Objective Consciousness are also as clear as day and night.

Logically, this perfect division of labor between the Cosmic Consciousness and brain-derived Objective Consciousness of a person answers the old-age Descartes' body/mind problem doe it not? The division of labor between the Cosmic Consciousness and brain-derived Objective Consciousness of a person also destroys the arguments of physicalists who denies the existence of consciousness, and panpsychics who claim that everything, animate and inanimate objects, even atoms are psychic and have consciousness or mind. These claims by physicalists and panpsychics can be seen as exaggerated extrapolations. To be clear, when scientists, philosophers, psychologists, and neuroscientists speak about Consciousness they refer to only the type of consciousness this Paper has identified as the brain-derived mental activity of a person's brain that neuroscientists are familiar with. This is why neuroscientists have been busy dissecting the brain to show different parts of the brain as being responsible for different sensations such as the frontal lobe located behind the forehead, does much of the work of complex thinking, like planning, imagining, making decisions, and reasoning. The functions of memory are carried out by the hippocampus and temporal lobe. The olfactory cortex is the portion of the cerebral cortex concerned with the sense of smell, and the occipital lobe processes visual signals sent from your eyes; by showing different parts or different organs in the brain with different functions, neuroscientists hope to validate the fact that all mechanisms of human thinking, action and behavior derive from the brain. But neuroscientists have never indicated or demonstrated which part or organ of the brain is responsible for ESP, intuition, clairvoyance, 6th sense, telepathy, vision, psychic powers, precognition, presentment, premonition, inspiration, foreknowledge, hunch, remote viewing, psycho-kinesis come from. On the other hand, whatever area of the brain performs which mental activities, all of neuroscientists' attempts to prove that the brain is the sole source of human intelligence, still constitutes just one half of human consciousness. Furthermore, the brain-derived Objective Consciousness whose mental activities

of thinking directly results in moving a person to action and behavior is the type of consciousness that neuroscientists have inaccurately assumed to be the sole consciousness of a person. But as comatose patients have shown, the brain-derived Objective Consciousness can only constitute one half of the human consciousness, while Cosmic Consciousness (as proven above in this research) constitutes the other half of human Consciousness.

The big problem, "the elephant in the room" is that scientists, especially, physicists and neuroscientists have no idea of the existence of Cosmic Consciousness and where it comes from. However, both types of consciousness are related and complementary to each other. Both consciousness join together to form the single human Consciousness or human mind that jointly produces the compendium of all sorts of thoughts and behaviors of each individual person on earth. Therefore, the two different origins of the two different parts of Consciousness that constitute primary consciousness and secondary consciousness of the human mind cannot be overemphasized. Thus, the 2 types of consciousness that make up the full definition of human Consciousness comprising Cosmic Consciousness and the brain-derived Objective Consciousness (that neuroscientists are familiar with) have been established beyond any reasonable scientific doubt.

Class: As you can see, the proper definition of Consciousness as a dual thinking mechanism comprising Cosmic Consciousness and the brain-derived Objective Consciousness of a person, immediately runs into epistemological and ontological problems. On the other hand, this Paper's explanation of Consciousness' characteristic upward and downward supervenient capabilities throughout the physical body of a person (as explained above) has solved the age-old Descartes' mind-body problem with regards to how the nonphysical consciousness can move the physical body of a person to action and behavior. Thus, Descartes' mind/body problem can now be laid to rest as a result of the proper definition of Consciousness based on the fact of the human mind's supervenient capabilities over the human body that constitutes nonphysical mental supervenience over human physical bodies. What all these facts about the simple definition of Consciousness mean is that if the analysis of Consciousness by scientists, philosophers, psychologists and especially neuroscientists of human thoughts and behavior are based on the brain as a specific organ and neuronal activities within the brain alone to represent the entire Consciousness of a person, how can such analysis be scientifically accurate? For example, if the proper definition of Consciousness is dual but all along, neuroscientists have defined it as a monist entity, how can such unscientific analysis of Consciousness be scientifically or experimentally accurate?

Evolution of Consciousness in all Organisms and Theory of Intentionality (of Plants)

Class: The next major point about the nature and characteristics of Consciousness is the concept of 'Intentionality'. The Intentionality of all living organisms including plants, animals, insects, as well as us human beings is to survive and perpetuate their species. In other words, any organism that has Consciousness has an innate ability of intentionality of survival or the urge to engage in intentional acts of survival. That is, the intentionality to survive is a innate urge in all living organisms and this universal urge derives from the Consciousness in all living things. You would think that this fact would be obvious to scientist and psychologists but unfortunately, the intentionality of all living organisms to survive and perpetuate their species (especially plants) has never been considered a scientific fact. The intentionality to survive and perpetuate their species may be accepted for animals and human beings as this is an obvious observation. But the intentionality to survive by plants to engage in intentional acts of survival and perpetuation of their species has never been explored as a topic that deserves rigorous scientific inquiry by scientists. The implication is that because scientists and especially neuroscientists regard the brain as the sole source of consciousness of other living organisms that have no brain do not have consciousness?

On the other hand, since plants obviously do not have brains, scientist ill-advisedly assumes that plants cannot have consciousness and the intentionality to survive and perpetuate their species? So, from the viewpoint of the brain being the sole source of consciousness in human beings and animals (minus plant), it can be seen how short-sighted and limited the idea of consciousness based solely on the brain and this brain-derived Objective Consciousness is, when it comes to other living organism such as plants. The critical question is, do plants have consciousness or not? Do plants have the intentionality to survive and perpetuate their species or not? Clearly, questions about plants' consciousness, their intentionality to survive and perpetuate their species both of which plants obviously demonstrate they have, puts to shame scientists' and neuroscientists' insistence that the brain alone with its neuronal activities of the brain-derived Objective Consciousness is the only type of consciousness that can be acceptable to science. This position of scientists raises several questions about how scientists view consciousness.

Nonetheless, scientists, physicists, and neuroscientist need to answer the question; since plants are apparently conscious organisms (with no brains)-they feed, they grow, reproduce, perpetuate their species and die of old age or are killed by other organisms, where does the consciousness in plants come from?

This Paper has maintained that plants are conscious organisms and that plants' consciousness derives from their having the type of consciousness known as Cosmic Consciousness which is an emergent property of the earth. This means both plants and Cosmic Consciousness are the direct emergent properties of the earth. That is how plants acquired the primary consciousness known as Cosmic Consciousness. And being an emergent property that arose directly from the earth similar to how plants arise out of the earth, is how Cosmic Consciousness has the upward and downward supervenient capability over all living organisms including plants, animals and us human beings, all of who are products of the earth. The final critical point about consciousness is that consciousness like everything else that emerged out of the earth undergoes the process of evolution as a result of the fine tuning the earth has undergone. In other words, evolution of living things is the equivalent of fine tuning of the products of the earth through the earliest microbes from universal phylogenetic tree of life

involving bacteria, archaea, and eucarya through the stages of insects, fishes, plants, and animals to humans, this is fine tuning of living things as exemplified by the phylogenetic tree of life. Thus, it is easy to see that evolution is the biological fine tuning of living organisms (Woese, Kandler, & Wheelis 1990).

Hence, like the evolution of organisms Consciousness also evolved and followed the principles evolution of all living things. The genius of Darwin is that his theory of evolution focused exclusively on humans and animals, but Darwin's theory of evolution has now been expanded to cover all living things including plants and the entire 5 taxa of organisms. It must be pointed out that under pressure from the materialist "Newtonian Scientific Method", Darwin failed to mention human Consciousness, let alone include plants' consciousness in his theory of evolution. Darwin had to settle with the logic of 'survival of the fittest' animals to pass on their genes for perpetuation of their species as the underlying principle of the theory of evolution. But now, this Paper has finally added Consciousness as the missing piece of the puzzle of Darwin's theory of evolution that was omitted in Darwin's grand vision of evolution of all living things which he wanted to promulgate. Up to the time of writing this Paper, finding the place for Consciousness in the theory of evolution (which has been a mute question for scientists) that nobody wants to talk about has been the great mystery in Darwin's theory of evolution that has now been made complete by the inclusion of Consciousness in the theory of evolution. Thus, to explain the evolution of Consciousness in the grand theory of evolution of all living things start with the theory of Intentionality-The Intentionality to survive (by all living organisms), or intentional activities of survival not only by humans and animals but the intentional activities of survival by plants too. The intentional urge to survive and pass on their genes to perpetuate their species by plants is even more intriguing and more interesting than the theory of 'survival of the fittest' in the animal world that was employed as a legitimate argument by Darwin to pacify the Newtonian scientific viewpoint of accepted rigorous scientific method.

There is no room in this Paper to explain the different levels of consciousness in plants and the rest of the 5 taxa of living things that rely on their Cosmic Consciousness for their intentional activities of survival. The natural urge of plants to survive and pass on their genes through reproduction by means of (crosspollination and seed dispersion) by plants is explained in my upcoming book: "Consciousness and Intentionality of Plants". The book draws much information from David Attenborough's (1995) book; The Private Life of Plants, on the intentional activities of survival by plants and other species that have been documented by many world renowned biologists, botanists, gardeners, and researchers revealed by Mr. Attenborough [11]. This way, scientists will no longer be able to ignore inquiry into the type of consciousness plants depend on for their intentional activities of survival to perpetuate their species as a result of categorizing Cosmic Consciousness as the type of consciousness for plant's intentional activities of survival, (as of the redefinition of Consciousness in this Paper). But does science not have the responsibility to find the type of consciousness plants have? Why not? Scientists, especially physicists claim the de facto authority of knowledge of the universe to the point of speaking about "String theory" and multiple universes, but physicists are unable to discover the consciousness of plants, a fact they can no longer deny or ignore? The world needs answers to questions such as; do plants have consciousness or not? What is the type of consciousness that is the source of plants' intentional activities of survival and perpetuation of their species? Answers to these questions about plants consciousness is my next research topic. Back to the evolution of human Consciousness, it is quite clear that the Consciousness of the present Homo sapiens that represent current existing human beings evolved and gradually progressed to a greater degree of rational capability than the Consciousness of the Neanderthals and early Homo sapiens that have died out. In other words, evolution of consciousness is the final trait of fine tuning of the species of organisms on earth through their innate characteristics of having Consciousness and the urge of Intentionality to survive. Hence, the absence of life on earth's close neighbors, Mercury, Venus and Mars is an indication of the absence of consciousness and incompleteness of fine tuning of the other planets in our local Solar System. Thus, this Paper started by proving the dualism of Consciousness, to the division of labor between the two different types of Consciousness, to the joint operation of the dual consciousness, to the evolution of Consciousness in other living organisms such as plants.

In spite of these facts, Identity theorists, physicists, and neuroscientists who have no idea of the existence of Cosmic Consciousness, and who think that the brain-derived Objective Consciousness is the entire consciousness of a person, further extrapolate that the brain and consciousness are one and the same thing. The big problem with the claim by Identity theorists and neuroscientists' that the brain and consciousness are one and the same thing amounts to a layperson saying that computer hardware and computer software are one and the same thing. It also amounts to equating Google search engine to Google computer severs being one and the same thing which is obviously not true. On the other hand, people who were born before the invention of computers and cellphones know that there is a vast difference between computer hardware and computer software. And nobody in their right mind ever equated computer hardware that are manufactured by specific companies to internet search engines that were invented and are maintained by different persons who had no hand in the invention and manufacturing of computers. Thus, for Identity theorists, physicists and neuroscientists to equate Consciousness and the brain as one and the same thing is similar to equating computer hardware to computer software. This Paper hopes that from now on, no Identity theorist or neuroscientist is going to wrongly assume that the brain, a physical (material organ) and its Consciousness which is a nonphysical (immaterial substance) are one and the same thing, just as nobody in their right mind can argue that a desktop computer hardware which is a physical object and the internet which is a nonphysical computer software for mental applications are one and the same thing.

The Supremacy of Dualism

Binary nature of Cells: First of all, like the atoms of matter, cells are the basic blocks of all living organisms and cell division

also known as binary fission is a form of natural dualism that indicates natures' adoption of dualism, the duo, or Nature's pairing of clones of DNA as an unavoidable process of creation. "In the process of binary fission, an organism duplicates its genetic material or DNA and then divides into two parts (cytokinesis) with each new organism receiving one copy of DNA" through mitosis or meiosis (*Encyclopedia Britannica*) .So there is dualism of cells and dualism of consciousness. Nature itself at the basic level makes dualism its supreme process of expansion for the perpetuation of life. Furthermore, "the binary system is the basis of digital computers that s used to represent data or in a machine-readable form". There goes the supremacy of dualism. On the other hand, monism or the mono, or Uno, as opposed to dualism are rarely found in nature as a mechanism of growth or expansion of any organism.

Even religion proclaims the supremacy of dualism by stating that a supreme being created all animals in pairs, two of every kind, male and female. And in spite of the attempt of making Adam the Alpha, macho, mono, Man as the head of all creatures on earth, the creation of Man could not be completed until the supreme being was compelled to create Adam's dual and opposite half namely Eve. Thus religion confirms the supremacy of dualism in Adam and Eve. That is how powerful the supremacy of dualism is everywhere in nature. The different concepts in philosophy that are in position to dualism are; monism, panpsychism, and physicalist. With regards to monism, it is clear from the above analysis of both monism and dualism that nature has demonstrable chosen dualism over monism. With regards to panpsychism, panpsychicsm blends animate objects with inanimate objects which is an impossibility. An organism is either animate with sensitivity and sentience like a plant or an animal, or an object is inanimate like a piece of rock with no level of sentience at all. Thus, a piece of rock can never be animated to become as sensitive as an organism. Physicalism is the opposite of panpsychicsm. Physicalism's denial of the existence of consciousness in organisms is totally off the rails when it comes to the question of Cosmic Consciousness as an emergent property of the earth.

This Paper started the redefinition of consciousness by explaining the dual nature of consciousness as consisting of a primary consciousness called Cosmic Consciousness and a secondary consciousness (derived directly from the human brain) known as the brain-derived Objective Consciousness of each person. Clearly, basing the proper definition of consciousness on the dual nature of consciousness makes dualism (in contrast to monism of consciousness) a very important concept that deserves rigorous scientific inquiry. Hence, this Paper advocated the concept of the supremacy of dualism as the common denominator in the constitutional nature of all living organism including us human beings. The dictionary defines dualism as: "Dualism" (from the Latin dualis, meaning "containing two") refers to a philosophical system or set of beliefs in which existence is believed to consist of two equally real and essential substances such as mind and matter and/or categories such as being and nonbeing, good and bad, subject and object (Google Scholar). But our understanding of dualism (as explicated in this Paper), goes far beyond that. In all types of living organisms that emerged on earth, their continuation and perpetuation of life was based primarily on dualism or the dual nature of each organism. This is how the digit 2, or the duo, di, or a pair of 2 opposite parts interacts to form to form a complete new organism.

However, the interpretation of the number 2 or duo in dualism has to be pair of complementary opposites and not just 2 ordinary numbers or just 2 pairs of the same organisms grouped together. Dualism's pair has to be not just opposites, they have to be necessarily complementary to each other. And the opposites or opposition should be completely opposite to each other as scientifically demonstrated by the north and South poles (N, S,) of a bar magnet, and also as seen in the opposites of matter and energy, body and mind, male and female, as magnetism in a loadstone demonstrates. Two males standing together do not form a pair of dual men, in the same way 2 females grouped together do not form a pair of dual females Dualism's pair of opposites and complementarity to each other is also clearly demonstrated by a pair of scissors, a pair of shoes, and also in monist-pairs such as in egg-white and egg-yolk in an egg. The Chinese Yin and Yang symbol that is mono on the outside but are a pair of opposite complementary natures intertwined within a monist object also clearly demonstrate what an object with dual natures look like. In other words, the foundational basis of dualism is opposition and complementarity that allows utility of an object or the self-perpetuation nature of any organism. It is the oppositional and complementary self-perpetuation between an egg yolk and egg white within an egg that results in an egg hatching into a chicken. In other words, life does not exist in a monist state and life cannot thrive in a monist state. Life can only exist in a dual state based on the foundational principles of opposition and complementarity found in dualism. Since such is the case that life can only begin, exist, thrive and perpetuate itself only in a dual state, there goes the supremacy of dualism. Thus, there is no living organism in nature that escapes the dualism of opposite and complementary nature as a fundamental requirement of existence. In other words, life as we know it cannot exist and perpetuate itself in a monist state without the foundational principles of opposition and complementarity of dualism. Since, life cannot exist nor be self-perpetuating without being dual or without having the dual natures of opposite and complementarity, this makes dualism, (the dual pair of opposites and complementary nature) or the number 2 or duo the most important number of life in all of nature.

Life cannot exist or persist without having a dual nature. Is this not the fundamental nature of organisms? This means there is no chance that any organism can exist in a monist state and be able to perpetuate itself in the world. All life, all organisms have to have the dual nature of opposites and complementarity in one way or the other in order to exist, survive, reproduce, and perpetuate their species. In other words, dualism underpins and underwrites the very existence of life and consciousness (even consciousness has to be dual) in all living things. And the requirement of opposite and complementarity within dualism guarantees the supremacy of dualism over any other concept such as physicalism, panpsychism, or identity theory. Thus, when it comes to the nature or survival of organisms or substances in the world, dualism is king. Dualism or the duo trumps all digits and numbers for the existence and perpetuation of life of all living organisms on earth. Thus, out

of all the digits from (1-9) the number (2) which represents the duo as in the Dualism of Descartes body and mind, or as in the symbol of the Chinese yin yang, is the most important digit. That means, Dualism or the dual nature of reality is the supreme concept in numerology. The reason is that life on earth and all living organisms can thrive and be able to perpetuate themselves at the fundamental level in a dual state only. The opposite is also true that the continuation and perpetuation of all species of living things in the world cannot thrive in a monist state. Therefore, the dual state or dualism is the fundamental nature of every organism that exists. For example, an entity or organism may appear monist or in a monolith state such as an egg, a seed, or even the human brain, but in reality each of these examples has a dual nature within their monist appearance.

Dualism's pair of opposites is not only replete in the human body, duality is excessive all over the human physical body. To appreciate the level of prevalence of dualism's pair of opposites and complementary organs in the human physical body, consider these facts: The human head alone sports 7 pairs of organs namely, a pair of eyes, a pair of ears, a pair of nose holes a pair of lips, 2 sets of teeth, a pair of jaws, and the pair of left-brain and right-brain. So many pairs of sensual receptive holes on the human head. Not to be outdone, the human body consists of a pair of hands, a pair of feet, a pair of buttocks, a pair of large and small intestines, 2 chambers of the heart, a pair of balls/gonads, a pair of nerves namely veins and arteries, muscles and bones, a pair of fluids to run the body namely water and blood, white corpuscles and red corpuscles, venal nervous system and sympathetic nervous system and a pair of kidneys. Together these form another 12 pairs of systems and organs in the body. What part of the human body is not underpinned by dualism? Human life cannot exist, thrive and perpetuate the human species except in the dual pairs of male and female. Without this dual opposite and complementary nature of males and females, life will come to a screeching halt. The same thing applies to Consciousness such that consciousness is dual namely Cosmic Consciousness and the brain-derived Objective Consciousness. There is dual body and mind. Even the brain is dual in the form of (left-brain, right-brain). The human physical body is replete with numerous pairs of body parts beginning with the X and Y chromosomes of the pair of 23 chromosomes. There is the dual pair of sperm and egg that forms the fetus. And to top it all, a pair of dual parents of mother and father for life to perpetuate itself in the human species.

Here are some of the nonliving entities with dual as well as opposite and complementary natures that makes any action possible for example, matter and energy, fluid and solid, order and chaos, the Chinese Yin Yang, static and kinetic, acidity and alkalinity, particle and wave, chaos and fine tuning. What objects or substances can exist or persist in a monist state without some form of a dual opposite and complementarity state? What are the lists of objects that exist in the moist state? Let us start with an egg that can be held in the palm or tossed up and caught in the palm. However, inside an egg is a dual pair of opposites in the form of egg-yolk and egg-white. The same thing can be said of any grain or seed. Clearly, the number 2, or dualism's pair of opposites is the number of life in the entire world. And the supremacy of dualism necessarily makes monism, or the mono unstable and unable to sustain life or maintain the continuation and perpetuation of life in any living thing, or even in nonliving-mechanical things. This makes monism or the mono, the most insignificant and improbable number for the building block of life or the building block of any mechanical system. Therein lies the supremacy of the concept of dualism over concepts such as physicalism, panpsychism, or identity theory. Thus, dualism rules supreme. Dualism ensures the continued existence of life.

Principle of Opposites and Complementarity in Dualism: (Bohr's Complementarity)

The principle of complementarity used in this paper is used as the opposite of Bohr's (1927), principle of complementarity in physics where instead of one of the opposites suppresses the other. In this instance, the dual opposites within an organism interact and complement each other in order to start any action of growth and maturity of any organism. In that case, the principle of complementarity becomes the necessary triad of the principle of opposites in dualism. That is, for the dual opposites in any organism to successfully interact, they have to be complementary to each other. Nonetheless, Bohr recognized the psychological nature of the principle of complementarity as an inescapable part of the particle-wave duality. 90 years ago in 1927, at an International Congress in Como, Italy, Bohr gave an address which is recognized as the 1st instance in which the term "complementarity", as a physical concept, was spoken publicly [1], revealing Bohr's own thinking about Louis de Broglie's "duality". Bohr had very slowly accepted duality as a principle of physics: Close observation of any quantum object will reveal either wave-like or particle-like behavior, one or the other of 2 fundamental and complementary features. Little disagreement exists today about complementarity's importance and broad applicability in quantum science. Book-length scholarly examinations even provide speculations about the relevance of complementarity in fields as different from physics as biology, psychology and social anthropology [12].

Thus, the use of complementarity in this analysis is more like psychological complementarity of opposites not only in romance but complementarity of dual substances in every organism. This is because within the dual state of monist objects such as an egg, or seeds and as in the symbol of yin/yang, it is the complementary nature of the dual opposites that makes any organism active. The complementary dual parts influence each other, mix and interact to divide, replicate and multiply within each monist organism as a process of enlargement, growth replication that leads to self-perpetuation of the life of any organism or species of living things. The problem that yin/yang opposites in any monist organism face is that the self-expression that the yin/yang in any organism seeks for growth and multiplicity always needs a third condition namely complementarity of the dual opposites in order for any action within an organism to succeed. Without the complementary interaction (as the third condition) between the dual opposites in an organism, there is no fulfilment of the self-expression between the yin and yang in an organism. Interestingly, while Chinese metaphysical philosophy remained attached to the supremacy of dualism expressed by the yin/yang symbolism,

Western philosophical thought placed more importance on the inescapable third condition of complementarity with an organism in the form of the triad, triune, The Trinity, and the digit 3, as the necessary driver of self-expression between the yin and yang in an organism that results in the formation new organisms out of the interaction between dual opposites. This is how the importance of the triad (representing Complementarity-the 3rd condition) as a symbol of the completeness of self-expression and perpetuation of life appears in religious metaphors such as the father-mother-child, the equilateral triangle, The Holy Trinity, as well as Hindu triune gods of Brahma Vishnu and Shiva, the 3rd Dimension, etc. In other words, although the supremacy of dualism is beyond contest, it is the complementary interaction between the yin and yang of dualism that makes the recurrence of the multiplicity of self-perpetuation of organisms possible. Nonetheless, the concept of dualism reigns supreme over monism, panpsychism, physicality, and Identity theory.

The Concept of the Emergence of Consciousness as an Emergent Property

The term "Emergence describes the distinct patterns and behaviors that can arise out of complex systems". Emergence as a concept "plays a role in theories of integrative levels and of complex systems. In philosophy, theories that emphasize emergent properties have been called emergentism". Some emergent phenomena take the form of simplicity emerging from complexity: temperature and density are properties relating to the motion and arrangement of large groups of atoms or molecules (*Encyclopedia Britannica*). The important explanation of an emergent property is that although an emergent property is not obvious at first, and it cannot be seen or discerned from the component part of a complex object or a machine, it comes out as specific trait, or quality that enhances the ability of the complex entity that was not present before. This is why it has been said that the whole is more than the sum of its parts. An analogy of the emergent property that comes out of three different types of aircrafts namely, a passenger airplane, a fighter jet, and a spaceship will make the case for emergent property clear. Granting that speed or acceleration is an emergent property of an aircraft, one can see the different types of speeds in the three aircrafts in this discussion. The speed of a jet fighter is many times faster than a regular passenger airplane. But the speed of a spaceship is also several times faster than a jet fighter. In other words, the emergent property of speed of a passenger airplane is different from the emergent property of a jet fighter and so is the emergent property of a spaceship from a jet fighter.

On the other hand, another intriguing concept that is closely related to the emergent property of a complex object or machine is the concept of fine tuning. The question is; what accounts for the different speeds or different emergent properties of speeds of the three different aircrafts under discussion? The unmistakable answer is fine tuning. The increased or higher fine tuning of each aircraft, or else is there any way of describing the different or increased speeds of the three aircrafts in question? Furthermore, bicycles, cars, and trains are ground travel machines with different speeds of motion. But the speeds of bicycles, cars and trains cannot compare to the speeds of passenger airplanes, fighter jets, and spaceships. Again what accounts for the difference in the speeds of ground travel machines and aircrafts? Once more, the inescapable answer is fine tuning, the fine tuning put in aircrafts to take off from the ground into the air to achieve higher levels of speed. These two analogies of the appearance of emergent properties of complex objects or complex machines proves that first, fine tuning and emergent properties of an object whether natural or manmade machines are interrelated to the point that they are inseparable. Second, this indicates that emergent properties of any object or machine, whether natural or manmade is intrinsically dependent and derives from the level of fine tuning an object or machine achieves.

Back to the list of seven properties of the earth including Cosmic Consciousness listed below in this Paper, the earth could not acquire those emergent properties (which are absent on earth's sister terrestrial planets Mercury, Venus, and Mars) without a high level of fine tuning by the Sun's energy due to the central position of the earth within the Goldilocks. So, the high level of fine tuning of the earth as opposed to no fine tuning of the three terrestrial planets Mercury, Venus, and Mars have been accounted for with the analogy of the high level of speeds of aircrafts compared to the speeds of ground travel transportation. Back to the concept of emergentism, the dictionary states that, "First, that emergentism is a theory about the structure of the natural world; and, consequently, it has ramifications concerning the unity of science. Second, that emergence is a relation between properties of an entity and the properties of its parts" As with regards to the concept of emergentism, it is stated that "Within the philosophy of science, emergentism is analyzed both as it contrasts with and parallels reductionism. This philosophical theory suggests that higher-level properties and phenomena arise from the interactions and organization of lower-level entities and yet not reducible to these simpler components". As a result of the foregoing definition of emergence, an example of an emergent property in philosophy could be a philosophical and scientific interpretation of consciousness. That is, individual neurons within a human brain do not possess the property of consciousness by themselves".

However, the term emergence and the concept of emergent properties (of the earth) as applied in this Paper refers specifically to the existence of life and everything else that sustains life on earth, as compared to the absence of those same things that should sustain life on Venus and Mars. In other words, every natural thing that sustains on earth are emergent properties of the earth. Hence, here are a list of natural things that are emergent properties of the earth

1. Life, life – namely all life is an emergent property of the earth.
2. Electricity is an emergent property of the earth
3. Magnetism is an emergent property of the earth
4. The Universal Constants are the emergent property of the earth
5. Cosmic Consciousness is the emergent property of the earth

6. Evolution of life is an emergent property of the earth that is why all living things evolve.

7. And of course matter and energy are emergent properties of the earth.

In other words, all of these emerged on the earth after the newly formed earth acquired the ability of sustaining life on its atmosphere as a results of the high level of fine tuning of the earth by the Sun's heat energy. The level and intensity of the Sun's heat energy on the planet earth is the result of the central position of the earth within the Goldilocks. The Goldilocks is a huge orbital region that covers the first four planets closest to the Sun, known as terrestrial planets that have the possibility of sustaining life on their atmospheres. Terrestrial planets are four planets within the Goldilocks zone that are baked into hard rocky orbiting planets in the Solar System including the earth. With regards to the emergent properties of the earth, we have mentioned, life and living things, the Goldilocks, and fine tuning of the earth as part of the seven list of natural things that are emergent properties of the earth. What this means is that life, the Goldilocks, fine tuning of the earth and emergent properties of the earth are all interrelated to each other and their overall connections is what is being revealed in this research.

The eight planets of the solar system

The eight planets in the Solar System are divided into three groups of planets. The first four planets closest to the Sun namely Mercury, Venus, Earth, and Mars are baked into hard rocky orbiting objects by the high intensity of the Sun's heat energy known as terrestrial planets that have the possibility of sustaining life on their atmospheres. The next two planets namely Jupiter and Saturn are known as icy cold solid planets that are incapable of sustaining life on their cold atmospheres. And the last two planets namely Uranus and Neptune are so far away from the Sun's heat energy that they are known as gaseous planets. Thus the significance of the arrangement of the eight planets orbiting around the Sun is that this picture perfectly explains the planets are capable of sustaining life are the four terrestrial planets that receive heat from the Sun's energy. It also explains which planets are simply incapable of sustaining life at all namely, the two icy cold planets as well as the two gaseous planets that do not receive any heat energy from the Sun. However, out of the four terrestrial planets that are capable of sustaining life on their atmospheres, only the earth have been found to sustain life. So, why are the three terrestrial planets Mercury, Venus, and Mars unable to sustain life on their atmospheres?

Reasons why mercury, venus and mars are unable to sustain life

According to NASA science and NASA probes sent to the planet Mercury, the atmosphere of Mercury being too close to the Sun heat energy (Mercury is only 36.04 miles from the Sun, is so hot that water dries out at the surface of Mercury's atmosphere. So, Mercury cannot sustain water on its atmosphere and therefore it cannot sustain life on its atmosphere. On the other hand, the reason why there is no life on Venus, "Venus doesn't have an appreciable field of magnetosphere because there appears to be little convection in its molten interior". NASA Science has indicated that too much methane on Venus, makes the atmosphere of Venus too hot for fragile life as we know it. With regards to Mars, Mars doesn't have an appreciable field of magnetosphere either although it did in the past – because its interior has solidified" (NASA Science.net). "Mars has a weak remnant of a magnetic field emanating from its crust, but it's a feeble phenomenon that provides little protection". The loss of its magnetosphere was catastrophic for Mars". science. nasa.gov. "How did Mars lose its water? They were mostly lost to space early in Mars's history, in processes driven by the Sun's UV photons and solar wind after Mars lost its magnetic field. Mars today is a cold, dry planet. Its temperature averages 50 K below freezing point" (NASAscience.gov.), it appears that Mars, which is 141.6 million miles away from the Sun's heat energy at the far edges of the Goldilocks) is quite soft and a bit too cold for life to exist on Mars (NASA Science.net).

Reasons why the earth is the only planet with life

The apparent reason why there is life on earth as opposed to no life on Mercury, Venus and Mars may arise from two propositions. The first and foremost factor is the earth's central position in the Goldilocks where it is not too hot nor too cold that allows water and life on the surface of the atmosphere of the earth. The second proposition is the high level of fine tuning of the atmosphere of the earth by the heat energy of the Sun that allows life as we know it (LAWKI) to exist and thrive within the atmosphere of the earth. Thirdly, the high level of fine tuning of the atmosphere of the earth that allows the list of seven natural mechanisms namely, life, electricity, Magnetism, the Universal Constants, Cosmic Consciousness, Evolution, matter and energy listed earlier to occur on planet earth. So, the earth checks all seven natural things that allows LAWKI to exist and thrive that are not found on any of the earth's sister terrestrial planets Mercury, Venus and Mars. These observations have been lying under right under the nose of physicist, cosmologists, astronomers and the scientific community all along. We have already explained the source of the emergence of Cosmic Consciousness out of the physical earth, and the emergence of brain-derived Objective Consciousness of individual persons out of their brains in the preceding pages. With regards to early emergentists who 1st surfaced the ideas emergence. Lewes (1875) stated that 'Emergence in evolutionary theory is the rise of a system that cannot be predicted or explained from 'antecedent conditions' [13]. Exactly, especially in connection with living things that emerged as microbial organisms that later evolved into bigger and different organisms such as animals and us humans. British Emergentism reached its most developed form in C.D. Broad's: The Mind and Its Place in Nature (1925) [14]. Broad uses an epistemological criterion for what he intends to be a metaphysical condition of emergent autonomy: In the last chapter of his monumental The Mind and Its Place in Nature, Broad defends an emergentist position with respect to the relation between mind and matter: Mental properties are, in his opinion, distinct from physical properties; they are properties that emerge when neurophysiological processes have attained a sufficiently high degree of complexity (Stanford Encyclopedia

of Philosophy). Polanyi (1925), while stated "the levels of being and knowing all pertain to the concept of emergence to name a few ideas that supports the concept of emergence of consciousness" [15].

However, none of these theorists of the concept of emergence of human Consciousness ever proclaimed the idea that our Planet earth achieved the type of consciousness known as (Cosmic Consciousness) as its emergent property of intelligence. In other words, nobody has ever stated that Cosmic Consciousness comes from the earth except this Paper. On the other hand, this Paper claims that our Planet Earth attained the type of consciousness known as Cosmic Consciousness as it's emergent property of intelligence that underpinned the development of life and evolution of living organisms including us humans. This means the development of life on earth coincided with the appearance of intelligence of consciousness on earth known as Cosmic Consciousness that inhered, infused and animated all forms of organisms as living things. This is how animate organisms of life are differentiated from inanimate objects such as water, metals, and rock. This is why consciousness cannot be separated or severed from the body of any living organism be it plant, animal, or human. Any living organism (again be it plant, animal, or human) has to have consciousness or die and cease to exist. The emergence and infusion of Cosmic Consciousness in the fabric of the earth as its emergent property of intelligence is what makes the earth capable of producing living organisms that thrive, otherwise there would be no life on earth. The next important concept of the emergence of consciousness is that apart from the emergence of Cosmic Consciousness (as the earth's property of intelligence) which is fundamental to all living things, each living organism (that has a brain such as animals and humans) also developed separate individual consciousness based in the brain known as the brain-derived Objective Consciousness of human beings that neuroscientists equate to the brain [5]. Other philosophers, and psychologists such as Teilhard de Chardin's (1881) "cosmic evolution" may have suggested "the moving towards higher forms of consciousness", but nobody has ever definitively claimed that Cosmic Consciousness is an emergent property of our planet earth [16].

The 2 types of claims of the dual sources of consciousness namely, one type of consciousness as the emergent property of the material physical earth and the second type of consciousness as the emergent property of the human physical body, controversial as they seem, are no doubt the dual sources of human intelligence. This is from the fact that consciousness either Cosmic or brain based is an emergent property of two different physical bodies namely the earth and brain of a person. One type of consciousness is from the physical body of the earth while the other type of consciousness is from the physical brain of each person, a fact that is hard to imagine but factually true. And facts are facts, as this Paper has provided detailed explanation of the dual sources of consciousness in the preceding pages above. This Paper explains the high level of fine tuning of the earth's atmosphere that led to the earth's acquisition of the emergent property of intelligence known as Cosmic Consciousness which is known in philosophy and psychology as The Subconscious Mind. As the emergent intelligence of the earth Cosmic Consciousness permeated all organisms of the entire earth. Cosmic Consciousness inhered and infused all organisms of the earth and animated all organisms of the five taxa into conscious living things with intentionality and the innate urge to survive. As Planet Earth's intelligence, it is Cosmic Consciousness' inherence and infusion in the material and physical bodies of organisms that animated organisms into living things just as magnetism that inheres a loadstone animates every particle of the lodestone. Without the earth's intelligence of Cosmic Consciousness infusing and animating the physical bodies of organisms there would be innate urge for survival by any organism including us humans. This is how all forms of life of the five taxa are the animated expressions of the earth's (emergent property of intelligence) known as Cosmic Consciousness.

DISCUSSION

Supervenience

How cosmic consciousness animated life (and created living organisms): "In the 1970's and 1980's the concept of supervenience figured in philosophical debates as a promising way to shed light on the mind-body problem. According to the standard view in metaphysics and philosophy of mind, supervenience is a relation between two sets of properties such that: 1), they vary together in a regular way. 2) One set somehow determines the other. 3) That the two sets are different in kind. For example, mental properties can be said to supervene on physical properties if they are covariant and if physical properties are more basic than mental properties. Likewise, baldness supervenes on the distribution of hair, computer operating systems supervene on computer hardware, or what one might choose say what Kim (1984) calls "strong" supervenience (Stanford Encyclopedia of Philosophy).

With regards to the question: What is Supervenience? The core idea of supervenience is captured by the slogan, "there cannot be an A-difference without a B-difference" [17]. First of all, Supervenience is related to Grounding and Ontological Dependence. However, let those who want to nitpick the difference between Grounding and Ontological Dependence have their arguments. The way supervenience is explained in this Paper is similar to how magnetism in a loadstone can extend itself outside the loadstone to affect steel and iron (iron filings) close by, as taught in High School physics class. Specifically, supervenience means the ability of the electrons of magnetism to move upward or downward through the molecules of a loadstone all the way outside of the confines of a piece of a loadstone to form a magnetic field around any piece of loadstone [18,19].

In other words, when a piece of metal is magnetized, it means that electrons of magnetism (transferred to the piece of metal in question) has through the magnet's power of supervenience moved up, down, and sideways throughout the piece of metal that has been magnetized. More importantly, Supervenience is how magnetism within a loadstone extends itself beyond the confines of a piece of a loadstone to form a magnetic field around the piece of loadstone such that a magnetized loadstone is attracts iron filings from a distance. The same mechanism is how a loadstone affects electrically conducting materials close to a loadstone. The reason why magnetism in a loadstone can

extend itself outside the loadstone is that the magnetism in a loadstone has a downward or upward causation as well as an all-directional causation capability within a loadstone known as Supervenience. Similar to magnetism, and in the case of living organisms especially animals and us humans, Cosmic Consciousness' infusion in the material bodies of all living organisms works like magnetism in a piece of a loadstone.

Thus, both magnetism in a loadstone and Cosmic Consciousness in the human body have downward, upward, and all-directional causation capability to extend themselves beyond the material bodies they inhere. In the case of animals and humans, their Cosmic Consciousness can move any part of their bodies such as legs, hands, and the entire body to action through the innate sensitivity of reflex-action within their bodies. The magnetic field around a loadstone affects iron filings close by through the mechanism of attraction and repulsion. Similarly, the supervening capability of Cosmic Consciousness in a person uses the mechanism of reflexes of the muscles to extend any part of the body (e.g., hands, legs, etc.), to act in an effort to change the environment through instant reflex-action.

The Reflex action of any organism is its basic innate supervenient causation capacity (which all living organisms have) as a result of having Cosmic Consciousness as part of their innate intelligence in the natural world. Even some plants show reflex action their leaves e.g., the Mimosa Pudica, the carnivorous northern Pitcher Plant (Sarracenia Pupurea), Venus fly trap plant, South African Sundew plant. Plants also show reflex action in their roots in the soil especially, when the roots of one plant bumps into the roots of different plant species in their competition to search for nutrients in the soil [11]. On the other hand, thought supervenience or mental supervenience which also moves the body of a person to action deliberately as opposed to instant reflex action of human beings arise from the brain of a person through the second type of consciousness described in this Paper as the brain-derived Objective Consciousness of a person. To be clear, the Cosmic Consciousness in a person uses the mechanism of instant reflex action to move a person to action, while the brain-derived Objective Consciousness of a person moves the person to action through the mechanism of thinking. In other words, both reflex action and thinking are the two supervenient mechanisms of activities that human beings use for thought and behavior. Hence, reflex action and thinking are the mechanisms of how Consciousness supervenes in all parts of the human body to move a person or any part of a person's body to action and behavior. The supervening capability of the two types of consciousness to move any part of the physical body of a person to action through either reflex action or thinking (Cogitation) solves the problem of how people sometimes act without thinking and how sometimes people act only after thinking out an answer to a problem.

Earth as a giant loadstone of (cosmic consciousness) similar to a magnetic loadstone: Scientists view the earth as a giant ball of magnetic planet where magnetism is diffused throughout the earth from north to south (e.g., the North Pole and South Pole magnetic fields) show how magnetism surrounds the earth and protects the earth from harmful UV rays of the Sun. Similarly, pan-psychics, clerics, religious devotees, and mind theorists view the earth as a giant loadstone of intelligence known as Cosmic Consciousness (the subconscious mind) infused throughout the earth that animates (i.e., supervenes) all organisms and living things including human beings that are products of the earth. The infusion of Cosmic Consciousness in the material physical body of the earth makes Cosmic Consciousness the core innate intelligence of all living organisms including us human beings. As the intelligence of all living things, Cosmic Consciousness and the physical bodies of organisms and humans are fused together in such a way that the physical bodies of human beings and their Cosmic Consciousness cannot be separated or severed from each other without the demise and disintegration of the physical body of a person. This is the definition of ontological emergence of consciousness that gives Cosmic Consciousness the intrinsic downward causation or upward supervenient causation capability in whatever direction within the human body.

This is how consciousness also known as mind is able to move any part of the physical body of a person such as the hands and legs of a person through the mind's (consciousness) supervenient capability of downward and upward causations. The fact is that scientists are baffled as to how an immaterial consciousness centered in the brain of a person is able to move any part of the physical body such as the hands or feet of a person to action, until one factors in the supervenient power of upward and downward causation capability of consciousness over the physical body of a person. This is how one type of substance (e.g., consciousness) in a person can affect a different type of substance in the same person (e.g., physical body) is explained herein by the superveient power of consciousness (mind) over the physical body. The supreme example of one substance (magnetism) affecting another substance different from itself in (the same physical body) is magnetism in a loadstone, where the non-material magnet infused the physical body of a loadstone exerts its magnetic supervenient capability to extend itself not only throughout the loadstone, but also outside the loadstone to form a magnetic field around the loadstone. Similarly, human Consciousness also has supervening capabilities to extend itself throughout the physical body to move any part of the physical body to action and behavior a person wants. Therefore, it is the explanation of supervenient capability of consciousness (mind) over anything physical (body) that stymied 17th Century Descartes.

The goldilocks and fine tuning of the earth: For the purposes of clarity, the word Goldilocks refers to the specific orbital zones within the radius of the Sun's heat energy that covers the first four planets Mercury, Venus, Earth and Mars the Solar System. Beyond the Goldilocks zone which stretches from the remaining four planets namely, Jupiter, Saturn, Uranus, and Neptune do not enjoy any heat energy from the Sun. Fortunately or unfortunately, the word Goldilocks has been applied to many other things and conditions in popular language such as; the Goldilocks Principle in cognitive science, the Goldilocks theory, the Goldilocks hypothesis, Goldilocks conditions of life, Goldilocks trait and Goldilocks Rule etc. However, the Goldilocks mentioned in this research Paper refers specifically to the zone of the Goldilocks observed in the Solar System. The first four planets closer to the Sun's heat energy source have been baked into hard, rocky orbital planets known as terrestrial planets capable of sustain water and life within their atmospheres. However, only one of the four terrestrial planets

namely the earth has been found to sustain water and life within its atmosphere. Life has not been found the remaining three terrestrial planets, Mercury, Venus and Mars. Although the planet Mercury is in the Goldilocks zone, Mercury which is closest to the Sun's heat source has been found to be too hot for life to exist on its atmosphere. On the other hand, Mars which is farthest away from the Sun within the Goldilocks zone seems to be a little too cold for life. Hence, it is clear that it is the planet that sits in the center of the Goldilocks namely, the Earth, that became highly fine-tuned for the existence of life as we know it (LAWKI) as the dictionary reaffirms it thus: "Also called the habitable zone or life zone, the Goldilocks region is an area of space in which a planet is just the right distance from its home star so that its surface is neither too hot nor too cold. Earth, of course, fills that bill, while Venus roasts and Mars exists as a frozen world".

Thus, when it comes to life on earth, what accounts for the existence of life on earth is first and foremost the earth's central position sandwiched between Venus and Mars within the Goldilocks that allow the earth to sustain water on its surface as opposed to Mercury, Venus and Mars. The second crucial factor for the existence of life on earth may be the high level of fine tuning of the earth's atmosphere. In this case, life can be regarded as the emergent property of a planet. And the ability of a planet to achieve the emergence of life on its atmosphere is related to the level of fine tuning of such a planet's atmosphere within the Goldilocks zone or habitable zone of the Solar System. So, these three factors are related and interdependent namely, a) the favorable position of a planet within the Goldilocks, b) that allows a high level of fine tuning, and c) that results in the emergence of life on such a particular planet vis a vis its sister terrestrial planets. The earth checks all three factors, whiles its sister planets Mercury, Venus and Mars do not. Proof of the interrelatedness of three factors namely, a) favorable position of a planet within the Goldilocks of a Solar System, b) the high level of fine tuning arising out of the level of the Sun's heat energy in the Goldilocks, and c) the existence of life as an emergent property of such a planet, which is why life has not been found on any of the three remaining terrestrial planets Mercury, Venus, and Mars that lack the three factors mentioned above. Or else why is life found on earth, but there is no life on Venus and Mars?

The reason why no life has been found on any of the planets in the Solar System apart from the earth clearly relates to the high level of fine tuning of the earth and the lack of fine tuning of the atmospheres of Mercury, Venus, and Mars by the Sun's heat energy within the Solar System. Thus, it is demonstrably clear that the existence of life on a planet is closely related to the level of fine tuning or lack of fine tuning of the atmosphere of a planet. And the level of fine tuning of the atmosphere of a planet is directly related to the level of intensity of heat energy each planet receives from the Sun. This is because the degree of intensity of the Sun's heat energy that each planet receives on its atmosphere determines the level of fine tuning or lack of fine tuning of the atmosphere of each planet. Hence, fine tuning or lack of fine tuning of the atmosphere of a planet is one of the crucial basis for the appearance and existence of life on such a planet. It also means that the level of intensity of the Sun's heat energy on the atmospheres of each planet causes different levels of fine tuning or lack of fine tuning of the four terrestrial planets Mercury, Venus, Earth and Mars. The question is; was better fine tuning of the earth's atmosphere (as opposed to no fine tuning of the atmospheres of Mercury, Venus, and Mars) the main factor that led to the appearance of life on earth? The answer seems to be positively yes.

A fully fine-tuned atmosphere of a planet may be the first factor for the appearance of life on such a planet. The second factor for the appearance of life on a terrestrial planet relates to the level of intensity of the Sun's heat energy a planet received on its atmosphere that determines whether it was fully fine-tuned or not. The third factor for the appearance of life on a terrestrial planet is the distal and proximal distance of a planet from the heat source of the Sun within the Goldilocks. The Goldilocks is a vast expanse of orbiting space covered by the reach of the Sun's heat energy that congealed and baked the four planets Mercury, Venus, Earth and Mars into terrestrial planets. [20].

The fourth basis for the existence of life on a terrestrial planet is the presence of the universal constants as well as the Anthropic Principle. The earth is the only terrestrial planet that meets all four qualifications for the appearance and generation of life. This is why life is found on earth but life has not been found on any of earth's terrestrial neighbors Mercury, Venus, and Mars. As explained above, the Sun's heat energy falls strongest on the planet closest to the Sun (Mercury), but wanes soft on the planet farthest away from the Sun within the Goldilocks (in this case Mars). The vast distances of the planets from the heat source of the Sun makes it clear that fine tuning or lack of fine tuning of the atmospheres of each of the terrestrial planets in the Goldilocks is different from each other. Thus, the level of fine tuning of the atmosphere of a planet or lack of fine tuning of the atmosphere of a planet for the existence of life is the strongest piece of evidence why there would be life or no life on a planet within the Goldilocks. With Mercury being too hot for the existence of life and Mars being maybe a little too cold for life, this leaves Venus and Earth as the 2 terrestrial planets capable of generating life. However, NASA probes sent to Venus have shown unusual high levels of methane gas on the atmosphere of Venus that makes Venus incapable of sustaining life [20]. With the atmospheres of the 3 terrestrial planets Mercury, Venus, and Mars incapable of generating life (for now), this leaves the earth as the sole planet that was poised to be capable of generating life on its atmosphere. Now, the reason why there is life on earth but no life on Venus or any of the remaining terrestrial planets in the Goldilocks is clear as day and night. Mystery solved. The better fine-tuned atmosphere of the earth indicates that earth is the only planet in the Goldilocks that meets the 4 qualifications for the appearance and existence of life. This fact is made clear by the evidence that satellite probes sent to Venus and Mars; show hostile atmospheres to life because the atmospheres of Venus and Mars lack the level of full fine tuning for life as the earth's atmosphere is [20]. In other words, the 3 remaining terrestrial planets may still be undergoing some type of fine tuning by the heat energy of the Sun, but none of them has achieved the level of full fine tuning as the Earth does. Furthermore, the answer to why the earth's atmosphere alone has been fine tuned for the appearance of life is definitely be related to the earth's central position in the center of the Goldilocks. It must be pointed out

that Life as We Know It (LAWKI) is so delicate and fragile that the heat energy from the Sun cannot be too hot or too cold for the development of life. The heat energy from the Sun can only be mildly warm for the appearance and existence of life on any of the terrestrial planets but incidentally, the atmosphere of the earth alone meets the level of heat energy from the Sun within the Goldilocks for generating and sustaining fragile LAWKI as well as the 4 qualifications for the existence of life.

Thus, the earth's location in the center of the Goldilocks sandwiched between Venus and Mars is the profound reason why life exists on earth alone but nowhere else in the Solar System even in the Goldilocks. Thus, the main reason for the existence of Life on earth is all about location, location, location. Namely, the earth's central location with the Goldilocks. Logically, this is as clear as day and night regardless and in spite of the presence of the so-called Anthropic Principle or any influence of Gravity and the Universal Constants. Therefore, the Goldilocks region of the Solar System in which our Planet Earth is centrally located is the defining reason why LAWKI developed and exists on earth since life does not exist on any of the remaining 3 terrestrial planets, Mercury, Venus, and Mars. Otherwise, why is there no life on the 3 terrestrial planets that are the earth's next door neighbors? This is because life as we know it is so delicate and fragile that it depends (among other things) on a mildly favorable heat source from the Sun at a specific distance from the Sun's heat energy even within the Goldilocks. This brings to mind, the specific favorable fine tuning of earth as a result of the earth's central position in the favorable area of the Goldilocks. With the proper level of heat source of the Sun and a highly fine-tuned atmosphere of the earth that allowed water on the surface of the earth, organisms began to appear on earth in the dual form of physical bodies with inhere by Cosmic Consciousness as living entities. This is how all organisms exhibit consciousness that differentiates animate organisms from inanimate objects. This is also how the mental aspect of consciousness as opposed to the physical aspects of all organisms came into being as conscious living organism. And it is the inherence of Cosmic Consciousness in the physical bodies of organisms that infused life and the urge to survive, to reproduce, and to perpetuate their existence on earth. Hence, with the qualification of a fully fine-tuned earth primed for the appearance of life, earth's development of the emergent property of the physical bodies of organisms as well as the emergent property of intelligence called Cosmic Consciousness that inheres and sustain organisms as living entities followed as a matter of fact. This is how a fine tuned earth developed the emergent property of intelligence known as Cosmic Consciousness that infused, animated and instantiated sentience into organisms including us humans. On the other hand, there is no proof, or no experimental evidence that indicates the presence of life, mind or Consciousness exists on earth's 3 remaining terrestrial neighbors Mercury, Venus, or Mars.

The anthropic principle argument (of a Fine-tuned planet earth): Let us forget about the birth of the entire universe some 13.8 billion years ago for a moment. Scientists claim with dating evidence that our local Sun and its Solar System of 8 planets formed in the span of only 4.8 billion years ago. This makes the Solar System a very young celestial event in our local Milky Way Galaxy. According to scientists, the oldest rocks on Earth is 4.8 billion years as gleaned from the Introduction to Astronomy (Age and Origin of the Solar System). Regardless of the age of the universe, the age of the Solar System and the specific age of our local planet earth, this is how the Anthropic Principle goes: One of the remarkable features of our universe is that some of the constants of physics seem to be fine-tuned for the emergence of observers [21-24]. These fine-tunings-dubbed "anthropic" by Brandon Carter-have been studied for some 30 years and involve both the physical constants and various cosmological parameters. Some of them are summarized. As far as we know, these anthropic relationships are not predicted by any unified theory and, even if they were, it would be remarkable that the theory should yield exactly the coincidences required. Although anthropos is the Greek for "man", this is a misnomer because the fine-tunings have nothing to do with Homo sapiens in particular. They just seem necessary if an increasing degree of complexity is to develop as the universe expands and cools. This suggests that the anthropic principle should really be interpreted as a complexity principle. They just seem necessary if an increasing degree of complexity is to develop as the universe expands and cools. However, the multiverse proposal has led to a shift in the status of anthropic arguments because the constants may be different in the other universes. We have seen that this arises explicitly in the string landscape scenario and the constants may also vary in the different bubbles of the inflationary scenario [21].

Closer to home here on terra firma the second narrative of the fine-tuned earth is that scientists calculate that life appeared on earth about 3.7 billion years ago. That the environment on the earth was devoid of oxygen but high in methane for much of its history. That the Earth was not a welcoming place earlier on for the life of plants, animals and humans. That the earliest life forms known to Man were microscopic organisms (microbes) that left signals of their presence in rocks about 3.7 billion years ago. On the other hand, differences in the ages of the planets as well as the different distal and proximal positions of each planet's orbit around the Sun indicates different rates of fine tuning that took place in the Solar System [21]. Because of these differences in the rate of fine tuning among the 4 terrestrial planets in the Solar System, this Paper has proposed a natural explanation for the specific fine tuning of our planet earth compared to the 3 remaining terrestrial neighbors of the earth namely, Mercury, Venus, and Mars that are within the reach of the Sun's heat energy known as the Goldilocks. This Paper proposes that; Life as we Know It (LAWKI) can only exist on a terrestrial planet with a benign magnetosphere (such as the earth) as opposed to Mercury's scorching atmosphere or Venus' methane-hot atmosphere or Mars' has weak magnetic field, cold temperature, and lost magnetosphere.

Is there evidence of Earth's fine-tuning visa *via* Venus and Mars?: Scientists who dispute or disparage the connection between the Anthropic Principle and fine tuning of the planets focus only on the precise decimal numbers of the Universal Constants. These scientists point out that one degree more or less would skew gravity or some other universal constant which would have destroyed the earth's atmosphere without taking into account what caused the 4 planets Mercury, Venus, Earth and Mars to be terrestrial in the first place namely, the

Sun's heat energy. Without fine tuning of the atmosphere of the earth what would account for the appearance of life on Earth, and none existence of life on earth's terrestrial neighbors Venus and Mars?

One of the reason why living organisms thrive on earth is the protection magnetic field that protects life from the UV-rays from the Sun. "Generated by the motion of molten iron in the earth's core", earth's magnetic field protects our planet from cosmic radiation from the Sun Without the magnetosphere, the relentless action of the solar flare could strip the earth of its protective layers that shield living organism from the Sun's ultraviolet radiation. It's clear that this magnetic bubble was key to helping the earth develop into a habitable planet". (NASA science.gov.) "Researchers believe that Mars once had a global magnetic field, like Earth's, but the iron-core dynamo that generated it shut down billions of years ago leaving behind only patches of magnetism due to magnetized minerals in the Martian crust".(Institut Laue-Langevin https://www.ill.eu). Thus, the concepts of the Anthropic Principle of the fine-tuning of the earth advanced by Chemist Lawrence Henderson (1913), Physicist R H Dicke (1961), and Fred Hoyle (1984), are all valid and prescient claims for the fine-tuning of our Planet Earth [24-26].

Furthermore, this Paper sees celestial activities by the Sun's solar flares, the Sun's cyclic 11 year magnetic flips, the earth's acquisition of magnetosphere, and the earth's own magnetic flips once a while as evidence of the ongoing fine tuning of the earth. If both the Sun and Earth's magnetic flips and the Sun's solar flares (that are like a burning stove which seems to keep the furnace energized) stopped would that not affect the earth's atmosphere and life as we know it on earth? If such is the case, is that not a type of evidence of a sort of fine tuning that made the earth's atmosphere benign for the appearance and existence of life on earth?

On the other hand, it appears that the fine tuning of the earth may have been affected by the Universal Constants, the mild intensity of the Sun's energy, the forces of gravitational pull, the cosmological constant, the Sun's 11 year cyclic magnetic flips of Solar Minimum and Solar Maximum, the earth's acquisition of magnetosphere, and the earth's magnetic flips once a while as part of the continuous fine tuning of the earth. All of these celestial event may be the first part of fine tuning of earth's atmosphere. The second part of fine tuning of the earth that resulted in the generation of life was earth's dual development of the emergent properties of Cosmic Consciousness and the mechanism of the evolution of life [27-29].

So, the fine tuning of our planet earth was not caused by any specific single event such as the Cosmological Constant or the Anthropic Principle, but by all the list of seven natural events mention above. Furthermore, it appears that the earth's central position between Venus and Mars played a crucial role in the formation of the earth's perfect magnetosphere favorable for life in the narrow strip of benign area of the Goldilocks within the Solar system. This fact is so obvious. Or else, what evidence accounts for the emergence of life on Earth while life has failed to emerge on Venus and Mars? This is a simple discovery that has been lying under the noses of physicists, astronomers, cosmologists and philosophers all along at least since the 20th Century when scientists were able to send satellites probes to Venus and Mars that revealed that the atmospheres on Venus and Mars are hostile to life compared to earth's perfect magnetosphere that favors life. Perhaps a step by step list of how life emerged on earth would be in order viz; 1) such a planet (the earth) should be baked hard as a rocky terrestrial planet, 2) such a planet should be situated in the very center of the narrow band of favorable area in the Goldilocks and 3) such a planet should develop a perfect magnetosphere that may perhaps include the Universal Constants, the Gravitational pull or the Cosmological Constant that would be favorable for the emergence and sustenance of fragile life on earth. Perhaps somebody should write a mathematical equation or a law of how the earth was able to generate life besides the Anthropic Principle and the Universal Constants among the seven emergent properties of the earth.

CONCLUSION

We cannot complete a Paper that redefined Consciousness without recounting how scientists came to coin the term Consciousness which was called mind by philosophers (the human mind) for centuries. Hence, the conclusion of this Paper is better served by comparing the long journey of Mind to the short journey of Consciousness that has overtaken mind to the point that no philosopher wants to mention the human mind in any academic discourse and ask; is Consciousness different from Mind? What is the difference between Mind and Consciousness? To make the difference between Consciousness and Mind clear, we need to shine a light on the history of Mind. Therefore, the conclusion of this research has been as much about the history of consciousness as with the history of emergent properties, the history of fine tuning of the earth, the history of how the Sun's energy affects the planets, and the history of the role of the Goldilocks. It also involves the history of the reason why there is life on earth, but there is no life on earth's three terrestrial planets Mercury, Venus, and Mars, as illustrated by the different rates of fine tuning of the terrestrial planets as with the history ground travel transportation versus the speeds of differently designed aircrafts discussed in this research. When we speak about the human Mind, the names of 5 big Thinkers and Philosophers come to mind namely, Plato, Descartes, Hume, Kant and later Freud in that order. These are the big Thinkers who made such a mess trying to define the human mind so terribly that scientists did not want to have anything to do with the word Mind. That is why in looking for a new word to replace Mind scientists latched onto the word Consciousness in lieu of Mind in their attempts to define the same human mind. This conclusion looks a bit long, but I assure you that it is fun to read.

Plato started the mess about how the thinking system of the human mind works not so much as defining the mind but rather by categorizing the modes of thinking such as reasoning, imagining things and interpreting what is perceived in his illustrated divided lines of thought which he called a theory of knowledge. Plato's 3 modes of thinking consisted of dual mental actions of reason/dialectic, belief/perception, and conjecture/imagining, as the 3 modes of thinking. Plato established the fact that the standard number of categories of thinking by the human mind are 3. But Plato immediately discounted or

rather degraded the faculty of imagination as unimportant by pointing out that Comedians of that time were bound to use their imagination to poke fun at rational entreaties in lieu of serious cogitation by reason of philosophers in analyzing the problems of life. Plato's 3 modes of thinking later became "The Tripartite Soul of Man" that established what was later became the 3 faculties of mind by Freud. Thus, Plato consigned the human ability of imagination to oblivion for two thousand years until Einstein came along to reinstate the human imagination as one of the legitimate faculties of mind if not the most important faculty of mind (even in physics). How did Einstein restore the human imagination as a legitimate faculty of mind? Einstein wrote his theory of Relativity, the Speed of Light, Space-Time Continuum e.g., by imagining a person in a speeding train, a person in a falling elevator, two guys, one stationed on earth, the other flying off in a space ship etc., all out of the power of his Imagination to prove the legitimacy of his theory of Relativity. Thus, discounting the power and utility of the human imagination as a frivolous mode of thought instead of regarding the human imagination as a serious mode of thinking was Plato's first misjudgment in defining the 3 modes of thinking now known as the 3 faculties of mind. The next inaccuracy in Plato's theory of tripartite soul of mind was regarding the human reason as the sole legitimate mode of thinking in interpreting anything a person can think of,(conceive), without showing how objects are perceived (by a person in the first place) even though he mentioned belief/perception as part of the 3 dual modes of thinking. Plato further regarded "the spirited elements, and bodily appetites" that are perceived through the 5 physical sense organs not as real modes of thinking but impediments to the human reason. The 3rd inaccuracy in Plato's theory of mind was that Plato fixed the 3 modes of thinking after Pythagoras' theory of 'Tripartite Souls' or 3 types of men that still stand today in the year 2024 because Plato said so. In lieu of the theory of the tripartite soul, Plato's theory of mind should have read as; reason/dialectic, belief/perception and imagining/conjecture. These 3 modes of thinking namely, reason, perception, and imagination would have been perfect for Plato's theory of mind where only the mode of thinking missing would have been the mode of thought known as Conscience which was still strange for the mystic Plato who is also regarded as the father of mysticism to say the least.

In that case, the only other specific mode of thinking omitted by Plato would have been Conscience which Freud later added to his (Freud's) 3 faculties of mind by calling conscience the Superego. Interestingly, Freud's addition of Conscience (Superego) should have made both Freud's and Plato's theory of mind 4 faculties of mind namely reason, perception, imagination, and Conscience, to meet the actual number of 4 faculties of the human mind or 4 modes of modes of thought of the human mind. This is why and how this Paper is determined to correct the number of faculties of the human mind as being actually 4 not 3, but four in redefining Consciousness in this Paper. I bet nobody has ever heard of four faculties of mind. All that people have heard about regarding the number of faculties of the human mind is that they are 3 thanks to Plato and later Freud. All philosophers and especially psychologists have known about the faculties of the human mind is the Tripartite Souls of man (for philosophers) and the 3 faculties of mind id, ego, and superego (for psychologists)-we will explain this controversy when we discuss Hume's philosophy. As can now be seen, two important modes of thinking or two faculties of mind were excluded from Plato's theory of knowledge (mind), namely, perception-which Hume made a big deal out of, and conscience which Freud also capitalized on. Plato's blatant omission of Conscience (that inner voice which Freud called Superego), that always seeks to correct a person's misdeeds from Plato's categories of modes of thinking was a terrible omission. So was perception (through the 5 physical sense organs) that Hume latched onto to destroy Plato's theory of knowledge. It is now clear that Plato's 3 modes of thinking was improperly assembled because of the omission of two important modes of thinking or faculties of mind namely Conscience and Perception that has just been explained above.

Interestingly, Perception is the mode of thinking whose ingredients are supplied by the 5 physical sense organs that lead to what Plato referred to as "bodily appetites". So, Plato correctly identified perception as a mode of thinking without categorizing it as a specifically significant mode of thought as can be seen from what Hume did with perception by the 5 physical sense organs. On the other hand, the next four big Thinkers attacked Plato's Tripartite theory of knowledge. Leading the charge was Rene Descartes, the guy most remembered for saying 'I think therefore I am' who needs no introduction. Descartes thought he could write a better theory of mind based on the indisputable facts of logical analysis of his own mind that he can depend on with logical precision, without being influenced by the Tripartite soul of Man consisting of "reason, spirited elements and bodily appetites" that Plato alluded to. So, Descartes abandoned Plato's theory of knowledge that focused on mental categories involving a so-called reason, 'spirited elements, and bodily appetites' that Plato had sought to categorize as faculties of the human mind, to write his own theory of knowledge about the mechanical world and substances of the body and mind. However, on considering the constitution of a person as comprising a physical body and a thinking mind, Descartes hit on a new idea of the substance of the human mind as deriving from a substance that is different from the substance of the physical body. Descartes assumed that it is plain to see that the body is physical and the mind is nonphysical therefore it would be obvious to people since mental substances must be logically different from physical substances.

Hence, Descartes introduced the concept of the human mind having a different substance from the human body. But one can imagine Descartes bewilderment when Princess Elizabeth scolded him in effect; Monsieur Descartes, we thought you were going to correct Plato's theory of mind, what is this idea of the mind having a different substance from the body? Since you are so smart, why don't you explain how the nonphysical mental substance of the mind can move the physical substance of a person's body to action? History has been kind to Descartes about this story, but in hindsight one can see how stunned Descartes was because to him the idea that the mind should be fashioned with a different type of substance from the body seemed too obvious for anybody to question. But regardless of how obviously different the physical

body is from the nonphysical mind, Descartes quickly realized that you cannot just assume that what seems so obvious to you must be similarly obvious to everyone. That was the same error Plato had made about his Tripartite Soul of Man which did not seem so obvious to him Descartes. Enter David Hume, Hume rejected both Plato and Descartes' grand theories of mind as fanciful assumptions and idealistic creations of the reason without (any factual proofs from perception by the 5 physical sense organs) that can provide the best proof of any mental observation. In hindsight what Hume did was criticize Plato and Descartes theories of knowledge as based on mere assumptions that cannot be perceived by the 5 physical sense organs of a person. And boy, was Hume right. In other words, the philosophy of Plato and Descartes did not include anything perceived by their own 5 physical sense organs. Thus, Plato and Descartes theories of knowledge were mere concepts out of their reasoning without any factual proofs by perception of the 5 physical sense organs or from any scientific instruments.

Thus, Hume effectively showed that the ideas and theories that Plato and Descartes had put out as sacred truths were unproved concepts and assumptions. And all Hume had to do was to point out that for any idea, concept, or theory to be taken for a fact or truth must be certified as true by the 5 physical sense organs of seeing, smelling, hearing, tasting and feeling as the only factually testable basis of observation (via scientific experimentation) as scientific proof by the human reason. In other words, Hume was asking Plato and Descartes, where is the perceptual proof (by the 5 physical senses of the concept or theory you have just propounded as a sacred truth? You should have included perception by the 5 physical senses as the basis of proof for your theory of Tripartite Souls of Man or your (Descartes) theory of a mechanical universe. Hence, with a single powerful question dubbed 'Hume's Wrecking ball' that read; what is the factual basis of proof (by the 5 physical senses) of what you (Plato and Descartes) have propounded as sacred truths? How can the truths and or theories you have propounded be verified? Armed with this wrecking-ball demand for proof derived from the 5 physical senses as the basis for observation of any rational theories, Hume demolished the "rational theories" of Plato and Descartes till there was no theory of mind by Plato or Descartes left standing. Hume's critical analysis of proof by observation or by perception of the 5 physical sense organs or proof by scientific instruments won Hume the accolade of preeminent philosopher over Plato and Descartes in those days. On the other hand, how is proof by experimentation or proof by the 5 physical organs of facts or truths known to an observer? Any proof of facts through the 5 physical sense organs, or through scientific experimentation can be known to an observer through the mental activity of perception. Perception is the mental ability of interpreting what one sees in the distance, or where a specific sound is coming from, or whether it a sound heard denotes danger to run away from, or a friendly sound to welcome or entertain. The mental activity of perception answers the question; what type of sound did you hear in the jungle? Or what does the animal you see in the distance look like? Is it a lion in the distance? And the answer would be that was not a lion, it was just a small cow.

That is how the human faculty of perception works. That is how the faculty of perception interprets what was seen, heard, smelled, tasted, and felt. This makes perception by the 5 physical sense organs a very important faculty of mind that was omitted in the theories of both Plato and Descartes which Hume effectively used against both of them. Therefore, perception is the faculty of mind (in the brain) for interpreting the sensations and sensual information brought by the physical sense organs (to the brain) as the best proof of facts. Proof of facts from observation by the 5 physical sense organs was what Hume championed right. So, how Hume missed the opportunity of showing that "Perception" is the mode of thought through which sensations and sensual information from the 5 physical sense organs are transmitted to the human mind is a mystery. Thus, Hume who was the original empiricist failed to categorize Perception as a faculty of mind for empiricism. If Hume had pointed out or categorized perception as the important faculty of mind through which the human mind interprets sensual information or any knowledge as the proof of facts or proof of observation, Plato's theory of mind would have been clearer. Then the four faculties of mind would be perception, imagination, reason and conscience (Freud's superego) in that order. And Hume could have earned the praise of saving and refining the theory of mind Plato sought to create. However, Hume who championed the perception of things seen, heard, smelled, tasted and felt by the 5 physical sense organs and the interpretation of these sensual information by the perceptual mind, failed to categorize perception (that Plato mentioned earlier) as a specific mode of thinking or (as a specific faculty of mind) for the 5 physical sense organs. By recognizing perception of sensual information by the 5 physical sense organs as the best proof of facts. But without categorizing perception as one (even as the most important faculty of mind) as the basis of the proof of facts in Plato's theory of knowledge, Hume allowed the confusion and fuzziness of Plato's theory of mind to remain for both philosophy and psychology.

So, with Plato's theory of knowledge or Tripartite Soul (of mind) destroyed by Hume and the uncertainty of how the mind or human reason conceives or perceives knowledge of the world still hanging in the air, scientists saw the opportunity to shun the word Mind in any analysis of the observation of facts or proof of facts by looking for another word to replace mind. And that is how scientists came to choose the term Consciousness instead of mind, in connection with analysis of any mental activity of the human mind. In hindsight, it is clear how Emmanuel Kant who came to defend or tried to restore Plato's theory of mind, failed to address Hume's criticism of proof of facts by the 5 physical sense organs interpreted by the Perceptual Mind. Instead, Kant went out of his way to invent something else entirely new that could not be characterized or categorized as a mode of thinking called 'a priory' knowledge or (a priory faculty of mind?) that fell flat, and turned out to be 'much ado about nothing' which still left Plato's theory of mind in confusion and in shambles to this day. Enter Sigmund Freud, the pioneer psychologist who joined the 5 great thinkers and theorists of human mind, as a pseudo-scientist who came from the new science of psychology (to save Plato's theory of mind). But once again, Freud ended up cooking something entirely new that today is recognized not as philosophy or psychology but as psychoanalysis or better still as therapeutics. Wearing physician's robes and determined to

do a better job than Descartes, Hume, and Kant in attempts to rescue Plato's Tripartite Souls theory of knowledge as a legitimate scientific theory of mind. In other words, Freud tried to make a philosophic theory a scientific pursuit and in hindsight failed terribly. Freud's first job rehearsal (in the attempts to make Plato's theory of knowledge more scientifically based) was opening the "hood of the mind?" Not the brain, but the mind to free people's long suppressed secret thoughts and secret wishes that often led to mental maladies he identified as anxieties-led schizophrenia that had gone unnoticed. And he Freud the new philosopher-scientist was going to reveal something new about the human mind and the hidden thought people that goes on in 'the Unconscious' mind to the whole world. But first, he must rewrite Plato's theory of mind to prove his new discovery of how the human mind works to produce mental sickness or schizophrenia that he Freud has devised a method for healing the mental malady of schizophrenia that afflicts so many people.

Freud then set out to rewrite Plato's theory of mind by adding an important mode of thinking that Plato had omitted namely, Conscience which Freud called Superego as a one of the (3 faculties of mind) for Plato's Tripartite theory of knowledge. With the addition of Freud's superego (Conscience) to Plato's reason which Freud called the (ego), Freud's theory of mind seemed to be shaping up. All Freud needed was one more mode of thought to rewrite and reinstate Plato's tripartite modes of thought and Plato's grand theory of mind would be fine and dandy. And Freud would have succeeded where Descartes, Hume and Kant failed. The problem was that finding one more new mode of thinking to complete Plato's triune theory of mind was no easy task. So, Freud invented a new mode of thinking which he named "the Id" that moved humans to action through the mechanism of Instincts. Now Freud's new theory of 3 faculties of mind to replace Plato's earlier theory of 3 modes of thinking was complete. Freud called his triune faculties of mind as id, ego, superego, faculties of mind. If Freud had stopped with his new theory of id, ego, and superego as the (3 faculties of mind), he would have been hailed as the hero scientist who saved Plato's Tripartite Soul theory of mind, and making science the basis of a philosophic theory. But Freud did not stop. He went on to explain the new faculty he called id as being filled with something new he called instincts that motivate people to action through (get ready for it) anxieties in the mind. Well, that explanation could be accepted from this great genius. What destroyed Freud's brand new theory of mind was the additional attributes Freud claimed for his newly invented faculty of mind he called id and its instincts. Freud stated that both humans and animals have the same id and instincts. And not only that but both humans and animals are motivated to action by instincts caused by the anxiety to flee from danger. Freud explained id and its instincts are one of the triune modes of thinking or one of the faculties of mind. He even stated that instincts have aims that cause instinctual needs to be pursued for satisfaction by both humans and animals, something that nobody has ever heard before. And boy! Did Freud mess up! He struggled to explain that "the Id is filled with nothing else but instincts". And that instincts are what motivate animals' activities of survival. In other words, both humans and animals are motivated or moved to action by the same instincts that issue out of the mode of thinking he has named as the Id.

Furthermore, when Freud claimed that both human beings and animals share not only the mode of thinking called Id but share instincts as well and that instincts have aim and are triggered by anxieties such as the instinct to flee or fight, all hell broke loose. Freud's new theory of mind which he laid out as Id, Ego, Superego, was roundly rejected by his fellow psychologists. Freud had singlehandedly managed to bring the pursuit of grand theories of mind in philosophy and psychology to a screeching halt. The psychology of the mind was doomed forever. After Freud's faculties of mind debacle, psychology was revived again in Germany reinvented by Wilhem Wundt (1832-1920, known as the father of experimental psychology). This time, nobody wanted to go back to Plato's or Freud's theory of mind. "Wundt and his colleagues tried to make psychology a scientific discipline which they called Experimental Psychology. Wundt tried to analyze consciousness into its basic elements, just like physicists and chemists" by referring to investigations of consciousness instead of investigations of the mind. Scientists immediately latched onto the term Consciousness because nobody wanted anything to do with the word Mind or with the faculties of mind. This is why in this present day and age in 2024, the new psychology that evolved after Freud has no specific theory of mind to explain human behavior. Psychologists do not attribute a person's behavior any faculty of mind (such as the reason), but as arising from their brain. Some psychologists who are uncomfortable explaining behavior as arising out of the brain (instead of mind) attribute behavior to what they call "mental models" or mental models of behavior to explain people's actions. Now instead of the human mind or the faculties of mind directly motivating human behavior, modern psychologist, scientists and physicists attribute behavior to levels of brain development by stating that; a minor or a youngster's brain is not developed enough to make right decisions. This begs the question; how come a fully developed brain of many adults make not only wrong but terrible and horrible decisions in matters of life and death? Furthermore, to shun the idea of mind and faculties of mind entirely after scientists watched Freud destroy the theory of faculties of mind, philosophers, psychologists and especially physicists, looked for a new way of examining the human mind unencumbered by the relic of any theory of mind. So, in place of mind, scientists chose the word Consciousness and, Viola! The inquiry into the workings of the human mind gained scientific respect and resurfaced. This time, scientists took control and limited the definition of the word Consciousness as deriving from the brain or issuing out of the confines of the brain only.

But why limit the source of Consciousness to the confines of the brain? It is scientists do not want to deal with theories or anything that cannot be empirically proven through laboratory test or scientific instruments (Remember Hume?). More importantly, it is also because the brain is a tangible organ or object that a scientist can hold in the palm of the hand, (unlike the mind) cut it, slice it, and put a piece of the brain in a putri-dish or under a microscope and study it. Hence, Consciousness and the brain mean one and the same thing (Remember Neidermeyer's definition of the brain and Consciousness being the same thing?). Has scientists been able to explain

Consciousness a.k.a. mind any better than the philosophers tried to explain mind? Do human beings still have faculties of mind such as reason, perception, imagination and conscience or not? The worst part of the controversy about the nature of mind and consciousness is that the mind/consciousness problem has been superseded by the a phenomenon called "Singularity" or the moment of singularity, where artificial intelligence (a.k.a. AI) will not only equal human intelligence, AI will merge with human intelligence to the point that robots would be able to absorb and interpret human feelings and emotion or worse, robots will be able to emote like human beings, imagine like human beings? The prediction is that robots will soon surpass the slow thinking human Consciousness by the year 2045.

So, Class this has been the story of Mind and Consciousness. Take a hike!

The End.

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CONFLICT OF INTEREST

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