

# An Alternative Approach towards the Origin of the Universe

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## Abstract

The Big Bang is the most accepted theory for explaining the puzzle of the origin of the Universe. However, such a theory explains only the development of the Universe, not its origination. In this paper, we develop two main ideas: i) that by recurring to a strong philosophical approach, innovative thinking rises sharing new enlightened science; ii) it is introduced the Universal Theory of Origination (UTO), which explains how a ‘nothing’ originates ‘something’ without losing the base of the conservation law. There are established five levels of the Universe in series: cosmological, physical, biological, psychological, and intellectual (human) level. Then, UTO explains the origination of upper-level from lower-level substances. It is described the UTO’s step-by-step physical level’s origination based on the biological level’s origination using a unitary law. We also provide a scope to understand the origination of the biological, psychological, and intellectual levels. Our hypothesis is sustained by a) mentioning well-known formal research and experiments and b) applying an inference proof whose use shows us that nature behaves in a unitary way from one level to another. UTO allows seeing that for displacing a fact to another level, we have to change only the adjectives. A known aspect from one level can be interpreted on another level: therefore, an unknown truth arises. This work provides a basis for UTO, in turn resolving many open questions, including the origination of the physical world, space expansion, high activation of the past, acceleration in expansion, and differences between galaxies.

## Keywords

Multidisciplinary process; Evolution of the Universe; Origination of the Universe; Expansion of the Universe; Cosmology; Astronomy; space.

## 1.0 Introduction

### 1.1 Impact of preconceived notions

A question, which has been asked for so many centuries how the Universe originated, is still unanswered. We have a lot of preconceived notions that resist us from innovative thinking. These notions are affixed deep inside us, and our perceptions move around them (Rock, 1985) [47]. These perceptual symbols develop, they constitute the representations that underlie cognition (Barsalou, 1999) [04], using different computational mechanisms (Barsalou, 1999) [03]. We must ignore the preconceived notions to open new windows of enlightened science. It can only be possible if we establish a more concrete integration of philosophy and sciences as a possible way of making the philosophy of science have more impact (Pernu, 2008) [44]. The conservation of mass and energy is also a notion where the total amount of mass and energy is invariable. Philosophy argues that that nature acts in a unitary way, hence when an intellectual unit (human), a psychological entity (animal), and a biological unit (vegetation) follow a regular process of birth and death, the same process should be applicable to physical and cosmological entities too. If there is a contradiction between philosophy and science, one should follow philosophy. The UTO (universal theory of origination) explains in the paper how physical entities are born and die without harming the conservation law's root. Although Man Ho Chan argued that the pressure of dark energy would be zero if the total energy of our Universe is increasing. This pressureless dark energy model basically agrees with the current observational results (Chan, 2015) [10].

### 1.2 The prevailing models of the evolution of the Universe

Different philosophers have tried to solve the puzzle of the origin of the Universe in different ways. We have Big Bang theory, Steady-State theory, Big Bounce theory, Ekpyrotic Model, Plasma Cosmology, and many Metaphysical theories. Out of them, the Big Bang is the most accepted theory. The traditional Big Bang theory states that before roughly 13.8 billion years ago, and "before this event, space and time did not exist" (Tereza, 2017) [55], and Wood considered as beginning of TIME, SPACE, MATTER and ENERGY as well as other initial substances (Grinin, 2018) [22], and all the current and past materials in the Universe came into existence simultaneously. All material was in the shape of a compacted tiny ball with infinite density and intense heat, called a Singularity. Suddenly, the singularity began expanding, and our Universe evolved. Many proofs are there in favour of the Big Bang, which includes expanding galaxies, microwave background, a mixture of elements, and looking back in time. According to the author, all these inferences are not free of doubts because no observation is based on a proven science (Merritt, 2017) [35]. Secondly, the Big Bang explains only the

development of the Universe, not its origination, and it is believed that the question of origination leads us to GOD (Saha & Choudhury, 2016) [48]. The author submits that we can explain the origination without creating any supernatural event. Thirdly, no alternative solutions were considered for the above observations. As regards the origination, we have Kusenko's theory of antimatter, which seems to be unnatural. The present theory is based on a natural process that can be seen everywhere. The theory explains the origination, not the evolution; hence there has been no contradiction (maybe a few disagreements).

### **1.3 Addition to present knowledge**

The theory presented here explains an alternative approach towards the origination of the Universe. It explains the difference between the cosmological and physical world. It explains the step-by-step origination of the physical world (something, some material value) from cosmological substances (nothing, no material value). The methodology is based on a unitary law, which connects the origination of the biological world (something, life value) from physical substances (nothing, no life value). The paper provides additional scope to understand the origination of the biological, psychological, and intellectual worlds. It explains the structure of the elementary particles and how this structure is created by using the lower-level substance as raw material. The theory is being proved by using the results of the experiments already made. It further explains the unanswered questions regarding the evolution created by the Big Bang.

### **1.4 Explanation**

The paper contains words like existence, entropy, body, matter, mass, mass, ornamentation, etc. These words do not apply only to the physical world. All these terms are applicable to all known worlds, namely, cosmological, physical, biological, psychological, and intellectual worlds. For example, existence can be considered as cosmological existence, physical existence, biological existence, and so on.

## **2.0 Origination of something from nothing**

Due to the conservation law's consideration, it was hard to believe that something could be originated from nothing. But this thought is not a new one. Alexander Vilenkin had proposed a model of quantum tunnelling (Vilenkin, 1982) [58] where no singularity is required. Dongshan and others put an idea of 'spontaneous creation' (Dongshan et al., 2014) [15]. The paper presents a new approach towards the words 'something' and 'nothing'. The paper argues that the Universe evolved, step by step, starting from the cosmological level, to the physical level, to the biological level, to the psychological level, and to the intellectual level. Each level is 'nothing' relative to the further upper level. We will discuss them all in short. [Ref to Fig 1.](#)

## 2.1 Cosmological level

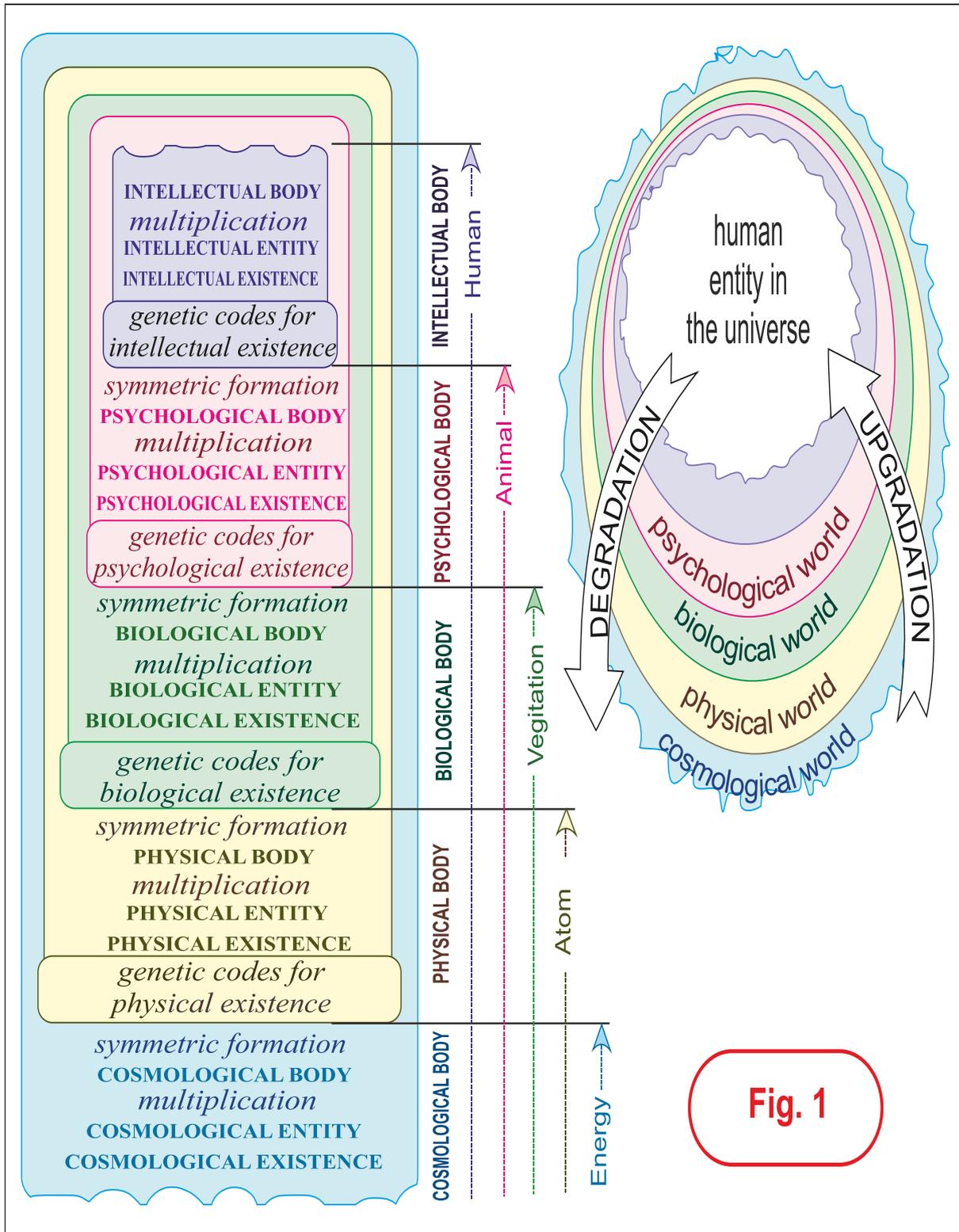
We do not know anything about the sub-cosmological (lower than the cosmological level) substances, which are the imperceptible substances. They are supposed to be the raw material of cosmological entities. It originates cosmological entities having all the cosmological properties, including cosmological mass (quantum), cosmological volume (unknown), cosmological shape (unknown), cosmological time (unknown), cosmological space (our so-called space), etc. These properties cannot be understood physically. We know something about the cosmological substances, which are the first perceptible substances in the form of a photon (radiation), gravitational pull (dark matter), repulsion push (dark energy), magnetic flux (motion), CMB, etc. These substances can be available in cosmological space or can be stored in the physical body. Cosmological substances do not possess any physical properties like physical mass, physical shape, physical motion, and physically doing-power. These are not physical entities: they are supposed to be the raw material of physical entities. And called cosmological entities.

## 2.2 Physical level

The cosmological quantum is ‘something’ for the cosmological level, but it is ‘nothing’ for the physical level. Cosmological substances (nothing) originate physical mass (something). According to Schirber, Higgs mechanism from the binding energy that holds these particles together ([Schirber, 2013](#)) [49], having all the physical attributes, including physical mass, physical volume, physical shape, physical time, physical space, etc. The multiplication of the physical entities creates the physical bodies (electrons, protons, etc.). Team ESA argues that Theoretically, in a Universe where the density of matter is high, clusters of galaxies would continue to grow and so, on average, “should contain more mass now than in the past” ([European Space Agency, 2003](#)) [54]. In other words, the mass is regularly increasing. Undoubtedly this origination is being done by using the cosmological substance as raw material. Further, these physical bodies do not possess any biological property. That may kindly be noted.

## 2.3 Biological level

The physical mass is ‘something’ for the physical level, but it is ‘nothing’ for the biological level. Physical substances (nothing) originate biological cells (something). Mara and green confirmed that “life may have come from nonliving matter” under ([Kara et al., 2019](#); [Morowitz, 1999](#)) [28; 37]. This biological cell has all the biological properties, including biological mass (quantum of life), biological capabilities, biological activities, etc. The multiplication of biological cells creates the biological body (vegetation). These biological bodies (vegetation) do not possess any psychological property.



**Fig. 1**

*Fig 1. The Universe is made of several levels. Each level is originated by using the lower-level substance as raw material. The Universe develops by using the same process from cosmological to physical, physical to biological, biological to psychological, and psychological to the intellectual level*

## 2.4 Psychological level

The biological tissue is ‘something’ for the biological level, but it is ‘nothing’ for the psychological level. Biological substances (nothing) originate psychological sentiments (something) (Koch, n.d) [29], having all the mental dimensions, including mental mass (quantum of emotions), mental capabilities, mental activities, etc. The multiplication of psychological feelings creates the psychological body (temperaments), which is called animality. This animality does not have any intellectual property.

## 2.5 Intellectual level

The psychological emotion is ‘something’ for the psychological level, but it is ‘nothing’ for the intellectual level. Psychological symbols (nothing) originate intellectual logic (something). Crosson and Shipman acknowledged it. (Crosson, 2009.; Shipman, 2010) [13; 50] Intellectual logic has intellectual properties, including intellectual mass (knowledge), intellectual capabilities, intellectual activities, etc.

In this way, at every level, the definition of ‘something’ and ‘nothing’ is changing. There is no intellectual logic in psychological sentiments, there is no psychological sentiment in biological life, there is no biological life in physical matter, and there is no physicality in cosmological substances.

## 2.6 Difference between physical and cosmological particle

We all know about the difference in intellectual, psychological, biological, and physical phenomena. But we have some confusion regarding the cosmological phenomenon. The UTO suggests that physical science and cosmological science deal with two different levels of nature and cannot be put in the same paradigm. They are different, just like biological science and physical science are different, and just like psychological science and biological science are different. Hence, before discussing the actual origination process, it will be necessary for us to understand the difference between physical substance and cosmological substances.

(1) A physically alive particle (physical matter) acquires the cosmological substance (light) as food. But the opposite is not possible.

(2) A physical substance can have a shape, but a photon does not have any shape. The same amount of heat can be stored in water, in an iron ball, or in a biological body; it never insists on the shape. According to the theory, all electrons, protons, etc., are physical particles; hence they all possess physical mass, physical volume, and physical properties. Photons are cosmological particles having no physical mass, no physical volume, and no physical properties. All the elementary particles, if having physical mass, will be categorized as physical particles; otherwise, they will be categorized as cosmological particles. It can be seen that biological mass (efforts),

psychological mass (emotion), and intellectual mass (logic) also do not have any physical mass, and they do not follow any physical laws.

(3) When a photon is considered as an electromagnetic wave, its wavelength is flexible. The same photon can also be converted into a particle. You cannot consider the magnetic flux or gravity with any shape or size. Photon is also a heat particle, can be stored in a physical body of any shape. (Nieh, 1972) [41].

(4) Cosmological substances do not experience physical distance and time. Cain said that for the photon, there's zero time elapsed between when it's emitted and when it's absorbed again. It doesn't experience distance either (Cain, 2014a) [08]. He further said that "from the perspective of a photon, there is no such thing as time" (Cain, 2014b) [09].

(5) The word 'inertial frame of reference' can only be used for a physical entity, not for a photon. "Quantum theory predicts that a particle (for instance, a photon) can be at different places at the same time. In fact, it can even be at infinite places at the same time, exactly as a wave" (University of Bristol, 2012a) [57].

(6) We can photograph a physical particle, but we cannot photograph cosmological particles like light, thrust, gravity, etc. Photon (light) itself is a photographic act.

(7) A sub-atomic particle can receive, store, and emit cosmological substances, so why it can be cooled down to  $-273.15^0$  (Perkowitz, 2008) [43], but it is not true for a cosmological substance.

(8) Cosmological substance is called pure energy (Madeleine, 2019) [32].

## 2.7 Application of Unitary law of nature

The UTO suggests that all entities of every level take place origination in a parallel process. Whyte recognized the fact that the three sciences: matter (physics), life (biology), and mind (psychology), can be simplified by applying the unitary method (Whyte, 1948) [59]. Howard Robinson believed in only two kinds of substance: material body, which is defined by an extension, and mental substance; we are calling them to 'physical' and 'psychological' substance. (Robinson, 2004) [46]. Britannica editors strongly acknowledge the presence of a common science for the biological and physical world (Britannica, T. Editors of Encyclopaedia, 2017) [06]. We can add many circumstantial pieces of evidence to it. It can be seen that all entities have a hunger for the substance of the successive lower level. An intellectual entity (human) has a hunger for psychological symbols; a psychological entity (animal) has a hunger for bio-chemicals (Britannica, T. Editors of Encyclopaedia, 2020) [07] a biological entity (vegetation) has a hunger for physical substance (CO<sub>2</sub>, nutrition, etc.); and A physical entity (atom) has a hunger for cosmological substance (light, etc.). The author suggests that intellectual time (concentration), psychological time (courage), biological time

(effort), and physical time separately. Martyushev accepts biological time, psychological time, and historical time; even physics has different times separately (Martyushev, 2017) [34]. The paper suggests that all levels of entities follow parallel laws. Theoretically, we can have infinite levels of this Universe, but our perceptibility has a limit. We cannot understand the level above the intellectual level and the level lower of the cosmological level. All known or unknown levels are like inflated balloons, which are placed one inside the other. The innermost known balloon is the intellectual level, and the outermost known balloon is the cosmic level. This is our complete Universe. The original origination takes place from the lowest one, which cannot be known.

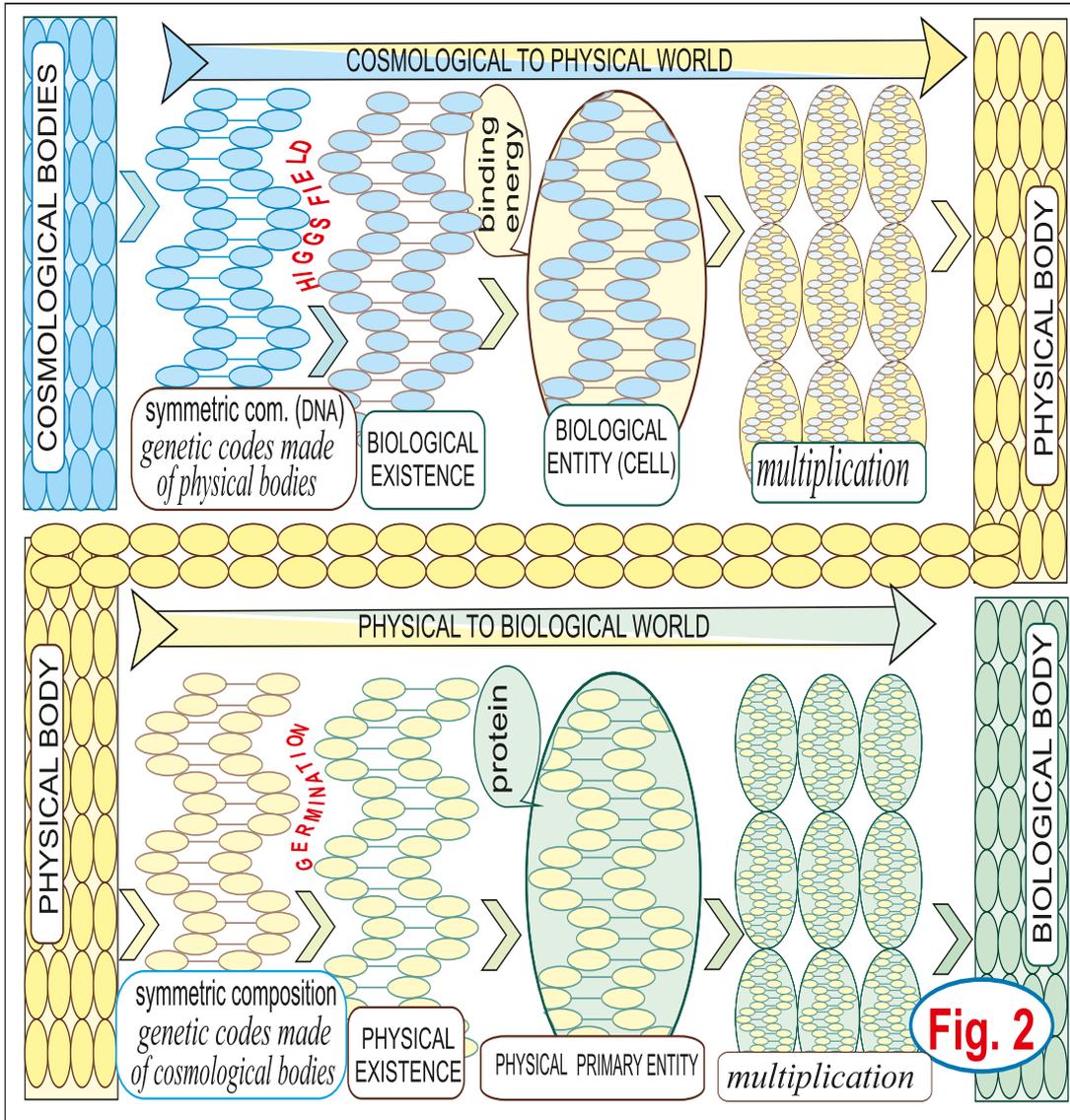
We have an infinite number of biological trees, a big number of psychological animals, and big numbers of intellectual humans; all are evolving, living, and dying. This is a regular process. The author argues that if all these levels follow the same rules, the physical level should also follow the rule of regular evolving, living, and dying. The UTO propounds that initially, there was a cosmological world alone, with no physical world. The physical entities (galaxies) originated one by one, live their own life (trillions of years) with binding energies (Schirber, 2013) [49], become old (fad), and one day they will die. After dying, they will free a huge amount of dark energy and dark matter. These will be used to create some new galaxies and to expand the Universe.

### 3.0 Methodology: Origination of the physical world

#### 3.1 Use of inference proof

There is no possibility of any direct evidence to solve this mystery. Philosophy says that if there is something that could not be resolved with direct proof, we should take the help of inference proof. The theory of inference proof says that logic behaves in a unitary way with all the entities. This logic is the relationship between cause and effect. All effects we observe today are based on the cause hidden in the past. Therefore, by knowing the relation between cause and effect, an unknown cause can be interpreted based on the known effect. We are fully aware of the process of origination of biological bodies from physical substances. Using the same process and by applying the inference proof, we can understand the process of origination of physical bodies from cosmological substances.

It has already been explained that we have five known levels of the Universe. All follow nature in a parallel way and operate with the parallel disciplines. Regarding our prevailing knowledge, we have ‘some’ knowledge about each level, but we do not have ‘all’ knowledge about any one level. We always have an opportunity to displace a known part of one level to the unknown part of another level. While displacing a known part, we have to change only the adjectives (cosmological, Physical, etc.). One level’s known aspect can easily interpret another level, and an unknown truth can come in front of us. Please refer to **Fig 2**.



*Fig 2. We know the origination of biological entities from physical substances. Using the same process, we can determine the origination of the physical entities from cosmological substances.*

### 3.2 Origination of the biological body (the known facts)

(a) We know that before the evolution of the biological entity, we did not have any biological mass, biological space, and biological time, and we had the physical world all over. We had various types of physical compositions in the form of  $O^2$ ,  $CO^2$ ,  $C^xH^y$ , and other known or unknown molecules (substances).

(b) Out of various types of molecules, a specific symmetric molecule named DNA developed. The DNA composes the genetic codes, which is kept in the nucleus and is known as a biological seed.

(c) As soon as the biological life field enters the seed, biological germination occurs.

(d) The germination converts the seed into biological existence.

(e) A biological existence has no biological livingness. Hence it acquires protein (physical binding forces) and creates its own primary biological entity called 'cell'. This is the origination of the biological life, which has all the doer power to receive, store, and provide the physical substance.

(f) Due to the availability of biological entropy, the cells multiply themselves and create a biological body. This biological body is called vegetation.

(g) This is the origination of biological life from physical substances.

(h) A biological cell is made of two parts: the nucleus (Guo, & Fang, 2014) [24] made of the entity's genetic code and the cell body (Baluska, Volkmann, & Barlow, 2004) [02] responsible for the shape and activation of the entity. During the multiplication process, the nucleus copies itself and creates cell bodies so that the created biological body can take shape according to the properties written in the nucleus's genetic codes.

(i) In this way, a biological body is originated. The thing can be understood in how the human's biological body is made of many cells, including blood cells, bone cells, muscle cells, etc., all cells are different, but the nucleus within all the cells is the same. And all these nuclei have the same genetic code having the same mapping, which is in accordance with the human's biological body

### 3.3 Origination of the physical body (the UTO)

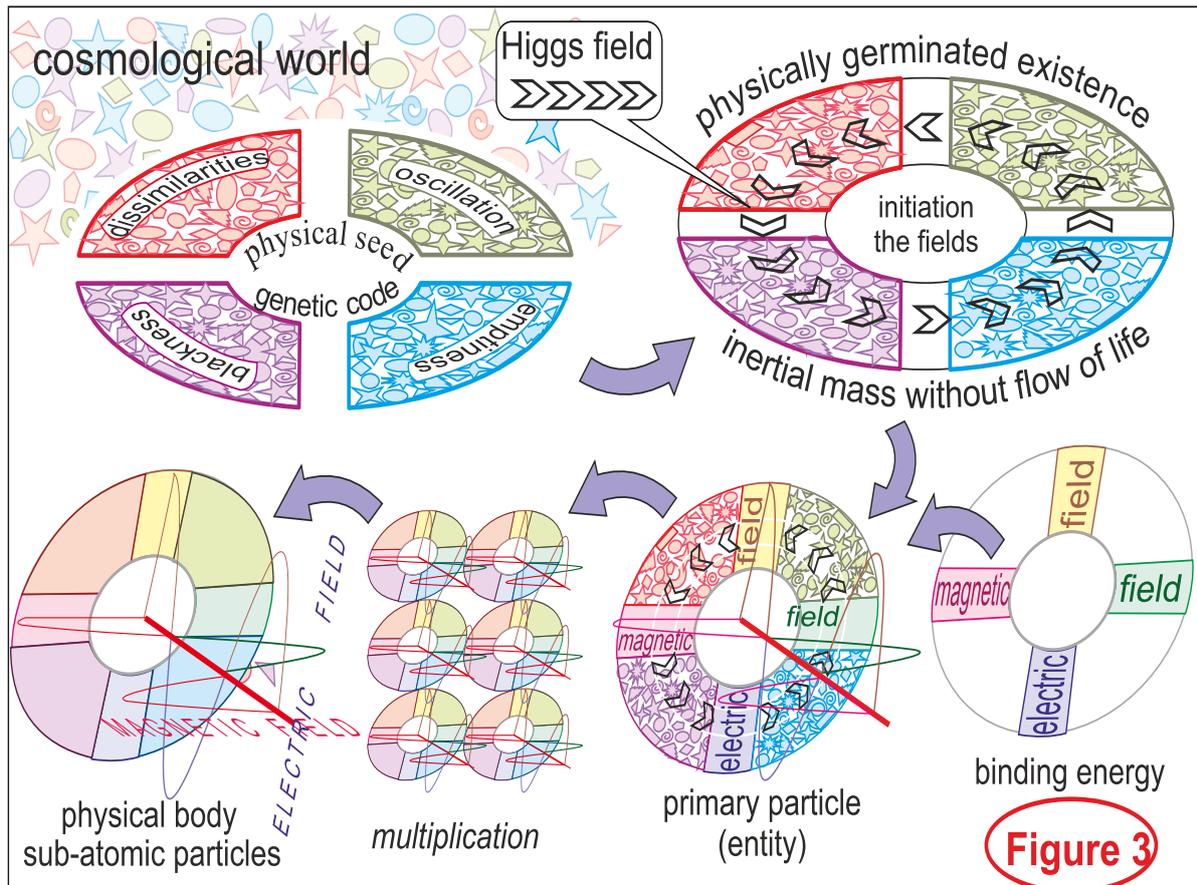
Now, we will change the appropriate adjectives to find the evolution of the physical body. All expressions are based on imagination and inference proof. Please refer to [Fig 3](#).

(a) The hypothesis suggests that before the evolution of the physical entity, we did not have any physical mass, physical space, and physical time, and we had the *cosmological world* all over. We had various cosmological compositions in the form of dark matter, dark energy, CMB, photon, and other known or unknown energy fields (substances).

(b) Out of the various types of energy fields, a specific symmetric composition (SSC) developed. The SSC composes the genetic codes, which is kept in the nucleus and is known as a physical seed.

(c) As soon as the Higgs life field enters the seed, physical germination occurs.

(d) Grey and Mansoulie say that many questions in particle physics are related to the existence of particle mass. The "Higgs mechanism," which consists of the Higgs field and its corresponding Higgs boson, is said to give mass to elementary particles. By "mass" we mean the inertial mass (Grey & Mansoulie, 2018) [21].



**Fig 3.** The cosmological world forms symmetrical patterns. The figure shows an imaginary pattern. As soon as the Higgs field enters it, this pattern changes into an existence that has an inertial mass without activation. After adding binding energy, it converts to an active unit. This unit is multiplied, and this multiplied entity converts into a physical body, which is called a boson, etc.

(e) A physical existence has no physical livingness; it has to create an elementary particle so that it can activate its life. The Higgs field further interacts and create self operative elementary physical particle (Hebert, 2012) [25] (Okada, 2007) [42]. This binding energy holds this particle in a unit (Schirber, 2013) [49]. This is the origination of physical matter, created along with physical space and physical time (James, 2014) [27], where time is evolved to increase the entropy (Tuisku et al., 2009) [56]. These particles (primary physical particles) can be called quarks, gluons, etc.

(f) These primary physical particles compose the physical bodies. It is found that a proton is made of a swarm of quarks and gluons (Cho, 2010) [12].

(g) This is the origination of the physical body created from cosmological substances.

(h) Please refer to **Fig. 3**. A physical entity is made of two parts: (1) the nucleus made of the entity's genetic code, and (2) the entity-body responsible for the shape and activation of the

entity. During the multiplication process, the nucleus copies itself and creates entity-bodies so that the created physical body takes shape according to the properties written in the nucleus's genetic codes.

(i) In this way, a physical body is originated. The thing can be understood in how a proton is made of many unknown primary entities, all may be different, but the hypothesis says that the nucleus within all entities is the same. All these nuclei have a genetic code having the mapping of the proton/electron/etc.

The entire process of origin of physical substances appears to be imaginary. But it makes it clear that the physical world is made up of the cosmological world. It can be seen that if the physical particle originates or dies, then there is no change in the amount of cosmic matter. The law of conservation is never affected. In the case of nuclear fusion, the physical mass is killed, and the energy (cosmological substance) controlled by the physical mass got released. There is no change in cosmological quantum before and after fusion.

## 4.0 Proofs and Discussions

### 4.1 Summary of the proposals

The theory proposes that there was cosmological space all over, and the space had different cosmological substances with different sequences. Some specific sequences acquire Higgs fields, and the physical mass originates. Refer to [para-no 3.3](#). This process may be considered as the origination of singularity. Further evolution can be understood with the famous Big Bang theory.

The theory proposes that the Universe is not originated in one shot as predicted by the Big Bang. Our argument is near the Steady State Theory, where new stars and galaxies are formed, and the old stars are fed away. The phenomena of continuous born and die are available in all other levels of the Universe. Intellectual humans, psychological animals, and biological plants are all born and die in due time. Their space and time remain alive till they are alive. After and before, there is no space and time for them. When we say that space and time did not exist before the Big Bang, we have over-generalized the statement. We should say that our space and time did not exist before the origination of our own galaxy. At the time of our origination, millions of galaxies were already present. Some of them were old enough to get fed. The theory adds up that, in parallel to other levels, the cosmological substances also originate regularly. The theory predicts that the originated cosmological substance increases the cosmological density of the space, thus populate the cosmological world. This populated space increases the route to travel time and creates an expansion of space. The CMB is also a part of continuously originating cosmological substances.

## 4.2 Presence of cosmological space

It is a known fact that psychological activation takes place in the psychological space (sentiments), where the psychological space is created within biological space. ([Britannica, T. Editors of Encyclopaedia, 2012](#)) [05]. The biological activation takes place in biological space (organs), where the biological space is created within physical space (molecules). In the same way, physical activation takes place in the physical space, where the physical space is created within cosmological space. By the Michelson and Morley experiment, we were trying for physical space, but the medium is cosmological space, which we were calling aether ([Michelson and Morley 1887](#)) [36]. We should not confuse between physical space and cosmological space. The physical space is the electromagnetic waves and gravitation or repulsive thrust, and the cosmological space is the medium where a physical entity exists or creates its waves and thrusts.

**4.2.1 Structure of cosmological space** – It is a proven fact that the ‘empty space’ is not actually empty ([Davies, 2011](#)) [14] and filled with CMB, dark energy, dark matter etc. How these are homogeneously if they never meet each other. ([Folger, 2008; NASA/WMPS Science Team, 2007](#)) [18; 40]. Vacuum energy is the underlying background homogeneous, small, and positive energy called cosmological constant ([Steinhardt & Turok, 2006](#)) [52] that exists in space throughout the entire Universe. According to quantum machines, the space around a particle is filled with countless “virtual” particles that are rapidly bursting in and out of existence like an invisible display of firework ([Folger, 2008a](#)) [19]. This is a sea of cosmological substances and called cosmological space. This space has the ability to support electromagnetic waves and gravitation. Gravitation has the capability to curve the fabric, creating time dilation. The cosmological space has the capability to hold the dark energy, dark mass, CMB, and other unknown ingredients. All of them can distort the homogeneity of the fabric and can create curvature in the space fabric. Dark energy increases the fabric density of the space, creating expansion of the space, and dark matter decreases the fabric density of the space, creating contraction of space resulting in gravitation.

**4.2.2 Physical space** – For all practical purposes, electromagnetic waves and gravitation can be called physical space. The sky to which we are calling space is just a cosmological space. The cosmological space acts as a medium and facilitates the physical space between two physical objects. It facilitates the oscillation of electromagnetic waves and creates gravitational pull by decreasing its fabric density. In other words, all physical objects have their own separate spacetime for the electromagnetic wave and gravitational pull. It is like a plant, having its own individual life (biological space and biological time) that uses physical molecules as a medium. The psychological life has its space and time in feeling emotions. The intellectuality has its space and time in thinking.

### 4.3 Origination of cosmological entities

The theory propounds that biological entities are originated from the physical substance; the physical entities are originated from cosmological substances. Hence, it can be safely inferred that cosmological entities are originated from sub-cosmological substances. All these originations, including the creation of cosmological substances, take place in a regular and continuous manner. It can be proved by the observation that dark energy is continuously increasing (Siegel, E., 2018) [51]. This phenomenon can be proved by (1) the presence of CMB and (2) the expansion of space, which will be discussed later. This fact proves that space continuously originates cosmological substances.

**4.3.1 Availability of CMB** – The CMB is a big question mark (Fahr & Sokaliwska, 2015) [17]. As soon as we understand the origination of cosmological substances, the mystery of CMB is automatically solved. CMB is a cosmological substance, available regularly because it is originating regularly.

**4.3.2 Expansion of space** – Expansion of space is a well-known phenomenon, explained by Øyvind Grøn in his article The Discovery of the Expansion of the Universe (Grøn, 2018) [23]. When we say that space is expanding, it does not mean that the galaxies are going away mechanically (Chervon et al., 1996) [11]. Space may actually give rise to the phenomenon we experience as time (James, n.d.) [26]. It only means that the time between the two objects increases. How is time increasing? The UTO states that space-fabric becomes denser because of the production of dark energy (Kanos, 2013; Siegel, 2018; & Baltay, 2014) [27; 51; 01]. When the light proceeds through the cosmological fabric, the time taken in propagation depends on the density of the fabric. This time defines the distance between the galaxies. If the fabric is thin, the distances will be less, and if the density is thick, the distances will be more. As the cosmological substance (dark energy) is being regularly originating; hence the distances among the galaxies are also increasing. The fact can be proved by the Redshift experiment.

**4.3.3 The proportional origination of cosmological substances** - UTO argues that as the cosmic matter is being generated homogeneously everywhere, the mean distances between two objects at which astronomical objects move apart is proportional to their distance from each other. This fact has been noticed by Edwin Hubble (Tai, 2014) [53]. The incident cannot be explained by the Big Bang. It is argued that if the Big Bang is correct, and all other things are moving away from us proportionately, then the Earth must be located at the center of the Universe; It is very unlikely!

**4.3.4 No expansion of space within a cluster of galaxies** - All the massive bodies in space continuously eat the dark energy, and to keep the homogeneity of the body intact; the dark energy is replaced by dark matter. This dark energy is the cause of gravity. This gravity keeps the galaxy or cluster of the galaxies bound against the expansion. If we imagine a cluster of

galaxies, the time dilation created due to dark matter balances the time concentration due to dark energy, and that results in no expansion (Greshko, 2020) [20].

**4.3.5 Bending of electromagnetic wave** – If there is a massive body in the space. The production of dark matter will be proportional to the mass of the body. The dark matter dilates the space fabric and provides a smooth and short pathway to the light passing nearby the surface of the body. Under the circumstances, the direction of the light is bent towards the massive body. This proposition has already been proved by several experiments.

**4.3.6 Accelerating the speed of origination of cosmological substances** - We regularly observe the population accelerations in the case of intellectual human, psychological animal, biological vegetation, and physical matter (European Space Agency, 2003) [54]. In the same way, the quantum increment of cosmological substances cannot be ignored. In other words, the acceleration in the expansion of distance between two galaxies should also be there. This phenomenon was discovered by Edwin Hubble in 1929 (Kraghm & Smith, 2003) [30]. The same phenomenon has already been observed experimentally by Saul Perlmutter and Adam Riess (Martínez, 2009) [33].

#### **4.4 Different age of different galaxies**

The theory suggests that the complete Universe is not evolved in one shot. Different galaxies have evolved at different times and hence have different ages. Galaxies are originating, living, and fading is a regular process. This presumption is taken in Steady State Theory. We can begin to understand how galaxies and their stars are born, how they change and how they die over time. (NASA, 2020) [39].

**4.4.1 Some galaxies are older than us** - It means that when our galaxy was originated, some galaxies already existed. It is because the calculation of the age of the Universe is measured with the evolution of our galaxy only.

**4.4.2 Difference in galaxies** - It has been confirmed by experiments that there are lots of differences among galaxies. The UTO suggests that this difference may be caused by the age difference between the galaxies. (NASA, 2019) [38].

**4.4.3 Difference in activating speed** - The UTO argues that initially, the entropy was high, and the fabric density of space was also less. Under both circumstances, the galaxies that initially originated had high activation speed. And the young galaxies have less activation speed. This fact has been proved by NASA.

#### **4.5 Homogeneous in the space**

The UTO suggests that the sub-cosmological substance creates cosmological substance, the cosmological substance creates physical substance. This all is a natural process. The Universe

so created should be homogeneous in many respects, and it has been already proved (Kwon & Suh, 1998) [31].

**4.5.1 Origination of the Universe within the same cosmological space** - The cosmological space is completely homogeneous, and all the evolution has been taken place from this cosmological space. That will result in a homogeneous universe in all directions. This fact has been proved by the original COBE (Cosmic Background Explorer) results and the higher-resolution WMAP (Wilkinson Microwave Anisotropy Probe) data (Dooling, 2013) [16].

**4.5.2 Uniformity in Universe** - It has been observed that on a distance scale in excess of 150 Mpc or so, different parts of the universe record the same basic picture of the Universe; further, it is observed that there are no preferred directions or locations in the Universe (Postman, 2006) [45]. It proves that all the galaxies were originated at the place where they were required. It's just like the leaves on a bush, which are placed symmetrically by nature. It proves that the placement of galaxies is a natural process. It can be seen that all big galaxies have a big black hole at the center, and all the stars are rotating around the black hole. In the same way, all the planets rotate around the sun, all the moons are rotating around the planets, and all the electrons rotate around the nucleus. Everything is rotating. A complete universe is a self-operated and balanced system.

## 5.0 Conclusions

Modern cosmology faces many unanswered questions. We are still far behind the real truth. Why is it so? The philosophy says that truth hides behind our unavoidable preconceived notions. The conservation of mass and energy is such a type of preconceived notion, which becomes mysterious when we observe the origination of dark energy in space. The theory suggests that our Universe is not limited to the physical mass or to cosmological energy. It also has biological lives, psychological animals, and intellectual humans. The intellectual brain originates in symmetric psychological emotions. The psychological mind originates in symmetric biological tissues. Biological life originates in symmetric physical molecules (DNA). In the same way, physical life originates in symmetric cosmological energy fields. Furthermore, the cosmological field originates in symmetric sub-cosmological imperceptible substances. In other words, dark energy, which is a cosmological substance is originating from the sub-cosmological substances. Now, the conservation law can include sub-cosmological substances too. Philosophically this thought is logical, but experimentally we cannot perceive it. If there is any conflict between philosophy and science, we should obey philosophy because philosophy is the mother of all sciences. In this way, the theory feels no mystery of the origination of dark energy in space.

How the physical world originates? The paper suggests that we know the complete process of the origination of biological life from physical matter; we can displace this complete process

in the origination of physical matter from cosmological energy fields. By doing so, we are just to convert the word biological to physical and physical to cosmological. The unitarity will automatically explain the process.

The paper suggests that all the pieces of evidence in favour of the Big Bang can be used to prove the present theory. Modern science believes that due to the origination of dark energy, space expands, and it is being proved by the Redshift experiment. The paper suggests that expanding the space and increasing the fabric-density of space are one and the same thing. The dense space fabric will slow down the speed of light, which results in more time to travel, which we measure as more distance. We always measure the distances by time, not by kilometer. The paper resolves many unanswered questions using the above theory.

Paper finds itself very near to the Steady State Theory, where it is imagined that the total Universe is not originated in one shot. Each galaxy or the cluster of the galaxies is evolved one by one. The theory adds up that each galaxy has its own mass, space, and time, which did not exist before the origin and will not remain after death. But for other living galaxies with mass, space, and time continue to function as usual. As regards the CMB, it generates along with the dark energy continuously.

## 6.0 Reference list

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