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The Intelligent Universe:

Everything comes from nothing

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Abstract— The oldest and the most crucial question of the all times is this: How Universe and we originated? The most popular theory of our universe's creation a cosmic cataclysm unmatched in all of history – the **big bang**. This theory was born of the observation that other galaxies are moving away from our own at great speed, in all directions, as if they had all been propelled by an ancient explosive force.

The Big Bang theory was a great found to think differently than the ancient status quo model, but it needs improvement, because it lefts some questions to be answered, and some observations to be proven. In particular, it was unable to explain what happened before the Big Bang. This was the biggest reason why big part of this paper will be dedicated to the question: “What happened before Big Bang?”, which remains to be the biggest black box of moderne astrophysics. To answer this utopic question, I develop some new concepts and theories, more important to notice are: The theory of Active Points, the theory of Condensation Points, the concept of the Universe center, the concept of space evolution in dimensions, etc... These concepts and theories will be explained chronologically step by step.

The second part presents the Big Bang itself, observed and traited a bit differently. The main focus will be the cause of Big Bang and what made it happen.

Third and last part is the post-Big Bang scenario and how the Universe got the shape that has today. In the same contest, we will discuss the General Cosmic Plan (GCP), which is the fundamental theory for this subject.

Index Terms— Universe, Creation, Big Bang, theory of everything, stady-state, dynamic, materialism, space-time, evolution



1 INTRODUCTION

The most popular theory of our universe's creation a cosmic cataclysm unmatched in all of history – the **big bang**. This theory was born of the observation that other galaxies are moving away from our own at great speed, in all directions, as if they had all been propelled by an ancient explosive force. 1* This explosion, for some scientist is just an ad-hoc process of Origine denying Creation and The Creator and for some others is part of well calculated plan which results Creation of the Universe.

A Belgian priest named Georges Lemaître first suggested the big bang theory in the 1920s when he theorized that the universe began from a single primordial atom. The idea subsequently received major boosts by Edwin Hubble's observations that galaxies are speeding away from us in all directions, and from the discovery of **cosmic microwave radiation** by Arno Penzias and Robert Wilson. 1*

In fact, the expanding Universe was the first theory to prove wrong materialists and supporters of stady-state Universe model. Hubble showed to Einstein that his formula stating that Universe is static was wrong and Einstein very sporty accepted the “defeat” by stating that this was the biggest mistake of his career. Even materialists accepted the Big Bang as the main theory for the Universe origine, but still they denied Creation as process because ad-hoc means accepting the Creator. As you can see, there is not scientific problem only, it is a

political too.

Why materialists and most of scientist deny Creation?

Creation as a concept means not just making something, but making it from nothing and that is enough to divide the divine and human, also to divide religion and rational thinking.

Creation implicitly involve the Creator, so that become the biggest headache to scientists, which then have to agree that God exist. If you think dogma rules religion, then also is very dogmatic to deny existence of God just because science has to admit something that religion has admitted before.

We are used to say: “I created it” for things that we do, but we are really just transforming things that were already created.

Practically, our limited intellect has troubles understading this difference between Creation and making/transformation. The only way to explain is the theoretical way by using mathematical modell to explain Creation process and its difference from making process.

The mathematical model consists of a simple Topology group to explain the nature and geometry of the very beginning of Universe (from Empty Space to Conservation Point). The model then is developed to an Evolution Function based on basic Riemann Integration to describe dimensional Evolution of the Universe itself which results the Universe that we know today. In fact, the evolutions function of the material existence: $f(\varepsilon)$ will help us to define states of the existence of matter that we know today. In addition, the fundament of my theory is that matter that we know today is not an absolute

existence and it exists only on the limits of material world.

Evolution from zero dimensions up to the fourth dimensions (the World of Minkowski) and continuing to infinite space-time (String Theory) existence is continual function of Rimman.

In the second part we will generally explain the mathematical and physical conditions to result the Big Explosion, known as Big Bang.

In the third or last part, I will focus in the problems of the new existence which is called Universe. Fascinated from its order, we conclude that Universe is created by Supernatural been by a very exact plan, which I call General Cosmic Plan. Undeniable fact that behind this Creation exist a well calculated plan is that all explosions destroy systems but only Big Bang actually did the opposite. Scientists agree with me in this point, that exist a very exact calculated plan of the Cosmos, but still they consider causality and probability as the main factor for creating such a master piece.

For example, if the Universe is created casually would be the same or even more difficult than as to say that if you throw bags with alphabet letters from the balcony and on ground to be written the book "General theory of relativity" of Albert Einstein.

2 Before Big Bang

Before diving deep in mathematics, let's give a little space to the mother of smart thinking, philosophy. What is the philosophy behind Creation?

As we defined Creation as a process when "something" is made from "nothing" and to approve the theory, we have to prove that "something" is in fact "nothing".

"Something" can be generalized as everything that "exists" in this material world and based on logic induction means that the material world is nothing. This point is very important because here is where my model of the Universe and existence has its start.

So to conclude, our theory wants to prove that material world is created from zero, implicitly to prove material content is actually zero. I am conscious that this is hard to believe and even harder to understand, so I will follow with some examples that may help you familiarize with the problem.

Imagine that you are doing a random recording with digital camera in a beautiful sunny day. After that, you copy the recording material in a disc and you put that in a computer's CD Rom. This computer is connected to a human brain, which is in coma. All the information from computer is converting to electrical pulses targeting the brain surface. In a near monitor connected with the brain surface, you will see the same record. The brain 'feels' the information at the same way, without considering the environment.

This means that if you have cold from the environment temperature of -12C, or you simulate the surface of brain on temperature centers (to generate the -12C) you will feel the same thing.

Or, if you stay in a room where temperature is 40C and you are simulated by electronic pulse that tells your brain that the temperature is -12C, then you will feel cold even outside is

hot.

If you are viewing a burning candle by your eyes then it automatically will be generated in electrical impulses to your brain. Based on these impulses, brain makes the configuration of the object inside of your head. Inside of our head is dark, then how we can see light?!

If you cut the nerves which are sending information to your brain, you will not see, touch and feel or the candle does not exist for you. If you cut all the nerves, it is no "existence" for you.

I hope these examples made you think out of the box and change a bit your opinion of what World is all about.

We can easily conclude that this World that we live in has non-real existence, but it is only an electric simulation in our brain. The real Universal existence is actually beyond material world limitations.

The only remaining universal existence is energy and during reading this article hope you understand the difference between two concepts. Matter and energy are co-existent in the material world, but despite matter, only energy has universal existence. Separating matter to smallest partition will result you zero partition. Same process with energy gives you quantum which is not a zero existence. Why is this important?

Knowing the nature of matter and energy, you can come to a clear conclusion that matter is representation of the energy and not vise-versa.

Also, very important is that "matter" is energy that connects this zero particles. That energy is $E=mc^2$ and after this energy is taken off from and m mass then you have actually nothing. It is evident that mass do not exist as stand alone.

Nevertheless, for the energy we have the quantum and that is smallest particle. This is a big reason to make a deep border between two existences, so energy can exist as stand-alone.

To ignore physical world (matter) while "existing" here in it is very hard, but theoretically we can do that. Therefore, I will explain this in mathematical way.

Empty Space (Universe beginning) topology is described with simple concepts as:

Let X - is any set of Active Points and let T - Universe be a family of subsets of X . Then T is a **topology** on X

1. Both the empty set and X set of Active Points are elements of T Space (*Whole Universe*).
2. Any union of arbitrarily many elements of T Space is an element of T .
3. Any intersection of finitely many elements of T is an element of T .

If T is a topology on X , then the pair (X, T) is called a **topological space**, and the notation X_T is used to denote a set X endowed with the particular topology T .

X represents set of Active Points and T represents the entire Space.

Space/Universe includes both Active Points set and Empty Space.

The integration of the zeros (or nothing) is possible by a mathematical concept, called integral. From the basic meaning of integrals, we know that:

$$\int 0 dx = c$$

If $f_i(\varepsilon)$ is the evolution function, which the initial value is zero (nothingness), then we have: $f_i(\varepsilon) = \int f(\varepsilon) d\varepsilon = c$. The constant i has these values: $i=0, 1, 2, 3, \dots, n$ and it measured the scale of integration (or the space-time range). The constant c the first non-zero stage of space-time evolution, but still not in the level of material world.

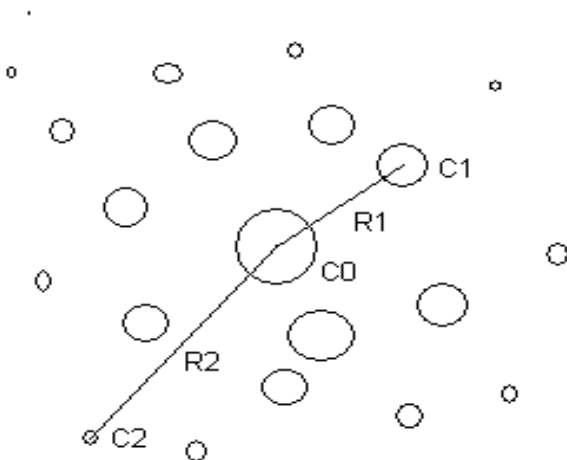


fig 1.1

At all, the general value of the evolution function is:

$$f_i(\varepsilon) = \int \int \int \dots \int f_0(\varepsilon) d\varepsilon^i = \int f_{i-1}(\varepsilon) d\varepsilon$$

It will be interesting to plot in 3D, for $i=3$ at polar coordinates.

The evolution function is a function which expresses the dimensional evolution of the Universe from its beginning to the n -dimensions. The first step on the Creation process is dedicated to the creation of the Active Points. The Active Points are static points with different capacity all-around empty space. These points actually represent singularities in the entire Universe and their duty is to control the expansion of the matter in the Universe. Even they are different than the rest of empty space, their surface and volume remains zero, while their attraction potential (gravity force) is not usual. Active points in Universe today represent any gravity center of any

Universe object blackhole, star, planet, satellite etc. They are different from each other in the potential (attraction force known as gravity) and based on the radius. The main difference is the gravitation force, which power is in direct proportion with the value of C and in indirect proportion with the radius from the center. The maximal value of C is in the center ($C0=\max$, for each group). This Space-time evolution step will be illustrated by a figure that visualizes random space-time forms in every stage.

In the figure, you can see one group of active points and the main active point in the center. Each one with different C_i and R_i has different value of gravity force. This is how the dispersion of Active Points looks like in the early stage. GCP (General Cosmic Plan) tries to represent a big picture of Universe organization.

After each process of contraction, we get a new dimensional world in incremental order. It is the time-line or with other words, we have the dimension of time. This condition is valuable for $i=2$ to general evolution function (1.2). It will look like:

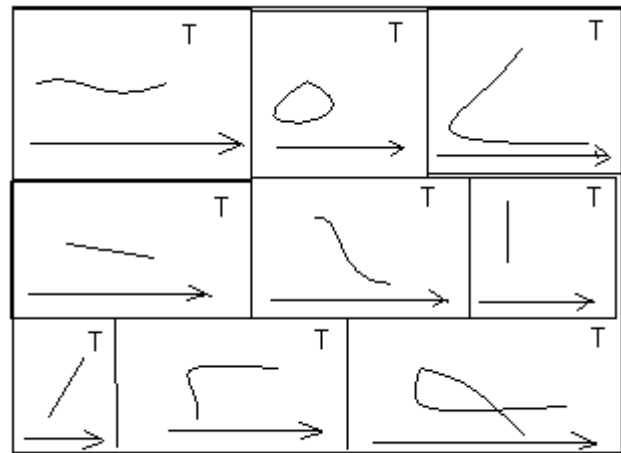


fig 1.2

Each group make it zone of integration or consolidation. Here in the figure are just nine of them, but really they are infinite. The different forms of time-lines are because of different types of active points.

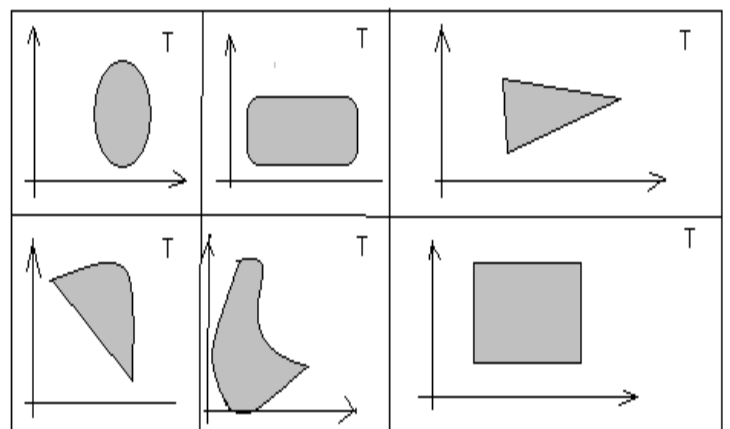
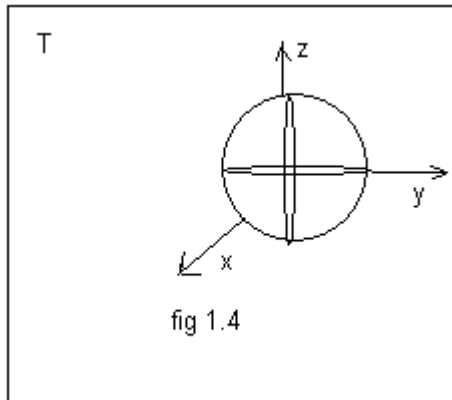


fig 1.3

The integration continues for $i=3$. The new dimension here is the surface. Now, we have 2D adding time. It will look like:

This comes from integration of the third step.

The integration continue for $i=4$. It presents the World of Minkowski (3D+time) or the world that we are living. This is the period of material consolidation or the child form of matter.



There are no chemical and physical characteristics. There are not different types of matter but just a cosmic gas. This is not the end of dimensional evolution, but it is enough for matter to be consolidated. String Theory confirms

that exist more than 4 dimensions and my theory supports that with continuous dimensional evolution.

What existence is the initial value of Universe?

By my theory, it is clearly a stand-alone atom in hyper-energetic mode.

Big Bang Era

The today's Cosmos (Universe) is characterizing by relative low temperatures. In the beginning, the Universe had different physical nature with today's Universe. There was a great temperatures and very high density of quarks and leptons. This period represent the Plank time and it supposed to be just 10^{-43} s. After the Plank time, but more before matter condensing, the Universe was maddened from partitions, anti-partitions and radiation and it lived on thermo equilibrium. At that time, the Universe was dominated by density of radiation energy, which was bigger than matter energy. For this state, we have this action:

$$t = \sqrt{\frac{3}{32\pi G\rho_r}}$$

1.2.

It can used to define the relation between time and temperature with this action manipulation and numeric calculations:

$$\rho_r = \frac{U}{c^2} \Rightarrow T = \frac{1.5 \cdot 10^{10}}{\sqrt{t}} [^{\circ}K]$$

This formula do not support the Big Bang explosion, so it must be another organization of the matter on this stage and temperature is not the reason of explosion. The combination of quantum and gravity theory has no results about the question

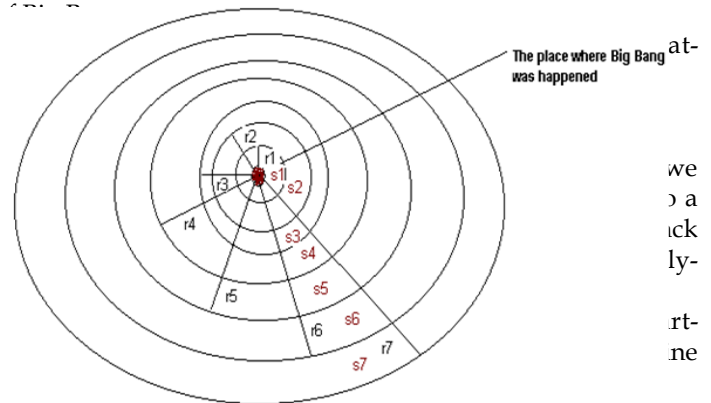


fig 1.5.

With different s , we represent different energetic states and with different r represent radiuses for each state. The nearest state to the center has bigger energy than far one. The lines coming from the center and connecting with the state are radiuses, which are different for different state. This is how it looks before the explosion.

This zone is a geometric regular sphere of shape but not homogenous. If we define the zone as $\theta(x, y, z, t)$, then the volume of the zone will be V_{θ} and the density will be ρ_{θ} . The energetic mass is separated on the states by a Riemann rule.

$$m'_{\theta} = \sum_{k=1}^{\infty} \rho_{\theta}(M_k) \Delta V_k; M_k \in \theta; M_k(\alpha_k, \beta_k, \gamma_k, t_k)$$

$\lambda = \max d_i$ The concept of mass, for this case, we will change to energetic mass because it contains the meaning of our problem.

Therefore, we separate the zone on small pieces, which we consider as partitions, with space diagonals d_i , where: We have:

$$m_{\theta} = \lim_{\lambda \rightarrow 0} m'_{\theta} = \lim_{\lambda \rightarrow 0} \sum_{k=1}^{\infty} \rho_{\theta}(M_k) \Delta V_k = \iiint_{\theta} \rho_{\theta}(M) dV_{\theta}$$

In help of this action, we can find the compression factor k . Factor k is result of energetic mass dividing by inertial mass. Before this, we can define exactly what energetic and inertial mass is:

$$m_{\epsilon} = k \cdot m,$$

$$m = \iiint_{\theta} \rho(M) dV_{\theta}; m_{\theta} = \iiint_{\theta} \rho_{\theta}(M) dV_{\theta}$$

$V = V_{\theta}$ $\rho_{\theta}(M) = k \cdot \rho(M)$ Alternatively, we can write like:

At numerical meaning, energetic mass can be defined as: $m_{\epsilon} = m \cdot c_i^2$

here, we can see that $k_i = c_i^2$ at numerical meaning. c_i - is for each system with different value.

For example, in our system c is: $c = 3 \cdot 10^8$, which is equal

with the speed of light. In addition, the speed of light tells us the maximal compression factor of each system. So, $k_{\max} = [c]$.

This is all about physical meaning of the Big Bang status. Now, we are turning back to math. Looking at mathematical point of view, this existence is a field, or more exact, it is a scalar field, which can be defined as:

$$\varepsilon = f(x, y, z, t) \text{ and } \vec{s} - \text{the unit vector of the field then:}$$

, or in vector form:

$$D_s = \frac{\partial f}{\partial x} \cos \alpha + \frac{\partial f}{\partial y} \cos \beta + \frac{\partial f}{\partial z} \cos \gamma + \frac{\partial f}{\partial t}$$

$$\nabla f = \frac{\partial f}{\partial x} \vec{i} + \frac{\partial f}{\partial y} \vec{j} + \frac{\partial f}{\partial z} \vec{k} + \frac{\partial f}{\partial t} \vec{l}$$

$\nabla f(x, y, z, t) \leq 0$ - because the integration continue in negative direction.

The condition of explosion can be presented mathematically on this way:

$$\nabla f(x, y, z, t) = 0$$

After explosion, given field lose the scalar nature transforming to the vector field.

This is mathematical point of view about explosion condition, but physically it is a moment of energetic saturation of the atom that made explosion happened.

This will be analyzed in the third part of the paper.

Post Big Bang

Even it is look like a chaotic system, in fact is a very good calculated plan. The gravitational force of the center point is enormous but enough to get control of the entire Universe. It is a perfect equilibrium between the explosion force and the gravity force of the center point. This is the big difference from the other explosions.

GCP means General Cosmic Plan and is based on many theories, which one of them is the theory of Active Points similar to singularity. AP/Singularities are gravitational points of the Universe, which had enormous gravitational force. This grid of points makes the Universe more secure from other physical anomalies and are the support points to make Universe sustainable. These points controlled the whole situation in the Universe after Big Bang and made the order so we have the Universe that is today.

The potential of the point determinate the gravitational force and mass and not the mass is a function of this potential. Logically the biggest and most influential Singular Point is the Big Bang place and that is the Centre of The Universe. This mean that the Universe is not based on mass or material interactivity but in fixed points interactivity. It is reasonable that the plan applied in Universe after Big Bang determinate Universe and its now days shape and functionality.

The GCP consider that the points are the main thing of Universe's organization. Every gravitational or singular point with its potential has the role of composing Universe after the explosion. Active points in the Universe now are represented by Black Holes.

GCP is the main reason to create conditions for 3+ dimensions and make possible 3+ geometry calculations.

Possible local geometries

The local geometry of the universe is determined by whether Omega is less than, equal to or greater than 1. From top to bottom: a spherical universe, a hyperbolic universe, and a flat Universe.

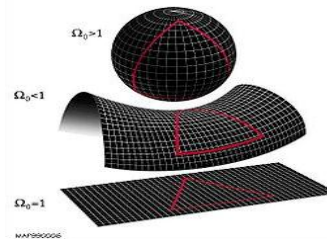


Fig 1.

The local geometry of the universe is determined by whether Omega is less than, equal to or greater than 1. From top to bottom: a spherical universe, a hyperbolic universe, and a flat universe.

There are three categories for the possible spatial geometries of **constant curvature**, depending on the sign of the curvature. If the curvature is exactly zero, then the local geometry is flat; if it is positive, then the local geometry is spherical, and if it is negative then the local geometry is hyperbolic.

The geometry of the universe is usually represented in the system of co-moving coordinates, according to which the expansion of the universe can be ignored. Co-moving coordinates form a single frame of reference according to which the universe has a static geometry of three spatial dimensions.

Under the assumption that the universe is homogeneous and **isotropic**, the curvature of the observable universe, or the local geometry, is described by one of the three "primitive" geometries (in mathematics these are called the **model geometries**):

- 3-dimensional Flat **Euclidean geometry**, generally notated as E^3
- 3-dimensional **spherical geometry** with a small curvature, often notated as S^3
- 3-dimensional **hyperbolic geometry** with a small curvature

Even if the universe is not exactly spatially flat, the spatial curvature is close enough to zero to place the radius at approximately the horizon of the observable universe or beyond.

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