

End for the Big Bang Theory, Dark Matter and Dark Energy.

A New Logical, Clear and Scientific Explanation

for the Accelerating Expansion of the Universe

Vaggelis Talios

Abstract: The “big bang theory” was established at the end of the third decade of the past century, when astrophysicist Edwin Hubble made the very great discovery, that the Galaxies of the Universe do not have fixed positions, but they move and even move away, which means that the “Universe is expanding”. The theory of the big bang was in completely agreement with Hubble's discovery; so although it had many doubts, it was established as a cosmological theory, provided, of course, that over the time and the advancement of science, these doubts would be clarified.

However, in the 1990s-2000s decade, something unexpected happened; two independent research teams, the Supernova Cosmology Project and the High Z Supernova Team, trying to study more thoroughly the expansion of the Universe, discovered that this expansion is accelerated, something that did not agree with the big bang theory, which provides for the opposite; that the expansion of the Universe is, a slowed down expansion.

Since then, all of the scientific community has been in turmoil, because an overthrow of the theory of the big bang will overthrow and most of the newer theoretical physics too, which is related to the big bang theory. Unfortunately, science attempting to explain the accelerated expansion, through the controversial concepts of “dark matter” and “dark energy”, –defined as strange cosmic “some-things” and nothing more–, has failed and so far, not produced any positive result.

Following these developments, I thought it necessary to get out of my office drawer and restore forward once again the “theory of the chain reaction”, which explains the accelerated expansion, describes with credibility and scientific consistency the creation and operation of the Cosmos and answers to almost all the questions that do not answer the big bang and the other cosmological theories.

Vaggelis Talios, E-mail, vtalios@gmail.com: Dipl. Mechanical & Electrical Engineer (N.T.U.A.). Researcher, Author and the Inspirer of the trilogy of the creation: The “theory of the chain reaction” [1], the “theory of the unification of the fundamental forces and physical theories” [2] and the “theory of the creation of the matter and antimatter”

Man always tried to interpret, how were created and how all that are happening around him, evolved? From time to time, there have been many theories about the

creation and operation of the Universe, proposed. The big bang theory, proposed by the Belgian astronomer and catholic priest George Lemaitre, at the end of the third decade of the past century, with its own persuasive, interprets the creation and operation of the Universe.

According to the big bang theory, the Universe was created by a big explosion. Initially and according to the theory, there was a very small sphere, at a size smaller than an egg¹. This small sphere had in it, infinite energy, infinite temperature, infinite pressure and generally all the material needed to create a Universe. At one point of time the sphere explodes, the materials that it had, been dispersed and then created the Universe just as we perceive it today.

The above interpretation was a very nice and fairly convincing explanation of how the Universe was created. There were also several clues to the interpretation given by big bang theory. But when scientists started studying the theory somewhat more carefully, there were many questions that made the theory problematic. The most basic question was: Where was it found and what was this very small sphere from the explosion of which an entire Universe was created?!!! Something that science could not answer. It was so fundamental this question that the rest of the other questions² had no sense if this question was not clarified first.

Coincidentally, at the same time that the big bang theory was proposed, the astrophysicist Edwin Hubble made a very great discovery that the Galaxies in the Universe do not have fixed positions but they move and even move away, which means that the “*Universe Expands*”. Big bang’s theory was fully in agreement with Hubble’s discovery, so although it had many doubts, it was provisionally established as a cosmological theory, provided of course that over time and the advancement of the science it would be clarified the above disputes.

With the passage of several decades, we reached in the 1990s-2000s decade, with the doubts and questions about the big bang being forgotten and the theory been established, without even answering one question. Then there was something unexpected happened; two independent research teams, the Supernova Cosmology Project and the High Z Supernova Team, trying to study in more detail the expansion of the

¹ This was the reason the small sphere was called “cosmic egg”. To Lemaitre’s honor, many scientists call the sphere, Lemaitre’s egg.

² I will not refer to the other questions of the big bang theory, since these questions are so many, that if I describe them, I will escape from the subject of the work.

Universe, discovered that this expansion was accelerating, something that did not agree with the theory of the big bang, which provided exact the opposite, that the expansion is, a slowing down expansion.

Since then, the whole scientific society has been in turmoil because the discovery of the accelerating expansion of the Universe essentially negates the big bang theory. But, a rejection of the theory will also negate the largest part of the modern theoretical physics, as it is based on, or is related, to the big bang theory. The effort to provide an explanation for the accelerating expansion of the Universe by the disputed concepts of the “*dark energy*” and “*dark matter*” which are defined as strange cosmic “*some-things*”, that generate the repulsive forces involved in the expansion of the Universe and create the accelerating motion, did not succeed and until now has yielded a multitude of anti-scientific assumptions but not any positive results.

The established scientific status quo, under the fear that it might lose some of its privileges, is opposed to any change and instead of broadening the research horizons, in order to increase the possibility for a correct answer, on the cause of the accelerating expansion to be found, does the opposite. It has been restricted in the already existing concepts of the big bang and tries to reach various answers based only on these concepts; at the same time, it rejects every new scientific proposal that is not in accordance to its opinions. Furthermore, it considers these new concepts heretic, regardless where these come from, what these describe and what these expresses. The result of this misguided tactic is to halt any constructive process that would lead to a positive solution. Instead, the same erroneous notions are continuously re-expressed resulting in, the creation of a static situation that leads theoretical physics and cosmology to an increasingly bad condition. Certainly, it would not be fair, if we did not acknowledge the fact that experimental physics and cosmological astronomy have made enormous progress in the field of the observations. However, all this enormous experimental progress is useless, if this cannot be supported, by the correct theoretical foundations.

Nowadays, the majority of scientists dealing to this subject have already realized that they cannot make any further advance with the data accept until now. However, they do not dare oppose themselves to the already established concepts, which have been supposedly expressed by great scientists, as they risk to be automatically considered heretic, –whereas, in fact, the opposite is true–; such a thing will have also a no good effect on their whole career. Certainly, there are also many cases of scientists

who have expressed their opposition to the existing concepts, but these cases pass usually unnoticed. For example, I will remind you the case of a research team in a large research center that announced that the speed of the light in void is not constant; this would dispute the theory of special relativity. Within a few days, the president of the research center was replaced and, at the same time, the announcement was hushed. On the contrary, the cases of the detection of the gravitational waves and the photo depiction of a black hole, –cases that I personally consider disputable–, were announced all over the world and promoted by thousands of media.

Taking into account all above developments, I feel that only a very daring proposal would be able to normalize the situation and yield a positive result. Such a proposal is a radical review or even the rejection of the big bang theory, on the grounds that although a century has passed since the temporary establishment of the theory, not one of its contested points has been clarified yet. On the contrary, it was discovered that the expansion of the Universe is accelerating, which means that even the hypothesis that supported and temporarily established the theory was refuted.

On the other hand, as every rejection generates negative feelings and gives always birth to the reasonable question, how the missing points caused by this rejection will be completed? It's good, the rejection to be accompanied, by a new positive proposal. On these grounds, for the replacement of the big bang theory, I propose the theory of the chain reaction that provides answers, to all contestations to the big bang theory and describes the creation and the function of our Universe and the rest of the Cosmos, more precisely, with a rational and scientific congruity. Also, at the same time, it explains clearly, in an indisputable way, how the accelerating expansion of the Universe is generated. In very few words, the theory of the chain reaction is as follows:

“... In the beginning, Cosmos consisted of a vast, absolute void of infinite size. At a certain moment, an abnormality occurred and an elementary particle-charge³ was formed with neither mass nor size. The only characteristic property of it was an electromagnetic radiation emitted, which corresponded to one third of the electromagnetic radiation of the proton. The theory named this particle ‘pointon’. In order to restore this abnormality, opposite particles to the first one, the ‘antipointons’ were

³ The theory of the chain reaction assumes that the beginning of the creation was marked by a single particle. This is a much more reasonable idea than the existence of a small sphere containing within it an entire Universe, as accepted by the big bang theory.

formed. The formation of the antipointons was considered as another abnormality and new pointons were formed in order to restore it. Thus, a flash, chain reaction⁴ started, producing pointons and antipointons; this reaction is still going on, until now, at the limits of the Universes and the Antiuniverses. The production of pointons and antipointons occurred and occurs without energy consumption, as, in any case, there was no energy, because, according to the “theory of the chain reaction” the Cosmos started from ‘zero’.

“A characteristic property of the pointons and antipointons created was that the opposite particles were attracted and the identical ones were repulsed. The theory named this attraction or repulsion, which corresponds to the actual electromagnetic force, ‘electromagnetic interaction’. The electromagnetic force was the cause that sometimes, led the pointons to capture antipointons –or vice versa– and forced them to spin around them. So the ‘quarks’ up and down, the ‘antiquarks’, the ‘electrons’ and the ‘antielectrons’ were formed. These were charged particles and, contrary to the pointons and antipointons they had, ‘mass’⁵ and ‘size’⁶.

“Then, from the quarks and antiquarks, the ‘protons’ and ‘neutrons’ were formed, as well as a branch of the ‘electromagnetic force’, the ‘strong nuclear force’, which joined protons and neutrons to form the nuclei of the atoms. From the nuclei and the electrons, ‘atoms’ and ‘antiatoms’ were formed. Here, always according to Vaggelis Talios’ idea, “the situation was reversed”, as a second branch of the electromagnetic interaction, the ‘gravitation’ occurred between atoms and antiatoms, as a gravitational force, with the atoms attracting similar other atoms and repulsing antiatoms⁷ and antiatoms, attracting similar other antiatoms.

“This reversal was the cause that resulted in the creation of matter, antimatter and then the concentrations of matter and antimatter; from which the Planets, the Stars,

⁴ The chain reaction of producing pointons and antipointons and the electromagnetic interaction were the only elements needed to create the Universe and the Cosmos.

⁵ The masses were created as the differences between the attraction and repulsion forces between the elementary particles when they orbited around their opposite particles to form quarks and electrons.

⁶ The dimensions of the new particles were created by the radius of the rotational orbits of the elementary particles pointons and antipointons.

⁷ The theory of the chain reaction assumes that atoms repel antiatoms. My related work: Does Matter attracts or repels antimatter? <http://viXra.org/abs/1805.0368>

the Solar systems, the Galaxies, the Universe, the Universes, the Antiuniverses and the whole Cosmos, were created...”

This is in very few words, the “theory of the chain reaction”, which explains the creation in a rational, convincing and scientific way; but this is something you will judge after having read and studied the whole work. For further details, I have written an extended summary of the theory, which I have published in the viXra archive, <http://viXra.org/abs/1802.0233>. The theory in full analyze is described in my book “From the Elementary Particles to the Limits of the Infinite Cosmos” [1].

Of course, the question whether the theory of the chain reaction can fill the gaps that will be created after the rejection of the big bang theory, rises. However and essentially, such a question is most probably misplaced here, as the big bang theory has never been definitely established, whereas it, as temporarily established, did not cover any gaps that will be created after its rejection. A proper question would be; whether the theory of the chain reaction can provide answers to the existing questions and whether it has the perspective to incorporate, the new advances, in physics and cosmology? The answer is that the theory of the chain reaction provides answers to almost all those questions that remain unanswered by the big bang theory and the other theories that explain the evolution and the creation of the Cosmos. Further more on the issue of whether the theory of the chain reaction can incorporate the new advances in physics and in cosmology, the perspectives seem positive and this will be obvious to the reader after studying the theory.

I mention for example, the answer the theory of the chain reaction provides to the question: How does the theory explain the accelerating expansion of the Universe? According to the theory, along with matter, antimatter is created too and then large concentrations of matter and large concentrations of antimatter⁸; from which the Universe and the other Universes and Antiuniverses have been and are being created. The concentrations of matter are attracted and the same applies to the concentrations of antimatter. The concentrations of matter and antimatter are repulsed. These properties create a dynamic that always results in accelerated motions, resulting in the accelerat-

⁸ In what concerns the issue where the concentrations of antimatter are and why such concentrations have not been observed yet, the theory of the chain reaction answers that these concentrations are be found at enormous distances, exponentially bigger than the size of our Universe and therefore it’s impossible to locate them with the means science has available today.

ed movement of the Galaxies. The accelerated movement of the Galaxies is considered by physics and cosmology to contribute to the accelerated expansion of the Universe.

For the chain reaction theory the state is completely different; as the motion of the galaxies on one hand is accelerated, but it is not a linear motion, creating just only the expansion of the Universe. In fact, it is a curved motion creating an accelerating but turbulent and chaotic movement of the Galaxies, –which is confirmed by the various astronomical observations too–, without this be creating necessarily an expanding motion of the Universe. But I will talk about these cases in my next work.

Completing this work, I felt the need to disclose also, several thoughts of mine, on the establishing of the big bang theory, which I believe that will be proven very useful in the next steps of the theoretical physics, i.e.:

- How is it possible to establish a theory when lots of contestations on it exist, without having been clarified yet the criteria that supported the theory?
- Why the contemporary theoretical physics and cosmology are based exclusively on the big bang theory and why all the other new theories, being rejected? When among these theories, there are some theories, much more notables than the big bang theory.
- Why there is always a standard policy, leads to the automatic rejection of all the new cosmological theories proposed, without their publication, study or any evaluation?
- Why the scientists who agree with the big bang theory considered as the real scientists, whereas the scientists who do not agree with the theory are being disdained and called heretic or pseudo-scientists?
- Are there any scientists who agree with the views of the present paper? If yes, where are these scientists and how do they react?

P.S. Before I conclude of the writing of this work, has been given rise a new controversy between science and the big bang's theory. Some of the observational data, of the Planck space telescope, indicate a spherical Universe, something which is not in agreement with the big bang theory, which accepts a flat Universe. This controversy will be discussed later on in some new work.

References

- [1] V. Talios, *“From the Elementary Particles to the Limits of the Infinite Cosmos”*, Nova Science Publishers, Inc. (2020). Note: Today the book is released under the title *“From the inside of quarks and up to the Universe”* (2010), but I suggest you to read the new revised version, with the new title, be released early in 2020.
- [2] V. Talios, *“The Real Grand Unification”*, Laplambert Academic Publishing (2016).