

Once Again about Nature and its Material Principles

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Abstract. In this article, the author makes another attempt to present and explain to the esteemed readers his vision and understanding of the structure and evolution of nature and the Universe. All this is in the author's book "Theory of Nature" and in his article "Nature as an objective reality". The author entirely and completely stands on the position of the only true and scientific philosophy of dialectical materialism. The author entirely and completely adheres to the only true and scientific dialectical-materialistic worldview.

Key words: nature, Universe, matter, truth, lie, science, pseudoscience, algorithm of evolution of nature, algorithm of evolution of the Universe, philosophy, physics, dialectical materialism, bourgeois-idealistic philosophy.

According to my own scientific research (not sponsored by anyone), < not yet (up to now) considered in the bourgeois Russian Federation as foreign agent activity >, conducted in 2011-2025, the results of which are presented in my book "Theory of Nature" and in the clarifying article "Nature as an objective reality", NATURE is a "five":

<NATURE> ::= <**Singularity, matter, UCN, emptiness, FLN**>,

where

Singularity is a unique, special area of nature or a unique special mechanism of nature;

matter is the matter of nature, which is represented by quanta of matter (EUMs), pulsating in the rhythm and tempo of nature. The quantum of matter (EUM) underlies all elementary particles (EP), generates them. The

quantum of matter (EUM) is the content of elementary particle (EP). The quantum of matter is the minimum amount of matter in nature. The pulsation of a quantum of matter is a strictly periodic, harmonic process of internal motion of matter. The quantum of matter is also in constant external motion, displacement. This motion occurs according to the law of nature: “in one quantum of time, displacement by one quantum of length”. This is the maximum speed in nature. In our ordinary physical language, this would correspond to the speed of light in a vacuum;

UCN= $1.210\ 256 \cdot 10^{44}$ is a unique and universal constant of nature;

emptiness is emptiness (void);

FLN is the Fundamental Law of Nature. This is the law of the circulation of matter in nature. The matter of nature (1) is “sucked in” by the Singularity like a pump, (2) is adjusted in a certain way inside the mechanism of the Singularity and (3) is radiated outward, into the surrounding vacuum.

Vacuum is a quantum of matter (EUM) in its ultimate state, in a state that should be called material vacuum dust, particle (MVD) and emptiness. So, at the entrance Singularity receives UCN particles of material vacuum dust (MVD) per one cycle, and at the exit (during radiation) UCN matter quanta (EUMs) in the current state are obtained from Singularity. All these UCN matter quanta (EUMs) are emitted by Singularity per one cycle in UCN different directions. The process of radiation of matter quanta by Singularity should be understood and imagined as the transfer of the initial impulse (push, kick) to each quantum of matter (EUM). As a result of this impulse, each quantum of matter begins to move by inertia in the direction set for it, away from Singularity with a very specific initial speed. This is the maximum speed in nature (Universe) (MVN) for the moment of radiation.

The maximum speed in nature (the Universe), and it is designated by a single symbol “MVN” is one of the most important, fundamental characteristics of the Universe. This (MVN) is not a constant value. This (MVN) is a variable, increasing value over time. For the modern era of the Universe, the numerical value of this value (MVN) is numerically equal to the physical value of the velocity of light in a vacuum in SI ($c=299\ 792\ 458$). Within the framework of the “Theory of Nature” (TN), a formula (change) of this velocity over time, with the age of the Universe, is established.

Another fundamental characteristic of the Universe is the gravitational value of the Universe (GVU). This (GVU) is also not a constant value. This (GVU) is a variable, increasing value over time. For the modern era of the Universe, the numerical value of this value (GVU) is numerically equal to the physical value of Newton's gravitational constant in SI ($G=6.67430 \cdot 10^{-11}$). Within the framework of the “Theory of Nature” (TN), a formula (change) of this characteristic of the Universe (GVU) over time, with the age of the Universe, has been established.

Another important fundamental characteristic of the Universe is the quantum of length (EUL). At the same time, the quantum of length (EUL), quantum of mass (MAM) and quantum of time (EUT) are fundamental elementary natural units. The quantum of time (EUT) is an unchanging constant value, it is a natural constant. And the quanta of length (EULs) and mass (MAMs) are variable values, changing according to certain laws in time during the entire evolution of the Universe. The material carriers of the standard values of quanta of time, length and mass, according to the “Theory of Nature” (TN), are grains of matter. Behind the quantum of time (EUT) there is a quantum of matter (EUM), and the equality of numerical values takes place: $EUT=EUM$. We can say that the quantum of time (EUT) corresponds to the quantum of matter (EUM). Behind the quantum of length (EUL) stands or the quantum of length (EUL) corresponds to the diameter of a grain of matter. This diameter increases with time according to a certain law, discovered and found within the framework of TN. And, therefore, along with it, the quantum of length (EUL) increases according to the same law. As for the quantum of mass (MAM) or the mass of a grain of matter, then, according to the “Theory of Nature”, in nature there is a relationship (identity): $EUL \cdot MAM = EUM$. This is a law of nature, the law of the relationship of quantum quantities (quantum units) of the quantum of matter (EUM), the quantum of length (EUL) and the quantum of mass (MAM). The quantum of matter (EUM) is a constant quantity in a quantitative sense, it is the minimum amount of matter in nature. Together with it, the constant quantity is numerically equal to its quantum of time (EUT), $EUT=EUM$. The quantum of length (EUL) is an increasing quantity. In this case, from the identity (law of nature!) $EUL \cdot MAM = EUM$ follows the defining formula of the quantum of mass: $MAM = EUM / EUL$. And from this last identity defining the quantum of mass it follows that the quantum of mass (MAM)

is a quantity decreasing with time, with the age of the Universe. Due to the equality $EUT=EUM$, the identity $EUL*MAM=EUM$ is equivalent to another identity $EUL*MAM=EUT$.

The formula, identity, law of nature $EUL*MAM=EUT$ also testifies to the fact that such important characteristics of nature as time, length and mass, represented in nature as a quantum of time (EUT), a quantum of length (EUL) and a quantum of mass (MAM) are not independent from each other by characteristics, quantities. They are dependent in the aggregate, in accordance with the formula, identity, law of nature: $EUL*MAM=EUT$ (or $EUL*MAM=EUM$).

It must be said that according to the “Theory of Nature” the Universe is not eternal. The time of the complete evolution of the Universe is finite, limited. It is UCN natural units of time (NUTs), or UCN^2 quanta of time (EUTs). In our usual units of time, this would be approximately $2.8*10^{34}$ years. This is a long period, a long interval of time, but it is a finite interval of time.

Within the framework of the “Theory of Nature” the current (modern) Universe time or the current (modern) age of the Universe is also determined. It is equal to approximately 124 trillion 666 billion 537 million 511 thousand years.

At the same time, modern science, physics, and cosmology indicate that the current age of the Universe is approximately 13.84 billion years.

It must be said that the process of the Singularity's functioning is a strictly periodic, harmonic process that occurs in the rhythm and tempo of nature. This is the main, fundamental, basic process in nature. Moreover, it is the very process of the Singularity's functioning that sets the rhythm and tempo of all nature. This is an eternal process. This process has no beginning and no end. This process had no beginning and will have no end.

It can be said that the Singularity is the “eternal” engine (mover) of nature. The eternity of the functioning of the Singularity is directly connected and correlated with the eternal existence and evolution of nature. The functioning of the Singularity is an infinite process in time in nature.

This is the only infinity (temporal infinity) in nature. There is no other (extended) infinity in nature (and in the Universe). The mere assumption, the admission of the existence of an extended infinity in nature leads us, ultimately, to a bad infinity. And a bad infinity is not constructive, not productive, and not realizable in nature. The approach to explaining nature, associated with the rejection of the assumption of the existence of an extended infinity in nature, turned out to be constructive and productive, effective, as exemplified by the “Theory of Nature”, leading ultimately to a single, unique and universal, dialectical-materialistic model of the structure and evolution of nature and the Universe. Within the framework of the “Theory of Nature”, more than 40 fundamental problems of the foundations of physics and cosmogony (cosmology) have been solved. Each solved fundamental problem is worthy of the Nobel Prize in Physics. But in the traditions of the bourgeois-idealistic and religious (anti-atheistic) orientation of the Nobel Committee (the majority of its members), the appointment of a Nobel Prize to a dialectical materialist is excluded! The 11 years that have passed since 2014, when the first working version of the “Theory of Nature” was written and presented to the entire physics community for consideration in the form of an article, eloquently testify to this.

The class (bourgeois-oriented) approach of the Nobel Committee and the entire modern physical community, the entire party of modern physicists (PMP) to the assessment of the scientific value, significance and validity of the “Theory of Nature”, written and developed by a dialectical materialist, is clearly felt. The bourgeois government, bourgeois society, bourgeois physical institutions, the bourgeois Nobel Committee, the bourgeois founders of other science prizes do not give a damn, if not to say more sharply and truthfully, about the scientific Revolution in physics and cosmogony (cosmology), about the found solutions to numerous (more than 40) fundamental problems of nature and the universe, about the event of world-historical scale on the path of scientific and social progress, if these solutions are found not by idealists, not by bourgeois and religiously minded and oriented researchers, but are carried out by a dialectical materialist. The TN itself, as the basis of the new dialectical-materialistic physics, is based entirely on the foundation of the only true and scientific philosophy of dialectical materialism. Within the framework of the “Theory of Nature”, a

long-term, fundamental systemic crisis in physics and in all natural science has been resolved. This is a crisis of the foundations of physics and natural science. And the foundations of the theory of modern physics (TMP) are essentially idealistic, anti-materialistic. These foundations contradict the fact of the materiality and dialectic nature. The matter of nature, being the primary principle, the primary essence, the origin and the first cause of everything and everyone in nature, is not presented in the TMP foundations in a proper, adequate manner. The matter of nature is not presented in TMP as a (basic) physical quantity.

Moreover, in the subject area of the TMP itself, the matter of nature is not presented as such, is not presented in the form of its specific manifestation and specific existence in nature. There is no indication in the TMP that “the content of elementary particles is “pure” specific matter in nature”. This simple and clear fact of nature is not recognized within the TMP by the physical community, the physical authorities, the entire party of modern physicists (PMP).

The bourgeois-idealistic, fundamentally false and deeply anti-scientific worldview, deeply ingrained in the collective and personal consciousness of the overwhelming majority of modern physicists, does not allow this correct and true recognition to be made, this simple and clear true and scientific conclusion to be made. And this false and anti-scientific worldview is embedded in the consciousness of physicists by the also fundamentally false and deeply anti-scientific bourgeois-idealistic philosophy (BIP).

Here it is the main, basic, root cause of the deep fundamental systemic worldview (first of all) of the modern crisis in physics and in all natural science. This crisis is a great misfortune of the theory of modern physics (TMP). And this categorical commitment to the false and anti-scientific bourgeois-idealistic worldview of the entire party of modern physicists (PMP) is, at the same time, the main fault of the entire modern physical party (MPP) before science, before all humanity.

The party of modern physicists (PMP) has actually and really turned out to be the main obstacle, the main brake and enemy on the path of scientific and social progress. And those who hinder scientific and social progress are called reactionaries and obscurantists.

All matter emitted by the Singularity is represented in the form of quanta of matter in the current, actual (not the limiting state, as in MVD) state. It is all goes to the construction of the Universe. The quantum of matter is the unique material “first building block” of the entire universe. The quantum of matter (EUM) is the basis of all elementary particles. And the Universe is the largest material dynamic object in nature.

One important remark should be made. Only matter in the form of matter quanta (EUM) is taken into account in nature as the matter of the Universe. This is the matter emitted by the Singularity. This matter is moving away from the Singularity. The matter of the vacuum, the material vacuum dust (MVD) is not taken into account in nature as the matter of the Universe. This matter is moving towards the Singularity. The circle (circle of matter) is closing. This matter enters the input of the Singularity. This matter together with the emptiness (void) forms a vacuum.

But all matter and matter quanta (EUM) and material vacuum dust, particles (MVD) is the matter of nature. And the available amount of matter in the Universe (quanta of matter, EUMs) is the only independent fundamental unique parameter (characteristic) of the evolution of the Universe. All other characteristics of the Universe are functions of this unique fundamental characteristic. This is also the most important law of nature, discovered within the framework of the “Theory of Nature”, which is the basis of the new dialectical-materialistic physics.

It is time to present, dear readers, the very scheme of the evolution of nature or the algorithm of the evolution of nature.

At the basis of the evolution of nature lies, or better to say, the core of the evolution of nature is the functioning of the Singularity. The functioning of the Singularity is the main process in nature. It is a strictly periodic, harmonic process.

In this connection, we can conditionally speak about the pulsating nature of the functioning of the Singularity or simply about the pulsation of the Singularity itself. The Singularity is a unique mechanism of nature. It is

quite possible to consider that the Singularity in this quality is a natural material oscillator with an input and an output. The operating frequency of this oscillator is set, determined by the unique constant of nature and the Universe, $UCN=1.210\ 256*10^{\{44\}}$. This frequency determines, sets the rhythm and tempo for all of nature.

This is the frequency of the Singularity pulsation in one natural unit of time (NUT). And one cycle of the Singularity pulsation occurs in one quantum of time (EUT). There is a complete analogy between the pulsation of a quantum of matter (EUM) and the pulsation (functioning) of the Singularity. Nature is basically simple.

The input of the Singularity is supplied by the vacuum matter, i.e. the material vacuum dust (MVD), dust particles in the amount of UCN in each beat (cycle) of the Singularity pulsation. MVD is the limit state of the quantum of matter (EUM), reached at the moment of completion of the evolution of the Universe (previous universe). This limit state corresponds to the maximum value of the parameter quantum of length (EUL).

The Singularity itself is a "black box". At the output of the Singularity, in each beat (cycle) of pulsation (functioning), UCN of matter quanta (EUM) is obtained. Each quantum of matter (EUM) is tuned to the current, relevant for the moment of emission, parameter EUL (quantum of length).

Each quantum of matter (EUM) emitted by the Singularity receives an equal initial impulse. All UCN quanta of matter are strictly synchronously, simultaneously emitted along UCN in different directions from the Singularity. Subsequently, the quanta of matter form elementary particles (EP). So far, this process of EP formation is not entirely clear to me, as the author. It is quite possible that already at the moment of emission, the quanta of matter (EUMs) have already formed elementary particles (EP).

The quanta of matter (EUMs) emitted by the Singularity are the real material "building blocks" of the universe. From the quanta of matter, elementary particles are formed, then atoms, chemical elements, substances and all material bodies. All this, ultimately, forms the Universe.

The matter of the MVD type does not form the Universe, is not part of the Universe, is not taken into account in the balance of the Universe, although the vacuum permeates (surrounds) the entire Universe. Material vacuum

dust (MVD) moves (is attracted) to the Singularity in a priority order. This is how the raw material ensures the continuous, unceasing functioning (pulsation) of the Singularity, not for a moment ceasing.

Singularity is a kind of unique and only perpetual motion machine in nature. Singularity is the original mover for all matter of nature and the Universe. In the scheme of the circulation of matter in nature, Singularity (its functioning, pulsation) occupies the central first place.

Through the Singularity, through the mechanism (area) of the Singularity in the process of the evolution of the Universe, in the process of the circulation of matter in nature, all the matter of nature passes. The matter of nature in the form of material vacuum dust (MVD) enters the input of the Singularity. And the output of the Singularity is matter in the form of quanta of matter (EUM). From quanta of matter, as the "first bricks" of the universe, the entire Universe is built.

The matter of nature of the MVD type is not the matter of the Universe. Only the matter of nature of the EUM type is also the matter of the Universe.

There is an internal counter for recording the available current actual amount of matter in the Universe at each moment of time. It is clear that these are discrete and fixed moments of time of nature and the Universe, and neighboring moments of time are separated from each other by 1 quantum of time (EUT).

Within the framework of the "Theory of Nature" it is established that the amount of matter in the Universe (and this is the available current actual amount of matter in the Universe) is the first, most important, basic, main, fundamental characteristic of the Universe. This is the primary characteristic of the Universe. All other characteristics of the Universe are functions of this primary characteristic, that is, they are secondary characteristics of the Universe.

Secondary fundamental characteristics of the Universe (its evolution) are, for example, such quantities as (1) the quantum of length (EUL), which is also the diameter of a grain of matter, (2) the maximum speed in nature, in the Universe (MVN), (3) the gravitational magnitude of the Universe (GVU).

In this connection, we can say that the evolution of the Universe itself is a function of one variable. And this variable is the amount of matter in the Universe. This is all the matter that is emitted by the Singularity. The matter of the Universe can be considered both in quanta of matter (EUMs) and in natural units of matter (NUM). In this case, the following relationship holds: $1 \text{ NUM} = \text{UCN EUM}$.

The maximum amount of matter in the Universe is reached at the moment of completion of the Universe's evolution, i.e. when the age of the Universe becomes equal to UCN NUT or $\text{UCN}^2 \text{ EUT}$. Immediately after the completion of the Universe's evolution, all matter quanta (EUMs) reach their limit values for the quantum of length (EUL) and become material vacuum dust (particles) MVD. The Singularity continues to function. At the same time, a certain initial readjustment of one internal parameter of the Singularity occurs, which sets the initial value of the quantum of length ($\text{EUL} = \text{UCN}^{-1}$). During the entire evolution of the Universe, as established within the TN, the quantum of length changes (grows) within the limits:

$$\text{UCN}^{-1} \leq \text{EUL} \leq \text{UCN}^{-0.75}.$$

In this case, the absolute age of the Universe (AGE) or, what is the same, the absolute universal time varies within the limits:

$1 \leq \text{AGE} \leq \text{UCN}^2$, if time is taken into account in time quanta (EUT), here the step is equal to 1 time quantum (EUT),

$\text{UCN}^{-1} \leq \text{AGE} \leq \text{UCN}$, if time is taken into account in natural units of time (NUT), and here the step is equal to 1 time quantum ($\text{EUT} = \text{UCN}^{-1} \text{ NUT}$).

So, here is what we have.

The algorithm scheme of the Singularity functioning process will be as follows:

... MVD|_{UCN} ==> Singularity ==> EUM|_{UCN}

The pair of symbols «|_{UCN}» means that the preceding, immediately adjacent part of the expression (construction) of the scheme is taken or repeated UCN times.

This is a continuous infinite process.

The scheme of the algorithm of the evolution of the Universe will be as follows:

{... MVD|_{UCN} ==> Singularity ==> EUM|_{UCN} ==> Universe}|_{UCN}.

The scheme of the algorithm of the evolution of NATURE will be as follows:

{{... MVD|_{UCN} ==> Singularity ==> EUM|_{UCN} ==> Universe}|_{UCN} ==> MVD}|_∞.

The pair of symbols «|_∞» means that the preceding immediately adjacent part of the expression (construction) of the scheme is repeated infinitely.

It is necessary to once again draw the attention of dear readers to the fact that in the above-proposed algorithm of the evolution of nature, in nature itself at any given moment in time there exists only one universe (Universe)). After the end of the evolution of one universe, the evolution of another universe immediately begins. No legacy is passed on from (1) the universe that has completed its evolution to (2) the universe that is beginning its evolution. Together with the end of the evolution of the universe, everything that was connected with this universe will sink into oblivion, disappear into thin air, disappear irretrievably, turn into nothing. This concerns everything. Including this concerns the origin of life, the appearance of intelligent beings. This concerns all aspects and sides of human life, all forms of consciousness. Everything disappears without a trace. No traces of the universe remain. No information about the universe that has completed its evolution is stored anywhere. Nature has no archive. Nature does not keep its own chronicle. Nature has no memory. We will never know how the evolution of the previous universe proceeded. It is fundamentally impossible to do this. The evolution of every universe begins with a “clean slate” and ends in non-existence.

Another important point. The evolution of nature is a sequential series of evolutions of universes. At any given moment in time, there is only one universe in nature. There are no parallel universes in nature. The evolution of nature can be considered an endless cyclical process, where each individual cycle is the evolution of one universe.

It should be said that TN does not reject the entire TMP as a false and unscientific theory.

TN rejects the philosophy and worldview of the TMP, which is fundamentally false and deeply anti-scientific bourgeois-idealistic philosophy (BIP) and bourgeois-idealistic worldview (BIM).

TN rejects and exposes the false and unscientific foundations of the TMP, where the matter of nature is not presented in a properly adequate manner.

TN rejects and exposes the false and unscientific theory of relativity (GTR). The main lie of GTR is the postulate of the existence of four-dimensional space-time in nature.

TN rejects and exposes the lies and unscientific character of the Standard Model of elementary particles (SMEP), which does not recognize the fundamental fact of nature that “the content of elementary particles is “pure” concrete matter of nature”.

TN rejects and exposes the lies and unscientific nature of the esoteric and mystical “Big Bang Theory” (BBT), where the matter of nature is also not presented in a properly adequate manner.

It should be especially noted that the most important, the main guarantee of scientific successes and scientific achievements of the “Theory of Nature” is the only true and scientific philosophy of dialectical materialism, which is the philosophical core of TN, and its true and scientific dialectical-materialistic worldview.

Sincerely

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