

DEFINITION OF “TIME” CONCEPT

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Analysis of state of scientific researches of fundamental problem of time had been performed in this paper basing on the concept of the eternal cycle of matter. It was succeeded to give a definition of "time" understanding and revealed its essence for the first time. Answer to the question had been given concerning the unidirectionality of time.

Homo sapiens had defined a series of basic specific features of the matter to order his sensations (irrespective of degree of their reliability and correspondence with reality). Basing on the humanity experience as well as his personal one, he decided that these features of the matter can be and must be characterized by the specific examples. Among these examples, conditionally introduced and agreed with other members of the society, the most important are time and space. The homo sapiens had defined these parameters, developed various schemes, facilities and devices for their measurement (Arntz et al., 2011; Arsenov, 2010; Bogdanov, 2011; Galimov, 2001a; Galimov, 2001b; Vocabulary of philosophic terms, 2010; Feigin, 2010; Hawking, 2000).

In principle, these parameters, irrespective of their measuring accuracy, reflect the really existing properties of the matter. The latter, in their turn, are not depend upon the observer existence, his opinion regarding these properties, applied techniques of measuring, methods of processing and interpretation of measuring results. Besides it, the observer also should not change intentionally these properties (break the conditions at which these parameters reflect the specific properties of the matter in the accepted models, theories, etc.) in the progress of their study, within the applied approaches.

Another one question is if these parameters can change in principle at different impacts or not. This question is initiated by inquisitiveness of observer, having his doubts in truth of the generally accepted approaches within of which the definitions of these parameters are given in various degrees, the methods, techniques and means of their measurings are defined and approved. If it becomes clear that the changes of these parameters are objective as a result of some impacts, then other ones appropriate parameters should be entered into the system of our knowledge; these parameters should be free of changes and difference. Instead of this, different approaches and theories are developed (which are the results of our secondary sensations), supposedly able to eliminate the results of breach of conditions of the standard approaches in the process of their utilization. At the same time they try to make the order in great number of our sensations using, in principle, the inaccurate copies of reality (theories, models and tools). The graphic

example, illustrating the present problem, is the attempt to create the common theory of all fundamental forces of interaction. The interaction also really exists in the various theories conditionally divided into individual components. We sense that the interactions exist; to order our sensations it seems to us convenient to divide them into different components (gravitational, electromagnetic, weak and strong). They acted and act till the present. Further they try to create the theory that would cover all these components of fundamental forces of interaction. It is still impossible. We had divided them conventionally ourselves and we can not join them ourselves to solve the artificially created problem. Why? All the theories, being the results of our sensations, initially contain the inaccuracies and errors, typical for our sensations (Guliyev, 2011). In reality all those around us exist irrespective of our sensations and reasonings.

When selecting the parameters of properties of the matter the reliability criterion should be, first of all, the correspondence to "common sense". Such approach is also based on our sensations. But there are still no alternative ways. "Common sense" is the intuitive correspondence of our new sensations to the totality of the standard complexes of already-established sensations (natural and artificial). New sensations can be discoveries, and in specific fields they can reject or change in essence the existing notions. After such changes the "common sense" is clarified and becomes more adequate to reality. Thus, our notions on the matter are enriched and can be evaluated. These assessments are accepted if they don't contradict "common sense".

Not stopping at the history of "time" problem study (there are numerous scientific and popular science publications on the present frame (Arntz et al.,, 2011; Arsenov, 2010; Bogdanov, 2011; Galimov, 2001a; Galimov, 2011b; Vocabulary of philosophic terms, 2010; Feigin, 2010; Hawking, 2000), which have extensive enough list of published works), below is a new approach within the conception of eternal cycle of the matter (ECM). In ECM every parameter reflects the specific property of the matter and is entered to order our sensations. In the present case, as the reflection of reality, the ECM itself is accepted in motions, renovations and unavoidable order of movement from past to present and future. In order to be able to use any parameter according to its intended purpose, it is necessary to give its clear definition and elaborate the methods of the appropriate measurements. So, we face with the necessity to create any models of the measurable parameters, methods, means and schemes of their measuring, methods of processing and interpretations of the obtained information. It is natural that all these procedures are realized on the base of our natural and artificial (secondary) sensations. Adequacy model defined parameters relatively those that presumably exist and exist irrespective of the observer, is solved by us again on the base of the "common sense" system created by us. Earlier it was mentioned (Guliyev, 2011), that our sensations don't give comprehensive information about the matter, because these sensations are not correct, dynamic and require constant correction (this is the participation informative form of the matter in ECM). Due to this the improvements in models, methods, schemes of measuring, tools, methods of processing and interpretation. But all these improvements are corresponded to our

sensations. If the fundamental parameters are selected by us successfully (correctly) from viewpoint of "common sense", then they should be constant and invariant relative all these corrections; this is not followed when defining "time" parameter. Here there is a very complex knot of tangled questions. All the requirements, corresponded to the time in classical mechanics, quantum mechanics, relativity theory, string theory, tachyon theory, etc. touch the results of our secondary sensations (theories and experiments). All the actual and mental experiments, related with attempts to reveal the impact of various physical fields upon the "course" of time and its velocity show that we selected this parameters by mistake. If our choice is correct, then in our experiments we had bleached the conditions of selection and tried to give the desired properties to the obtained corrupted results.

Various influences, impacted upon the devices readings, are interpreted as influences upon the time "course". But one should understand that as a result of these influences the device measures another one parameter but not that which matches the conditions of our choice. To assign the time properties to this distorted parameters one referrer to some more complicated mathematical theories, that supposedly explain the appeared complex situation, departing from conditions of preliminary agreements. Thus, they obtain the results flowing from these theories. But this none other than the results of our sensations, and the secondary sensations. Even at the very successful case it is impossible to judge on correctness of such approach. Hence it follows that the correspondence to the "common sense" should be considered as the most rational method of the correct decision-making and assessment. Till present the known theoretical constructions left some problems unsolved. Serious attempts are undertaken to assign the reality properties to results of these theories. Certain means are spent for this, unthinkable small geometrical and time scales (Planck's scales) as well as the highest levels of energy in the experimental researches had been achieved. All these are substantiated by limitation of earlier-accepted theoretical constructions (the discourse is not about the matter itself) and the models. Most probably, one should talk on observer's inability to describe correctly (the strict correspondence to the accepted conditions) theoretically and actually measure some typical properties of the matter. The incorrect definition of properties, error and inaccuracy of the theoretical and experimental results should not be interpreted as some properties of matter unknown for us. For the purpose of some constantly manifesting specific properties of the matter could be named as characteristics, first of all they should follow our agreements and correspond to "common sense". Otherwise the limits of "common sense" should be extended and supplemented. If it is impossible, then the obtained results must be rejected for a while, and they can not be assigned the status of the matter property. Those experimental results which are corresponded to theoretical results and forecasts are considered as true so far. Here the main arbiter is the "common sense".

Lets examine this issue in more details in connection with relativity theory of Einstein. First of all lets notice that SRT (Special Relativity Theory) и GRT (General Relativity Theory) give rules of correct way to measure the duration in

processes, occurring at near-light velocities, they don't give the definition of time. According to this theory, the time and space are included into the matter, i.e. they are considered as forms of matter manifestation. When mathematical description of this theory the various parameters, including time and space, are the variables and differentiate if necessary. It is considered that these parameters undergo the changes due to external impacts. Basing on these theoretical and mathematical procedures, they consider that time and space must also be subjected to gravitational impact. As a result the space near the massive bodies (where the gravitational impact is great) is supposedly curves, and the time "course" becomes slower. Also they make conclusion on change of time "course" in connection with high (near-light) velocities. This "effect" is often used by science-fiction writers: the man flies with observer in spaceship during one earth hour, moving with near-light velocity, and comes back to the Earth discovering the relatives and persons of the same age as old men and women. All will be vice versa if the observer of this flight stays in the Earth. Just the parameters of such kind clearly show the confusion with the time parameters.

Really, various fields and the fundamental forces of interactions influence upon all processes and events, where the material and energetic components of the matter take part (lets put aside for a while the issues, connected with dark matter and energy). Time and space are those properties of the matter that have no any material and energetic indices and, moreover, don't interact with the matter whatever form it has. In all above-mentioned examples either material or energetic components of the matter are subjected to the impact (in processes, events, etc.). Accelerations, slowdowns, variations of density, intensity and other properties of the matter (events, processes, etc.) are corresponded to their duration, and don't mean the slowdowns or accelerations of the time "course". It is necessary to come to agreement definitely: what to measure and how to interpret the results of measurements.

It was mentioned above that the relativity theory gives the rules for recalculation of single duration when the observer studies the movements in different reference systems. But it (theory) serves not for definition of essence of this parameter. Thus, proceeding from its equations, one can't make conclusion on that the parameters of space and time are the variables. Time and space characterize the specific (agreed by us) properties of movement irrespective of their essence, nature, velocity, rate, acceleration, intensity, etc. at any geometrical scales. The independence of time parameter upon the variables can be explained by simple example. For example, various events occur during an hour: river flows, snow falls down, a child sleeps, food boils, planes fly, trains run, forests burn, winds blow, the experiments carries out in Hadron Collider in Planck's scales at great energetic levels, etc. The nature of these motions is different and one thing unites them: all they last during one hour, irrespective of snowfall intensity, train speed, rush, planes engines power, sizes of geometrical scales, speed and degree of energy in the physical experiments, etc.

The terms "earthdays", "Venus days", etc. are commonly used. It also brings to confusion and testifies to necessity of reduction of "time" parameters measuring

results to the united database. In order to create the united system of ranking of our sensations we must enter the parameter of the universal time. But the reference systems and rules of measuring are different. Besides it, one and the same types of parameters of movement that are different in nature, content, density, rate, intensity, etc., must be compared in different reference systems.

To look into this lets examine the known enough example (Arsenov, 2010), mentioned earlier.

The spaceship crew that investigated the collapsar neighborhood – the black hole with inconceivably giant gravitational fields, came back home. The question is: will the crew members find the persons of the same age, friends and relatives as the old men living in that remote future, which the crew members are to live till? They think that due to impact of the black hole gravitational field the time course slows down. Moreover, the process of aging of the crew members' organism also changes. In this case the basic introduced error is that the decelerations related with readings of clocks made in the Earth (that counts time in the Earth conditions) are considered as time dilation. In the Earth we had agreed regarding how and what devices (clocks) to measure the duration of various processes, events, motions, etc. Near the black hole the device (clock) move had slowed down, but not the time "course". Time does not flow – the processes, events, etc. flow. It is necessary to define correctly the time in noninertial systems and be able to recalculate correctly the measuring device readings (if it is in good order and provides the operating capacity in any place of installation) for the Earth conditions. Here, in principle, the matter is that the results of single-type measurements must be compared at compliance of all requirements of the preliminary agreements.

In the reviewed example the matter is as followign. Lets assume that the spaceship was flying 10 years (according to the Earth time). For this period people put on ten years. The crew members also grew old for these 10 years (if the flight conditions don't affect the human organism in any unknown way). The clock's readings, operating in he black hole conditions, possibly will be different. It is just necessary to recalculate them correctly for the Earth conditions. At the same time it is necessary to follow the measuring rules that should be equal for any types of reference systems (inertial, noninertial) and independent upon the essence of occurring processes and events, i.e. motions. The instruments' readings in various reference systems must be invariant if there is no additional agreement different from those accepted in the Earth. Lets mention again that GRT doesn't give the time definition; in the present case it just gives the rule of recalculation of the time measurements results (by equal schemes and devices), obtained in various reference systems. Its design formulae don't describe the natural processes of the time course. It is just the basic fault that is still made from the observers' side.

People had agreed on time units. At present the standard is the duration equal to 9.192.631.770 – the number of periods of the electromagnetic radiation at transition between two levels of the basic state of cesium-133 atoms (Arsenov, 2010; Bogdanov, 2011). This duration is called as 1 second. If we achieve its changes by influencing upon this process by the use of some physical fields, then this indicator can not be accepted now as the standard of time unit. Just the

stability with respect to external impacts had allowed accepting this indicator as the standard of duration unit.

Following the philosophers, S. Bogdanov (Bogdanov, 2011), divides time into objective and subjective. He considers delusion the acceptance of atomic clocks as the objective standard of precise time. To this remark it is necessary to add that this approach really turned out to be insufficient. Preliminarily not agreed against each other the essence and context of the basic concepts, in particular the time, they propose various versions of more complex and exotic theories. These new theories, models, approaches, etc. seem as if covering still new and new horizons of phenomena and processes, but the basic issues regarding time still has no the answer.

Summarizing the above-mentioned we come to conclusion that there is still difference in definition of "time" concept, causing the confusion of various nature. The mistakes are made either in methods of measuring (various theoretical bases), or in method of instrumental measuring implementation, or in the process of interpretation of devices readings (they don't take into account the external impacts or the changes in motions, caused by them, i.e. entropic changes), or in the schemes of parameters recalculation, defined in various reference systems. The main thing is that there is no single-valued agreement on "time" definition.

Lets imagine that numerous motions of various nature take place during the fixed duration with different velocities, accelerations, rates, densities, frequencies, etc. in every possible geometrical scales (quantum, Newtonian and Einstein approaches). Since the examined period is set and fixed in advance, it doesn't depend upon the nature of these various motions and their properties and vice versa, i.e. between the motions and parameters of time there is absence of interaction and correlation. So, the time is also not connected with anthropic properties of these motions. The time is not born, doesn't "fly" – the motions arise and take place. Generally, within the paradigm of ECM the concept of "time" is all-scale. Its essence doesn't change in all scales. In all geometrical scales, using the concept of "time" we make the specific order in system of our sensations on motion duration, its distance (hereinafter "distance" of the specific motion is understood in terms "earlier" and "later" relatively the motions already taken place or possible in future). Thus, the time has no neither material nor energetic components. It is entered into the system of our knowledge and gives the possibility to make the specific order in the system of our sensations based on the real (having no material and energetic components) properties of the matter – such as duration of motions and their distance from each other. The time is corresponded to one of types of the matter informative form as the notion and the manner of reduction of things to order in the system of our sensations. This type has no the geometrical form, mass and energy. Lets emphasize again that it (time) is used only by homo sapiens in the process of his sensations' order related with the specific properties of the motion. The result of this method application is the increasing number sequence, recording the everpresent increase of motions' number in ECM. To measure the duration of motions and their distance from each other the man had entered very convenient benchmarks that are called "past",

"present" and "future". The definition of these benchmarks is given in (Guliyev, 2011). In practice, these benchmarks are used as in well-defined form (e.g. in the past, in 1914 the First World War had begun), and in undefined form (e.g. it is hot today).

Finally, it is necessary to emphasize that the motions' duration and their distance from each other exist within ECM irrespective of the observer. ECM does not need the concept of "time" (just like in all other similar notions) without the wise observer. All the regularities of the nature are performed within ECM in necessary cases. The criterion of necessity is higher effectiveness of the occurring cycles of the matter in comparison with already existing ones.

In the editorial introduction for paper (Bogdanov, 2011) we read: «From his (*author*) viewpoint it is time to clear not only how the time depends from these or those causes in terms of what we call time; to explain why it is everpresent, why it is impossible to fence off, why it "runs" only in one direction and to answer some more "why". From the list of issues set here as well as from the analogical issues discussed in the scientific literature (Arntz et al., 2011; Arsenov, 2010; Galimov, 2001a; Galimov, 2001b; Vocabulary of philosophic terms, 2010; Feigin, 2010; Hawking, 2000) it follows that the issue of "time" is still in focus of attention of many scientists and researchers. The thorough analysis reveals the significant dispersion of opinions of various authors. Some of them consider that the time must depend upon some reasons, other ones think that time exists everywhere and "runs" (and in one direction), etc.

Below some results on the present range of questions, obtained within the paradigm of ECM (Guliyev, 2001a; Guliyev, 2001b; Guliyev, 2002a; Guliyev, 2002b; Guliyev, 2003; Guliyev, 2003). Some questions, corresponded to the time from this viewpoint, had been already studied and the results are stated in (Guliyev, 2011). Let's briefly notice that paradigm of ECM is based on the eternity of existing of all forms and types of the matter in cycles of different scales (Planck, Newtonian, Einstein, endless), i.e. within the unlimited chain of processes of the energy transformation into the matter and vice versa. The cycles are the eternal, inexhaustible sources of the motion. Within the paradigm of ECM the motion is accepted in the general sense, i.e. it includes all-possible types of physical, biological, social and other processes, events, phenomena, etc. Consequently, we had accepted that ECM exists everywhere and always. From here the answer to question follows: why is the time ubiquitous? It is ubiquitous because it is the characteristics of the generalized motions (ECM), existing everywhere. Since the cycles of matter take place without stoppages in all scales in space, then it is impossible to fence off the time anywhere.

Time is the objective value and many scientists call the possibility of its knowing in question (Bogdanov, 2011). The present conclusion must be discussed. The ECM exists objectively in motions. The source of all motions is the entire struggle between the matter and energy to obtain, accordingly, the form with minimal potential energy and free energy. In this struggle the "tendencies" of matter and energy are antagonistic. The matter "wants to avoid" the energy, the energy "wants to avoid" the matter (mass). These issues are reviewed in details in

(Guliyev, 2001a; Guliyev, 2001b; Guliyev, 2002a; Guliyev, 2001b; Guliyev, 2003; Guliyev, 2003). To study the motions, order his sensations (related with these motions (the others are probably simply absent)) homo sapiens had defined the parameter called as "time". This parameter reflects the duration of motions and their distance relatively each other. Once and for all it is necessary to agree that time is the parameter (not physical and energetic form of the matter), conditionally entered by the man to order the results of his sensations (primary, secondary, etc.), caused by the motions. The matter is become known in motions but not the time. Time is one of the tools used in the process of this knowing. The acceptance of such agreement relatively the time takes off from the agenda the numerous questions, including those above-mentioned.

Regarding the time measuring. The time is not measured. Using the concept of "time" one measure the durations of motions and their distances from each other. Accurate enough standard of duration unit measuring (but not the standard of precise time) had been developed and accepted for convenience and to order the results of measures. It had been mentioned above. For the present this standard is considered as the most stable and reliable. If science proposes better and more convenient standard, it will be accepted. The time doesn't exist per se. It is neither absolute, nor constant, nor variable, nor relative, nor discrete, nor continuous, etc. The different matter is motions: they exist and possess the above-mentioned properties. In our practical activity we need in measuring of these properties of motions using the parameters of "time". The aim of this parameter enter into the theoretical models (e.g. the relativity theory) must be discussed strictly. First of all, to provide the convenience and unambiguousness during the process of measuring of the mentioned properties of the motions in practice it is necessary to select the basis inertial reference systems (if it is available at all; in other case it is necessary to assess in advance the error of selection and take into account this error in further calculations). Using the appropriate formulae the measuring results must be reduced to the uniform basis (in the Earth conditions). In the present case these formulae (e.g., the formulae of GTR) are used for recalculation. If they acquire the physical meaning then it turned out that time depends upon the velocity, and this dependence the more significant the velocity is higher. Here the main logic error is made. The duration of motion X , moving with velocity V , is determined in object either relatively the fixed observer or the observer moving with the object. Let's suppose that the duration of motion X in the latter case is equal to Δt_0 . Then the duration of motion X relatively the "motionless" observer should be the same, i.e. Δt_0 . Another one question is the duration of motion X taking into account the duration of motion of the object. It is quite different motion. It is natural that its duration is different— Δt_v . It doesn't follow that duration of motion X depends upon the velocity. Besides it, the velocity of object motion can also influence upon the duration of X motion (the question is not on value of this influence but in principle). In order to not confuse all these questions the formulae of recalculations of time had been proposed in relativity theory of Einstein.

The essence of time (parameter) measure is in comparison of duration of the specific motion with the standard parameter of duration. The standard of duration parameter (e.g. 1 second) in all reference systems, at every velocities and geometrical scales must be selected as united. The relativity theory gives the rules to select (calculate) of such uniform basis. Relatively the united basis the duration of one and the same process (if it is not subjected to any impacts in different geometrical and velocity scales) must be equal in all reference systems. In various reference systems the durations must be determined according to specificity (inertial, non-inertial) of these systems. Thus, that interval correlated with invariable basis (duration unit) must be called as duration of motion.

Thus, to define the concept of "time" we must use those properties of motion that are calculated as multiplication factors (integral and non-integral) of the duration standard, irrespective of the reference systems and the velocities of processes and reference systems proper. This is the first initial condition.

Within the paradigm of ECM the time is all-scale, i.e. in all geometrical scales the cycles take place with every possible duration. Since it is considered that the space is open unlimited system, then the cycles with unlimited duration must exist, i.e. the duration is endless in such cycles. So, all the cycles (i.e. motions) take place on the background of this endless duration. In mathematical sense the background is the open set of eternal cycles with endless durations, and form the continuum. The local cycles are characterized by the physical, geometrical and other parameters, having the finite quantities; due to measures our sensations (primary, secondary, etc.) about them acquire the intelligent order. On this background we define the concept of time by the endless duration of the cycles. For such cycles the notions like "beginning", "end", "past", "present", "future", etc. lose the meaning. Entering various conditional and agreed benchmarks ("reference system", "past", "present", "future", etc.) and markers (eras, years, months, days, hours, etc.), endless background of duration we turn into time scale which propose to use further to measure the duration and distance of all-possible specific cycles as well as to order their results. Thus, comparing the duration of the specific cycle with duration standard as well as the obtained result with time scale, we find all the time parameters of the present cycle. It allows arranging the order in our sensations. This is the second initial condition. According to it, on the base of objective specific properties of cycles the concept of "time" is entered into the system of our sensations. The totality of specific properties of the unlimited cycles we call as time. Besides the duration, distance, beginning, end, etc. the concept of "time" also covers the properties of eternity, ubiquity, inevitability, endless of cycles number; moreover all of them are the properties of objectively existed, existing and future cycles irrespective of the observer. So, the "time" is the concept but not the physical or other matter, energy, event, motion, etc. We use this concept to measure the above-mentioned specific properties of the cycles. Therefore, we don't measure the time, but (with its assistance) the totality of specific properties of actually existing cycles is measured. Now we must agree on the creation of time scale and the way of its application.

Let's suppose that there are cycles with endless duration and endless extent. Our sensations don't give possibilities to define the specific extreme values of duration and extent of the unlimited cycles. It is natural that all the cycles with extreme (minimal and maximal) scales either take place on the background of these endless cycles or be their component stages. Such a conclusion does not contradict the "common sense". In such interpretation our all-possible sensations just supposedly record the existence of endless Space and can not determine its extreme (if such limits exist) parameters by duration, distance and extent. From the supposition of existence of the eternal cycles it follows that the forces of interactions with analogical scales must exist for their supporting. It is natural, that our all-possible sensations in the present case just record approximately their existence and can not determine their scales. In all possible (i.e. available for our sensations) limited scales the matter exists in the form of cycles, supported by forces of interaction. If proceed from the scientific notions of the modern physics, then gravitational forces of interaction act in such unlimited scales (irrespective of specific properties); all other fundamental forces of interaction have the local (limited) scales of existence. The following scenario is also possible. All forces interact within the local scales, but the infinite number of cycles of the local scales is sewed together by the gravitational and electromagnetic forces of interaction. In any case, there is the endless Universe where the different-scale cycles of all-possible nature take place eternally. Our sensations had recorded that the Space has the spatial dimensions of the endless extent in all directions. The modern astrophysics masters new horizons of the geometrical remoteness, and there are no reasons that can end this evolution. The theory of expanding Universe also follows this hypothesis (it is supposed that there are enough place to expand). From above-mention it follows that the unlimited and eternal Space is characterized, first of all, by the unlimited spatial "framework", which is formed by the cycles of matter with durations of various scales. Relatively to all local cycles, the cycles of the endless scales create the homogeneous spaces and durations, i.e. all the local cycles take place on the background of the homogeneous space and homogeneous uniform duration. In some way, such interpretation constants with postulates of GTR. Each local cycle of the matter, in this or that degree, is the indicator of the local distinctive feature of interaction forces upon the background. Generally, the background stays constant and changeless (if there any changes we still can not record it), on this background the local spatial changes and changes of durations, located with local cycles, take place. Due to this the characteristics of interaction forces (e.g. gravity forces near massive bodies), able to be measured, are manifested. It is naturally, that within local cycles there are possibilities to define their beginning and end. In everyday practice we use the concepts of space and time, related to extension and duration of background. Comparing all other results of our sensations with specific constant benchmarks and markers (scale marks) of these constant and eternal properties, we achieve the order in them.

Thus, to understand correctly the time and to measure correctly its properties, along with standard duration, it is necessary to enter the concept of "time" into the system of our notions; this concept reflects the endless, homogeneous and constant

durations of the unlimited and eternal cycles. Due to indefiniteness of scales of such cycles, their durations are inevitable, ubiquitous and pervasive "background" for the analogical parameters of all limited cycles. Entering into this background the various benchmarks and markers, suitable for us, we create the time scale. To determine the parameters of time of the specific cycles it is necessary to compare the results of their durations, measured earlier, with the scale and to find the target value.

The issues of time pointedness are studied in details in (Kuliev, 2011). The above-mentioned results allow to make additional clearness on this issue too. Under the pointedness of time one understand the realization of process of motions sequence from "past" to "present" and "future". The cycles take place within the appropriate successions of durations. The total duration grows continuously and leads from "past" to "present" and "future". To return back to "past" it is necessary to reduce the already-reached value of the duration. But to realize this desire it is necessary to fulfill additionally a new motion. It is natural that new motion will take place within the appropriate additional duration. As a result, instead of reduction, the total duration increases; it leads to "future". The same takes place when realizing the desire to stop the "time" in "present". So, it is impossible to return back to "past" and to stop the "time" in "present".

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