

ONE STEP BACK TWO STEPS FORWARD¹.

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INTRODUCTION.

The work represents an attempt of introducing the new starting point in the process of looking at the bottom of the nature that surrounds us and which we are an integral part. It is in the form of several questions with short comments, I hope sufficient to open discussion about them but surely insufficient to explanation the attitudes behind these posts. For them there was no place in this conception of the article. That what characterize these problems and the accompanying commentary is a realistic approach to the observation of nature in all its complexity, including the dead and the living appearance's forms, especially the latter, which are still besides of attention of physics as the science of natural phenomenon and processes².

SOME INAUGURAL'S QUESTIONS FOR COMPLEX OBSERVATION OF THE NATURE.

Contemporary physics is based on two basic models of nature: relativity theory and quantum theory. On the basis of them it have been achieved in the previous period significant results of understanding the nature, on the one hand, and development of a number of technical solutions and technologies that have found application in everyday life and special activities, on the other hand. However, as the models of Nature often happens, when the level of our knowledge increases and expand the range of values of influential factors on the processes in nature, in applying these models coming to a saturation and further progress in their own right, enters scientific dead-end street. If we stubbornly push in the same direction there is a danger that we will eventually run into our heads in the wall. The only way is to return to the first intersection and select a new way, taking care not to impasse. There is an old proverb: "One step back, two steps forward." I think that we are mature for such a step. This "back" means a return to one hundred years and set ourselves some questions that we never managed to try and find the right answers to them, relying largely on the already created a database. In essence we would achieve a qualitative leap, or find another, higher level of our observation of Nature. The proposed work represents an attempt in this regard. Of course, that not all the questions that need to be set, but I think that the basically and to be a good basis to start. Modern physics has not identified some of them as a problem, and some are wrongly answered. The cost of these errors, we started to pay with retardation of further deepen our knowledge of Nature. It is up to us, or the generations to come, to correct these errors by using all the positive knowledge that modern science has so far come.

¹ This article has links to the discussion forum powered by NPA on achieving consensus, where exist my two comments.

² Comprehension processes in the living appearance's forms would probably term physics is replace with the term naturalistic, and I do it.

Listed questions I had give in mind the table with a brief commentary. What is my position in relation to them can be recognized from these posts. I don't expect that their adoption is easy, but that only represents the basis for beginning of discussions, with the possibility of correction, or rejection, but on the strength of arguments and not the argument of force. Given the questions have more global view of the nature of which should facilitate the selection of routes and nature of the research on a subelemental level, which is the starting point of everything in Nature can meet and what is it all happening.

Specified attitudes rely on the model of Nature, which I have developed (NMN model) and is listed in the book [1], noting that in this text in the meantime entered more serious amendments and changes that will find a place in its new issue. In the comments I did not intentionally stated characteristics and the role of certain substances, especially the mental, although they are basic principles NMN model. With this I want avoid premature debate about the details of this model before we can achieve consensus on the six questions. Without that consensus NMN model would be the only one of many that is considered to have not grounded in clearly defined physical settings.

For the analysis of these issues requires more logic than some physical and mathematical theories and models. They will be the subject of research, if these questions to reach a satisfactory consensus, which would, has led, I believe, to significant changes of the existing attitudes in the contemporary physics.

On the article of this content I decided to follow the situation in modern physics. It is the increasing dissatisfaction of many physicists with present situation and the slowing down development of physics as a science, which we approached more broadly understanding of nature in all its complexity. On the other hand, a significant numbers of attempts to define new, more coherent models of nature, with very different approaches to their formulation. Without enter to the evaluation of their validity (including the proposal of my NMN model to), I think it is difficult to achieve their convergence in order to become an acceptable and more coherent models of Nature. Assumptions are often too different to come to common position. I file we should first create, if it is possible, a common platform on which to build a conception this or these models. Only in this way we can save our time, resources, and in general create a chance to get to it. Maybe I affect naive with such attitude, but I still find that it is the only rational way to get to an acceptable solution. Of course, even if we accept this approach, it remains an open question of additions and corrections offered questions and suggested attitudes.

REFERENCE

[1] M.Abadžić: Razmišljanja o prirodi Prirode-1: Pojave i procesi; Beograd 2007 (Concerning Nature: Part 1: Appearance and Processes; Serbian text only)

Table: BASIC ISSUES RELATED TO THE NATURE.

Basic attitude	Consequences	Commentary	Proposal
1. What is the Nature?			
<p>The Nature is one spatially indented system of fundamental substances and their combinations whose behavior is coordinated by some general natural laws acting according them. Everything that exist and act within the Nature are results of interactions these substances.</p>	<p>It's not possible unification fundamental substances because their characteristics are different. Instead unification attention should be paid to find <i>the unity of their contrarities and differences</i>.</p>	<p>Only different substances may be the background to the creation of unlimited number of combinations, which make up the Nature.</p>	<p>Task:</p> <ul style="list-style-type: none"> • <i>Appoint and define the characteristics of basic substances, and the basic laws of their action.</i> • <i>On the basis of them to lay all the other derived relations, phenomenon's form and the laws with harmonize them.</i>
2. Is the Nature real?			
<p>The Nature is real. The study of Nature should come from the viewpoint of naturo-central philosophy and consistently stick to it by analysis of all aspects of the appearance of Nature.</p>	<p>Reality does not accept:</p> <ul style="list-style-type: none"> • Perception as a basic criterion for acceptance of appearance forms and processes that occur in Nature. • Inaccurate definitions of natural magnitudes. • The lack of established causal -consequence hierarchy between phenomena and processes. • The models of imaginary Nature and multi verse worlds <p>All occurrences of Nature are real:</p> <ul style="list-style-type: none"> • Perception is a measure of our ability to understand of the Nature. • Dead and live phenomena's forms that exist in the Nature must find its place in a coherent model. • To all appearances, phenomena's forms and processes must be single scientifically based explanation and corresponding models, based at the experimental and theoretical researches. 	<p>Source of this disagreement we can seek at least in the time before hundred years. At that time, when it was in the vicinity of our science to better understand the Nature, we didn't know, or still we could not put the right questions and seek answers to them. As a result, according to the postures more and more scientists, we arrive at some scientific blend alley. In order to exit from it we need to come a little back and now set these questions. Without them it will be difficult to come out on the right way in the knowledge of the Nature in all its complexity.</p>	<p>Establish a system of questions based on the general definition of Nature and the recognition of its basic forms and supporting occurrences of appearances and processes. From the reconcile responses from them to develop further research programs and set the first natural and then the mathematical model, related to Nature in general and its individual occurrences of forms. The ultimate goal is to obtain a coherent model which will include both the dead and the living phenomenal form, what means:</p> <ul style="list-style-type: none"> • <i>First determine ourselves regarding this question and what that answer implies.</i> • <i>Define beginning questions and programs for creating a database to respond to them.</i> • <i>Continue the process with questions that will result from already responded.</i> • <i>Looking for the real and unique answers to asked the questions.</i>

<p>The Nature isn't real. Relying on homocentric philosophy and quantum theory of Nature, it is real within the measure of our perception of it.</p>	<p>This means:</p> <ul style="list-style-type: none"> • To Perception is attributed all that deny to the real Nature. • It is a measure of the Nature around us and inside us. • The unresolved questions draw paradoxes, dualism and mathematical formalism. <p>In this way the acceptance of the perception allows and justifies the simultaneous existence of parallel worlds and within the same area, as well as a wide range of physical unsubstantiated phenomena and processes.</p> <ul style="list-style-type: none"> • To Perception is attributed all that deny to the real Nature. • It is a measure of the Nature around us and inside us. • The unresolved questions were covered with some paradoxes, dualism and mathematical formalism. • In this way the acceptance of the perception allows and justifies the simultaneous existence of parallel worlds and within the same area, as well as a wide range of physical unsubstantiated phenomena and processes. 	<p>As result we have:</p> <ul style="list-style-type: none"> • EMW as a particle-wave appearance, • Triple role of photon without substantiated physical acceptance characteristics and explanations. • Annihilation matter. • Transformation of type mass ↔ energy. • Changing the mass with its speed and its connection with the speed of light c. • Force carriers, etc. <p>These postures can hardly be the real basis to observation Nature around us and within us.</p>	<p>To access this still held must be ensured the introduction of physical based models appropriate phenomena and processes that would lead to significant changes in the existing postures.</p> <p><i>With this answer I do not see how to get to the real knowledge of Nature.</i></p>
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3.Is Nature only for single-use

<p>No. It is neither probably nor logical that such a system, as complex as Nature is, may be only to single-use. This is the results it's the most fundamental observation.</p>	<p>If we assume that Nature is not for single use only, the basic problem is the set of model for the renewal of its energy and material resources and the appearance of dead and living phenomena's forms. In this case we are facing with its cyclical repetition. This means the reality of matter collapse and the Big Bang in the Cosmos' development. This repetition can be two-fold:</p> <ul style="list-style-type: none"> • In unchangeable form. • With the characteristics of evolution. <p>For all of the natural appearance's forms is present the particular forms of cyclical</p>	<p>A simple case of repeating unchangeable cycles isn't peculiar of Nature. But each new cycle is more advanced and fittest to possible changes in environmental conditions, which also can evolutes.</p> <p>Evolution from one to other cycle has three basic conditions:</p> <ul style="list-style-type: none"> • Renovate of energetic and material's resources of system with its evolution changes. • To possess with system of "memory" to the previous cycle and its conditions and appearances. 	<p>Task: <i>For this variation, it is necessary to develop the model of recovering energy resources of Nature.</i></p> <p>Task:</p> <ul style="list-style-type: none"> • <i>Model of renovate the energetic and material's resources of Natures.</i> • <i>Model of procedure and possibility of "memory" to the previous cycluses and all problems related to interation's processes</i>
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	and evolution's changes. Logical conclusion is that this cyclical the Nature maintained in its entirety. This means the reality of matter collapse and the Big Bang in the development of Cosmos.	<ul style="list-style-type: none"> The correction's possibility. 	<i>and supporting the appearance of the previous cycle.</i>
<p>Yes</p> <p>Acceptance of this position is going to hand of creationism because it follows from its that the nature was established at once</p> <ul style="list-style-type: none"> Either with the deliberately process, including all of the phenomenon's form presences in it and the laws of their behavior, or With accidentally hit values of cosmically constants necessary to establish the existing structure of cosmos and population of live phenomena's forms, including homo sapience. 	<p>The first case is related to presence and the role of almighty and omniscient creator, or creationistic access to the observation of Nature.</p>	<p>As an atheist this variant I don't take in my consideration.</p>	<p><i>The program of activity would have to give holders of these ideas.</i></p>
	<p>The second case is the unbelievable coincidence that at first hand to establish such of conditions that are enable to the evident development of all the dead and the living appearance's forms.</p>	<p>And in this case can be counted with the subsequent evolution of some appearance's forms but not the whole of Nature. For its missing cycles and "memory" to the previous situation, which would changes through the evolutionary processes?</p>	
4. Nature covers only what indicates as a visible universe?			
<p>No.</p> <p>Cosmos space, which is deployed Nature, with all its components and the various appearance's forms, is far broader than that which indicates the visible universe. Cosmos space, within is the Nature deployed, with all its components and the various appearance's forms, is far broader than that which indicates the visible universe.</p>	<p>Cosmos space is filled with supplemental evenly distributed systems of basic substances of Nature in the form of the subelemental's particles. There are within Cosmos the localities with increasing concentration of the substances and their structures, including the celestial objects different sizes and their systems, which are indicates as the <i>Limited spaces</i>.</p>	<p>Without such an indented system of Nature mentioned cyclical would be meant a discontinuity whole of Nature in the long period of time. With many Limited spaces around the Nature cycles asynchronous spread over individual Limited spaces, while by the other can take place processes typical for the systems and structures within them. For the collapse of matter and the big bang may be said to be going across Cosmos from one to other Limited spaces.</p>	<p>Task:</p> <p><i>In addition to the tasks of the points "3.No" should to be developed:</i></p> <ul style="list-style-type: none"> <i>Model mechanism of cyclical changes in the Limited spaces.</i> <i>Model mechanism of matter's collapse and the Big Bang.</i> <i>Model behavior of substances in the whole Cosmos.</i>
		<p>No matter which value of the cosmological Constance would be accepted this Nature must have an energetic death. After some time it will be happened, no matter how long it would be.</p>	<p>For both versions will have to find a meaningful explanation of appropriate phenomena and processes in such a cosmos. Another problem in the second variation would be:</p>

<p>Yes</p> <p>Acceptance of such a relationship returned to the question 3 on the present dilemma about three variants of behavior Cosmos or three values of cosmological constants.</p>	<p>U this case are two possible variants:</p> <ul style="list-style-type: none"> • The nature of this Cosmos has no possibility of evolution. • Processes of evolution are possible in such Cosmos. 	<p>In the second variant should be a certain kind of cyclical processes in Nature that would facilitate its evolution's processes and renewal of the energy resources within all Cosmos.</p>	<ul style="list-style-type: none"> • How to find the motives for the necessary cycles. • How to explain of the procedure revitalization of energy and material resources between the two cycles. <p>Supporter such variants should develop their acceptable model.</p>
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5. Is it possible unification of Nature, and its reduction to one basically magnitude capable of various transformations.

<p>Not in principle.</p> <p>It must be the basic types of substances, which may combine all of appearance's forms, which may be found within Nature. I think that would be at least two physical (electrical and material) and one non-physical substance, that the model could include all the dead and living appearance's forms.</p>	<p>These substances should be, according to the present level of our knowledge, is small and defined characteristics that allow for their combination of subatomic structures. In addition, there should be strict rules their behavior and general combining</p>	<p>Characteristics of selected materials must be single and without the possibility of transformation, provided that there is the strict causal - consequence of the hierarchy by the relations some magnitudes and interaction's processes.</p>	<p>Task</p> <p>In addition to the tasks 3 and 4, it is necessary to:</p> <ul style="list-style-type: none"> • Appoint and define the basic substances. • Define the basic laws of action introduced substances. • Define hierarchical relationships between the magnitudes and introduced the processes.
<p>Yes</p> <p>There are attempts, but till now there aren't satisfactory results.</p>	<p>Acceptance variants with a unique substance, regardless of the type and characteristics of it, imply its various transformations, whose model is necessary to define and check.</p>	<p>In this case, the question arises: what is it, or who is it that to determines the conditions, the nature and time to conduct certain transformation. They cannot be purely stochastic process already causal, but it's the question: what and how?</p>	<p>To definitions this unique substance, its transformations and interactive processes is goal of numerous physicists and mathematicians for more time. Partial results are not yet satisfactory, although they use the various paradoxes, dualism and physically ungrounded transformations. To find the coherent model of the nature would have to be rid of such approaches.</p>

6. Are the singularities the peculiarity of the Nature?

<p>No</p> <p>If you accept the postures of the character and processes of Nature than the existence of singularities in it is unacceptable. The basic characteristics of these processes is their duration, no matter how short is it, and the fact that in the proce-</p>	<p>This statement is justified by:</p> <ul style="list-style-type: none"> • The existence of the beginning and end of each event or process, irrespective of their type. • Certain dimensions of all the appearance's forms from the size of basic 	<p>Singularities are a result of our misuse of modeling reality of the Nature and of processes and phenomena in it. Any phenomenon or processes, would they be changing the state, form or structure, have its duration, including the all transformations with which modern physics account. Apart them it exist the condition $dx/dt \neq$</p>	
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<p>esses participate the magnitudes of final value. The question is only witch scale we use by our observations.</p>	<p>substances to the largest of material's structures.</p>	<p>0 for all natural processes. Violation of these conditions is possible only in abstract mathematics. Physics can not accept it, whether it is based on the theory of relativity or the quantum theory.</p>	
<p>Yes</p> <p>Accepting these postures enabled the introduction of instant phenomenon evanescence structure, transformation of different types and certain restrictions that do not have any physical basis. The result is wrong and imprecise physical models and their mathematical interpretation.</p>	<p>Consequences of accepting singularities are for example:</p> <ul style="list-style-type: none"> • The appearance of increasing speed limits movement through shares c. • Processes the annihilation of particle and antiparticle. • Different types of transformation. 	<p>This approach is a consequence predominantly of:</p> <ul style="list-style-type: none"> • Ignorance of the real natural processes in the referent cases. • Take accepting easy of the logic of mathematical modeling insufficiently known the natural phenomena and processes. <p>Would have to be to go from a clearer comprehension of natural phenomena and more logical their modeling, first physical and only after that mathematical.</p>	<p>In both cases it is necessary to further review all cases in which they appear different variants of temporal, spatial and other singularities.</p>
<p>Basic attitude</p>	<p>Consequences</p>	<p>Commentary</p>	<p>Proposal</p>