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THE TIME AND THE UNIVERSE: TIME'S CONCEPTS

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Dialectical materialism comes from the fact that "the world is nothing but matter in motion, and matter in motion cannot move otherwise than in space and time" (VI Lenin, PSS, vol. 18, p. 181). Space and time, therefore, are the fundamental forms of existence of matter. Classical physics considered the space - time continuum as a universal dynamics arena of physical objects. However, the development of non-classical physics (elementary particle physics, quantum physics, etc.) put forward new ideas about space and time. It turned out that these categories are inextricably linked. Any different concepts: according to ones, the world is nothing but an empty curved space, and physical objects are only manifestations of this space. According to the others, space and time are inherent only in macroscopic objects.

There were two points of view about the relation of space, time and matter. The first of them can be called a substantial concept. From its point of view, space and time were treated as separate entities, along with the existing matter and independently of it. Accordingly, the relationship between space, time and matter is as the ratio between the two independent substances. This led to the conclusion that the properties of space and time are independent from the nature of the proceedings occurring in them.

The second concept can be called a one relational. Its proponents understand space and time as separate entities, but as a system of relations formed by the reaction of material objects. Outside this system of interactions, space and time were considered to be non-existent. In this concept of space and time were as common forms of coordination of material objects and their states. The dependence of the properties of space and time and the nature of the interaction of material systems were allowed.

Space and time are forms of expressing certain ways of coordination of material objects and their states. The content of these forms is a moving matter, material processes, and its features shall specify the nature of their basic properties. In this respect, the dialectic of zeroing in science is search of the relationship between certain properties of space and time and related material processes that define them. Furthermore, the presence of a single space and time content - moving matter - indicates the relationship between time and space itself, the impossibility of their existence completely independently.

At the beginning of the XXth century the theory of relativity was found, which has forced to reconsider the traditional views of space and time and to refuse a substantial concept. The theory of relativity can be regarded as the concept aimed at disclosure of the dialectical relationships in nature.

The theory of relativity includes two genetically related theories: the special theory of relativity (SRT), the basic ideas which were formulated by Einstein in 1905, and the general theory of relativity (GRT) which Einstein finished to work at in 1916.

SRT has arisen as a result of Einstein's attempts to extend the physical principle of relativity, known since the time of Galileo, the laws of electrodynamics, which were seen as contrary to the latter. Einstein solved this problem, but the price he had to pay for the generalization of the principle of physical relativity and spread it to all the laws of physics, is the revision of Newtonian space-time concepts. SRT showed that many space-time properties that were considered still intact, absolute are actually relative. For example, in SRT such space-time characteristics such as length, time interval, the concept of simultaneity lost their absolute character. All these characteristics are found to be depended on the relative motion of material objects.

The GRT gave new validation of relational concepts of space and time. If the principle of relativity in the SRT was associated only with inertial reference systems, the general theory of relativity was the result of the extension of the principle of relativity and non-inertial reference frame. This in its turn led to the establishment of close dependence of the metric properties of space-time from the gravitational interactions between material objects. In the SRT, it was found that the geometrical properties of space-time depend on the distribution of gravitational mass. Heavy objects near the geometrical properties of space begin to deviate from the Euclidean, and the rate of flow of time slows down. The GRT dealt a blow to the substantial conception of space and time.

The theory of relativity excluded from science concepts of absolute space and absolute time, thereby revealing the failure of the substantial interpretation of space and time as separate, independent forms of existence of matter.

It showed the dependence of space-time properties of the nature of the movement and interaction of material systems, confirmed the correctness of the interpretation of space and time as the main forms of existence of matter, as the content that appears moving matter. It is believed that the time characteristic of a specific property is its irreversibility, which manifests itself in the inability to return to the past. Time flows from the past through the present to the future, and it is impossible to reverse the flow. Irreversibility of time associated with an irreversible course of the fundamental physical processes. Some see the connection with the irreversibility of time irreversibility of thermodynamic processes and the action of the law of increasing entropy. There are also cosmological approaches to justifying the irreversibility of time. The most widespread causal concept of time; its supporters believe that the reverse flow of time causal link provided would be impossible.

Psychological (perceptual) time due to the perception and experience of the individual time: time is "running", the "slowing down", depending on those or other specific situations (one thing when we have someone else to look forward in process of not being busy or when we do something interesting); in childhood it seems to us that time flows slowly, and in adulthood - it has accelerated its pace. This is a subjective sense of time, and it is only

broadly in line with real-time physical. According to experts, psychological time includes: evaluation of simultaneity, sequence, duration, velocity of different life experiences, their reference to the present, their remoteness to the past and the future, experiences of brevity and prolixity, continuity and discontinuity, limitation and the infinity of time, awareness of age, age stages, ideas about life expectancy, death and immortality, the historical connection of his own life with the life of the preceding and succeeding generations, etc. One way or another, but psychological time peculiar in comparison with the physical time, although in many areas and is determined by them.

The concept of psychological and real time shows us the existence of one of the most striking anomalies of time - time shifts, the concept of which can be summarized in an unified field theory, which consists of three aspects: the active matrix field, time shifts themselves and coexisting time lines.

Matrix active field - this is the hard drive in your computer that stores all the data and drivers; they can be brought to bear when needed. This means that it stores all programs and data - all you need to run any of the coexisting lines of time - and they have access to. Coexisting time line - it's like a lot of saved versions of the same document; they are all different because the document can be changed, edited. The latest version of the document - is the dominant time line, the revised since the last time shift. The old version of the document is also stored, but not used - they are stored on disk, and if you need some of the old document to him always have access. Time shift - it's like pressing a key, which leads to the document, after which he was different from all the other versions of the same document.

Our brain is an interface of an active field matrix, as well as receptor forming our perception of reality, space and time. From this it follows that the program is able to hide the time shift operations to change the timeline it is due to our brain as an interface. Since the nature of the secret activities of the joint, the mechanism that prevents the realization of this activity the brain - it is the same mechanism that is able to detect malfunctions of the program and convert them to our advantage. These failures and create a situation where the brain is not fully occupied by dominant perception of the new time line as the only existing one. And since it is not fully occupied, creates a situation where in the brain there are simultaneously two lucid memories of the same event or scenario - the same, but on two different coexisting time lines. This situation creates the so-called conflict of time perception in coexisting time lines.

In the event of such a conflict in the coexisting time lines - and this is the measure of performance for editing time lines by the time shift - a man clearly remembers two things that could not happen at the same time line in the same time. This proves that all lines co-exist in the same space and different frequencies only.

We often think that we have already had all possible knowledge about the realities of time and space.

Maybe the time - it's just a change. Before the Big Bang there was nothing. After it was the beginning of changes - there were space and time. But does this mean that one day the universe will shrink back to nothing and space, and at the same time it will cease to exist?

And maybe time - motion. In a fundamental sense, time is the measure of movement, and the movement itself - a kind of change. The change in the movement of the subject suggests that the time - the time from the moment when the subject was in the same place, before he found himself on the other, or the time since then, as the subject was one, as long as he was different .

Simply, the time - that's how we arrange the sequence of events that make up our lives, the duration of each event, the gaps between them. We love the time. We hate the time. The reason is the same - it brings order into our lives, and we cannot even control it.

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