MAN, DEATH & ETHICS

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Words (including notes and references): 4,158

Abstract

Aim of work: the research of the determination and destination of human for nature and cognition. The basis of the research is Karl Raimund Popper's article «Evolutionary epistemology». A critical analysis of Popper's proposed theses and the scheme of theory evolution is conducted. The significance of the occurrence of the system of tenses of the language as an implication of the descriptive function of the language is noted. The issue with which the cycle of evolution of life and cognition begins is revealed. The language is included in the scheme proposed by Popper. As a result of the reasoning the pivotal feature of the human essence is identified: awareness the problem of death. This awareness makes it possible to relate oneself to the problem, which is the reason for the presence of the most aggregate evaluation categories: «good» and «evil». This is how a person may determine the purpose of evolution: overcoming the problem. In contrast to nature, the evolution of which is aimed at avoiding the problem. Having reached the goal, a person will go beyond himself as a phenomenon defined by the awareness of the problem. In this case, self-transcendence is a person's transition to a new quality. The role of philosophy in the procedures of self-transcendence occurring in contemporary society is discussed.

Key words:

Metaethics, human, ethics, epistemology, evolution, death, good and evil, Popper, self-transcendence

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Man holds a unique position. He brought into the world an element alien to the animals but what this is still remains a problem.

– K. Jaspers.

Introduction

Concern in philosophy has somewhat extinguished in contemporary society, and practicing scientists explicitly pose the question «Why does science need philosophy?» Thus, known popularizer of science, Candidate of biology, Senior Researcher at the Institute of Information Transmission Problems named after A. A. Harkevich Russian Academy of Sciences, member of the Commission of the Russian Academy of Sciences on combating pseudoscience, member of the Board of the Educational Foundation «Evolution», laureate of the «Enlightener» award, Alexander Panchin states as follows: «I ... almost never encountered references to any philosophers in my specialization - bioinformatics, mathematical and evolutionary biology, and related fields. An infrequent exception is references to Popper and his falsifiability criteria» [1]. «Despite the tight historical links between science and philosophy, present-day scientists often perceive philosophy as completely different from, and even antagonistic to, science.» [2].

Contemplating in this direction, the answers to the questions are not obvious: «why does a person need science?» and «why does nature need a "human"?» Only human spends tremendous irretrievable resources of the planet and wildlife on various forms of cognition and evolution. Every scientist act in a peculiar ecosystem of civilization. The straightforward opportunity to switch the light in the laboratory begins with a large-scale extraction of resources around the world, a complex processing industry that «exhales» billions of tons of carbon dioxide a year, and results in landfills of household, industrial and specific waste that poisons the living environment around the world. Environmental problems that have become more acute in the process of human cognition and development require us to be certain about the reason why we are doing this? Is not it facilitating to locate «harmony» with nature resembling the animal world, consciously refusing such hazardous cognition and evolution both for nature and for us?

Therefore, it is eminently significant to assimilate the essence of «human», its destination for nature and cognition precisely during the exacerbation of environmental problems.

Description of the criticized theses of the article «Evolutionary epistemology» by K. Popper

In the article «Evolutionary epistemology», Karl Raimund Popper provides us a scheme for the evolution of specific human cognition, discovering analogies in the development of life itself. We perceive cognition as a system functioning in the categories of Darwinian selection by eliminating errors to adapt sufficiently to reality.

The second thesis of Popper's article is the phrase: «All organisms are problem solvers: problems arise together with life.» [3, p.396]. In the context of the thesis, this sounds as an assertion of the concept of Darwinian selection, which accompanied life from the very beginning of its occurrence, and which does not retain its work, passing into the field of specific human cognition, binding cognition as something perfect, with material reality.

The progress of theories (*TT, tentative theories*) is designated in the scheme, where the critical process of error elimination (*EE, error elimination*) reveals problems (from P_1 to P_2), which is a measure of progress in cognition (1):

$$P_1 \rightarrow TT \rightarrow EE \rightarrow P_2$$

Popper notes the role of language, the third thesis of the article: «A human scientist as Einstein is allowed go further than amoeba by mastering what I call the specifically human language. While the theories developed by the amoeba are part of its body, Einstein could articulate his theories in language; if necessary, in written language. In this way, he was able to quit his theories outside of his body. This provided him the capacity to view his theory as an object, to view it critically, to inquire himself whether it could solve his problem and whether it could be genuine, and finally to eliminate it if it proved to be that it did not withstand criticism. To solve this type of problem, only specifically human language may be applied» [3]. The peculiarity of language consists in the ability to create objects that exist outside the body. Consequently, the conscious object becomes the subject, and its theories become the object of thought. This enables us to exclude errors without eliminating the thinking object (subject), and to be critically conscious of them, eliminating errors in the theory. Entering the cycle, the scheme reflects the continuous work of cognition. In nature, an unadapted object is eliminated by itself, embodying error with its entire being. However, it is essential to note, that even being the «correct answer», the biologically evolving object does not know anything about «validity» or «fallaciousness», demonstrating the phenomenon of «survivor error» [4].

Detection of the tense system in Popper's reasoning

In the 5th part «Language», Popper, referring to Bühler, identifies the narrative capabilities of language «descriptive (representative) function», which enables to think not only about what exists at the moment, but also about what does not exist: «...this is something new and indeed revolutionary: human language may transmit information about the state of affairs, about a circumstance that may or may not take place, or may or may not be biologically relevant. It may not even exist» [3].

Popper does not provide a precise indication of such a quality as the occurrence of a system of tenses in language, but it definitely follows from this «revolutionary» feature of it. Further we see a mention of time in part 6 of the article entitled «How did the descriptive function of language develop?»: «...there is one extremely valuable distinction between the biological situations of bee language and human language: the descriptive information transmitted by the dancing bee is part of the signal ... to the useful here and now; the transmitted information is closely related to the current biological situation. In contrast, information transmitted in human language may not be useful now. It may not be useful at all or it may become useful only after many years and in a completely different situation» [3] – this confirms our conjecture that the tenses system of a language directly ensues from the descriptivity peculiarity of a language.

The incentive for criticism of the theses of « Evolutionary epistemology»

The undoubted advantage of Karl Raimund Popper's article «Evolutionary epistemology» is the representation of objective cognition in a natural-scientific way. This reasoning is valuable in so far as it is valid to the phenomena of life on the example of its development. The evolution of cognition provided by the schema is decent as a model that may itself be implemented, criticized, and, accordingly, developed.

In a view of the provisions of «Evolutionary epistemology», it, as a theory itself requires criticism. For elaboration intentions, we endeavor to discover errors in it, remedy them, receiving a new theory that is more adapted to reality. The incompleteness of the Popper scheme is that the problem with which everything starts is not detected. The problem is «emerging», but what is it? This is important for comprehension of the outcome of the cycle. Similarly, Popper fully characterized a specific human language, and not unintentionally: it plays a crucial role in the process of cognition. However, the language is not included in the scheme. Its role is too confined.

The position of language in the scheme of cognition

Language is presented only as a tool of criticism: «The fifth thesis. During human evolution, a vital precondition for critical thinking was the descriptive function of human language: precisely the descriptive function makes critical thinking possible» [3]. Constraint language to the sphere of criticism only deduces language outside the framework of the cycle of cognition. Although Popper himself notices regular changes in language, in part 8, «Three worlds»: «Each such step is a linguistic discovery, an innovation» [3].

Here «innovation» is any «new vision» that can be visualized in the imagination by means of a particular language in order to be able to conceive the phenomenon appropriately to reality. If Popper's thought is explained by an instance of a series of numbers, then we will contemplate how an appropriate image of the atom model appeared. Democritus specified atoms as pieces of matter that had «roughness», «sharpness», or «smoothness», on which the peculiarities of substances allegedly depended. Then there was Thomson's «Plum pudding» model, then Nagaoka's planetary model, then Rutherford's. But all of them, when tested later in the framework of chemistry or classical mechanics, contained irremovable errors, i.e. they appeared to be inappropriate to reality. Only the establishment of quantum mechanics, as a qualitatively new language that disclosed the specific world of Planck quantities, made it possible to adequately describe the model in the framework of the quantum theory of the Bohr-Rutherford atom. This is how the «image of the atom» originated in our imagination, which in the form of a simplified model in conventional language is provided as a core with an electronic cloud around it: this is the reality that we could not view before the appearance of a new language.

Occasionally occurring changes in the language, or the emergence of new languages, allow us to assume that the language should engage in the cyclic scheme along with the theory, revealing new spaces for theories. Then what position should the language be in on the scheme?

Defining a problem in the scheme of cognition

The scheme starts with a problem: «All organisms are problem solvers: problems are originated with the emergence of life.» [3] This term: «problem», is not defined in the reasoning, and in the continu-

ation of the phrase is accepted as something general, as a set of «obstacles» on the way of development. However, we are able to impose a common problem by passing a step further in Popper's own reasoning: «All organisms are problem solvers: problems are originated with the emergence of life» [3]. What kind of problem did appear with the emergence of life? Until the appearance of life, there was no death in nature, meaning death as the termination of life. In the absence of life, there was nothing to terminate.

Death is the only most common problem for life. All other problems contain the meaning of «impediments» for life solely if they may terminate it, i.e. lead to death.

Thus, we sustain the connection between Popper's scheme of evolution and Darwin's selection by another analogy. In both cases, evolutions solve not just any problem, but the problem of death, in the form of each of its sub-problems.

Organisms in the wildlife do not lack the existence of problems around them in the form of deadly danger, which forces them to any mutability, the search for adaptability. Here it is indispensably to comprehend the paradoxical fact that living animals do not know about the problem, that is, about death, because they are isolated from it by selection: existing reflexes, instincts, behavioral programs, and so forth (further – animal reactions) – are highly «correct» reactions, since they are formed by eliminating «wrong» reactions. This is how the effect of «survivor's error» described by Abraham Wald [4] occurs, which is featured by the presence of only positive experience, and the absence of experience of failure due to the physical unavailability of its bearer. The reactions of survivors lead only to survival, protecting them both from contact with negative experiences and from understanding them.

Human is the only living nature evades the «error survivor», gaining access to full information about what is happening, because it has the ability to preserve any part of the experience, including negative (non-existent in nature), transferring it from the past to the future, the future being aware in the present – using the system of the language, deriving from the descriptive function of language.

When a person has an ability compare the experience leading to survival with the experience leading to death, then a dichotomy of normative and evaluative categories is occurred. This enables us to advance the conjecture that the awareness of death is the reason for the existence of such most general evaluation categories as «good and evil».

Therefore, the problem is death, human is the only creature able to conceive it using the specific language, and in the form of a specifically human reaction, forming its attitude to it in moral and ethical categories.

New scheme of cognition

Without understanding the problem, it is impossible to initiate any solution, just as it is impossible to solve an unproduced problem. Consequently, the language cannot be engaged in the scheme cycle, arising at the very beginning of it. Thus, without the language of mathematics, we would have made no progress in classical mechanics, quantum mechanics, or relativistic mechanics. And all of them became separate sections of physics, literally forming specific languages for solving specific problems (2):

$$L_1 \rightarrow P_1 \rightarrow TT \rightarrow EE \rightarrow L_2 \rightarrow P_2$$

Where L_1 – is the language that allows to behold the problem; L_2 – is the new language, enabling to locate new problem expanses.

In this case, the language acts as a point of qualitative transitions of the cycle of cognition. And if it is impossible to generate quantum mechanics just by correcting errors in classical mechanics, then it is possible to create a new language of quantum mechanics, revealing a new field for theories of a new quality that is appropriate to one or another part of the real world.

Discussion of outcomes and inference

Heuristics of the modified schemes, considering the understanding of the problem and the opportunity of high-quality navigation system with language, is that it discovers the intention of elaboration and human cognition: a solution to the problem, which started it all.

In living nature, elaboration is an attempt to avoid death. As we have demonstrated above, these attempts cannot be goal-oriented, because the living nature does not understand the problem, isolating himself from it on the one hand by physical adaptation to environmental conditions, and on the other by the construction of survival behavior: conditional and unconditional reflexes, instincts, behavioral programs that make it possible to avoid death. For an illustration here is suitable a submarine operator

from Humberto Maturana's book the «Tree of cognition», who only moves the levers, without realizing that he is actually operating a complex system [5, p.120]. This example can be projected on the behavior of colonies of ants, bees, and gregarious animals. No matter how complex their systems are, they are not understood by the ants and bees themselves. They do not have ant hill plans or flight maps. Teaching the operators is due to the fact that nature has a huge number of attempts to find the correct order of «switching» all the «levers». The wrong «switch» operators die evolutionarily, and the right ones know only the order of switching levers and nothing else. For this reason, the living nature complete without the awareness of the goal of its own elaboration. But this option of development is not rational, it requires hundreds of millions of years to blindly search for options [6], it may appear in isolated from each other «decision corridors» of the phylogenetic tree, where horizontal gene transfers are extremely rare, that is, transitions «from branch to branch». Sometimes the investigation for options comes to an evolutionary impasse, perishing without discovering the «right order», as in the case of trilobites [5, p.94].

A person, having received the language and theory of genetic engineering (for example), may already transit along the tree of evolution – implementing interspecific transmission of information where nature cannot do it naturally for any time, or developing the necessary genetic information *de novo*, or creating its own format of information [7]. For instance, recombinant strains of *Echerichia coli* bacteria produce not only substances such as antibiotics or prebiotics, but also non-specific proteins for them, such as components of human insulin. Evolutionarily, a bacterium will never be able to generate a human protein of a quaternary structure, because it is located much earlier on the evolutionary tree, and physically does not have a number of mechanisms acquired by further «steps of evolution» up to the human. A person can bring together such distant from each other branches of evolution, randomly operating with pieces of genetic information. If nature accommodates species only to the current state of the environment, then because of this there are 5 large and 20 small extinctions in history. In that way, a person knows the ecological problems, in which he is already involved, and more broadly, the problems of the evolution of planets or stars, which may be solved at a certain level of development. All this is in the interests of continuation of the life.

This is what living nature «requires» a human for (not in the teleological sense): if nature evolves only to avoid the problem, then human moves towards its solution by means of cognition.

As a result of our reasoning, it may be stated that it is the ability to understand death as a problem, to form an attitude to it («good and evil»), that retracts a person into the cycle of cognition and elaboration. The result of which will be a solution to the problem. Interestingly, we behold the same logic in verse 22 of chapter 3 of the Book of Genesis: «And the LORD God said: behold, Adam became as

one of Us, knowing good and evil; and now, lest he reach out his hand and take also from the tree of life, and eat, and live forever.» [8]

Thus, the understanding of death as a problem can be considered as an element that qualitatively distinguishes a human from all living things, which is mentioned by Karl Jaspers [9, p. 8, 766].

By receiving the demarcation of «human», we may specify the understanding of «self-transcendence», which Popper comes to in the conclusion of his article: «This self-transcendence, this going beyond ourselves, seems to me the most important fact of all life and all evolution…» [3] – where the phenomenon that goes beyond its limits, the transition to another quality in the process of elaboration, concerns the person himself.

In other words, self-transcendence is feasible not only in the ideal world of cultures and sciences, but in reality. Here there is an opportunity to discover an analogy with Russian cosmism. However, Nikolai Fedorovich Fedorov does not associate, but identifies evil with death « Life is good; death is evil.» [10, p.558]. I consider that «good and evil» is not «life and death», but a dichotomy of «attitude to death». Life does not participate directly in these categories. It looks at them from the side. Therefore, entering into the world of immortality, beyond «good» и «evil», we will be forced to abolish not only «evil», but also «good», while not abolishing life. This same circumstance will bring to the foreground the categories that are severely limited today by the tragedy of death: love, happiness, and creativity.

If we conclude that «good» and «evil» do not exist for both animals and «gods», then human is between them, having the opportunity to take a step in one direction or another.

Unfortunately, science, while destroying faith in a religious-metaphysical response to the problem of death, does not itself provide a direct answer. This is how the phenomena of decadence, hedonism, and amoralism appear – as a symbolic step «back», a kind of attempt to «forget» about death. Learn to live in the moment, concentrate on the brightness of emotions and the power of experiences, get away from historicism and ideologies, and from thinking in general. That is, in a sense, to become an animal again. These motives can be traced at any level of culture and art. Starting with soft forms, for instance, in the novel «Violist Danilov» Vladimir Orlov subtly ridicules «khlopobudov» – people who are vainly and comically «fussing about the future». Before the phenomenon of the transition of underground movements into the mainstream, when the territory of obscene lexicon demonstrates the bitter disappointment of our contemporaries in everything human. The most motivated and developed feel the loss of the development purpose. Here are the revelations of highly prepared Lyceum students

and Olympic athletes: «Continuous intellectual activity, ambition, knowledge, sleepless nights. It was hard, but we had a clear goal in front of us… We are used to intensive study, where every day we had to prove our progress in any form…» After entering universities: «Crucial subjects were passed without examination and were given unnecessarily easily. I did not feel any development. I felt like I was constantly being degraded… It is not just the quality of the education, but the overall atmosphere of complete intellectual disruption… The University, in a sense, is similar to a train station. You are all going in some direction and have met temporarily. The main thing in this train station chaos is not to lose yourself.» [11] Directions that postulate systemic self-restraint are being developed: «The main idea of bioethics is that not everything that is technically possible is morally correct.» [12]

Discover another way out: not to animals, not to self-restraint and degradation. But to a New human, a Superhuman. To justify the significance and need of cognition as an elaboration towards self-transcendence. Human self-transcendence here means a rational solution to the problem of death, both in the interests of human and in the interests of nature as a whole. This, in my opinion, is the purpose of philosophy today for science and society, which have lost the image of the future, the audacity of ideas and the dignity of goals.

Gratitudes: Kudryashov Ivan Sergeevich, for scientific guidance in the compliance of work.

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