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The Viability of a Scientific Philosophy: Proving that Computers are Human Creations without the Ability to Think

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ABSTRACT

In 1950, an article was published, which contained the conclusions of the Turing test [1]. Then, representatives of the logicism doctrine made the following conclusion. That in principle it is possible to create an Artificial Intelligence (AI) that can think like a person. With another, representatives of the psychology doctrine concluded that this is impossible. For example, H. Dreyfus claimed that it is impossible to achieve from an AI program efficiency comparable to a person [2]. D. Searle argued that a computer is just a symbol-searching device using a set of syntactic rules. What it lacks is the ability of biological intelligence to interpret semantics. Biologically, the roots of semantics of meaning remain a mystery [3]. In this article, developing the ideas set out in article, an attempt is made to prove the following [4]. Computers created by people can never acquire the ability to think.

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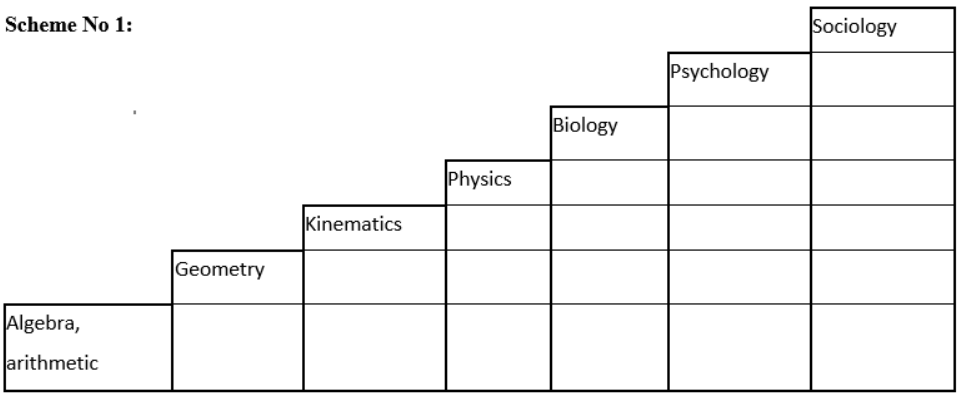
About how it was possible to obtain evidence of the truth of the ideas of psychologism more than the ideas of logicism, which is the basis of the theory of Artificial Intelligence (AI). The following facts are well known. The results that ultimately led to the main results of AI theory are based on the main ideas of Leibniz's logical teaching. That is, the teaching that he tried to develop as a "universal characteristic". On the other hand, the following fact is well known. Leibniz came to his results under the influence of Descartes' fundamental ideas. That is, under the influence of his ideas about the possibility of developing the foundations of universal mathematics. Here, when I talk about such ideas of Descartes, I mean the following. According to Descartes, there are ideas that can be systematized using Scheme No 1.

Scheme No 1:



As it is written in works when taking such ideas as a basis, one can come to obtain the following results [5]. That is, the fundamental results of theoretical physics, which were taken into account when constructing schemes 2 and 3:

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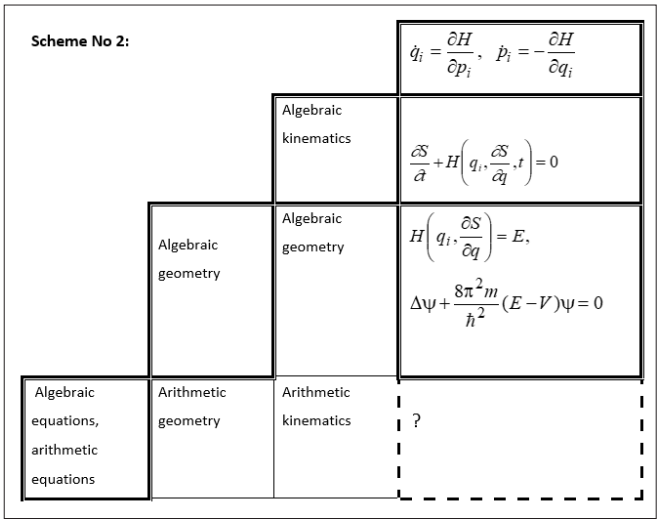
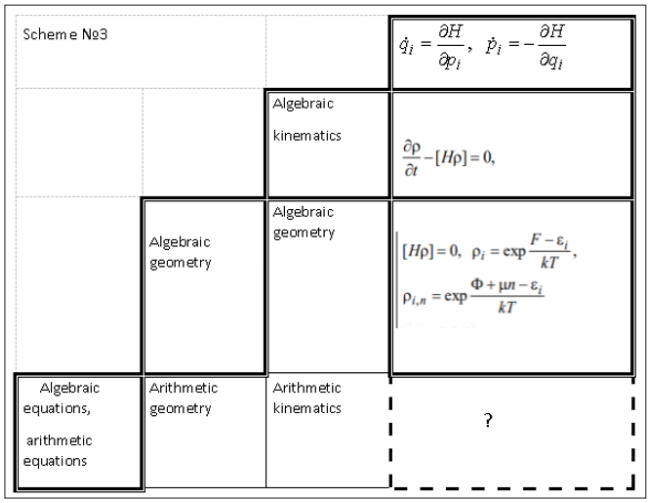
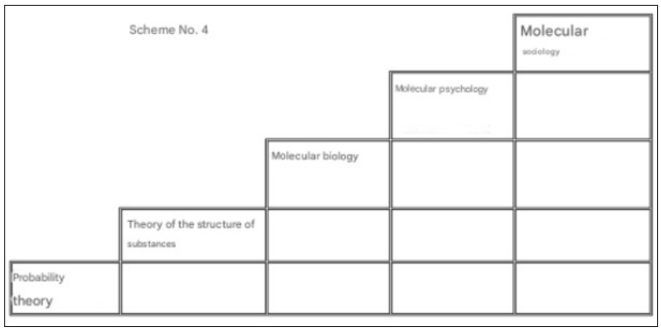
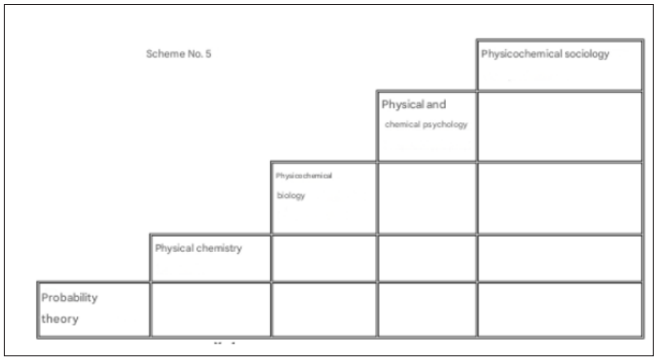
Scheme No 2:





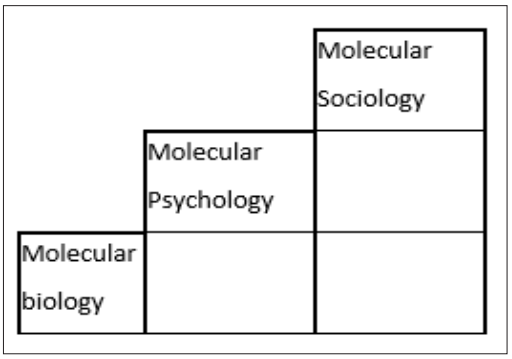
And the main results of probabilistic physics, which were taken into account when constructing schemes 4 and 5

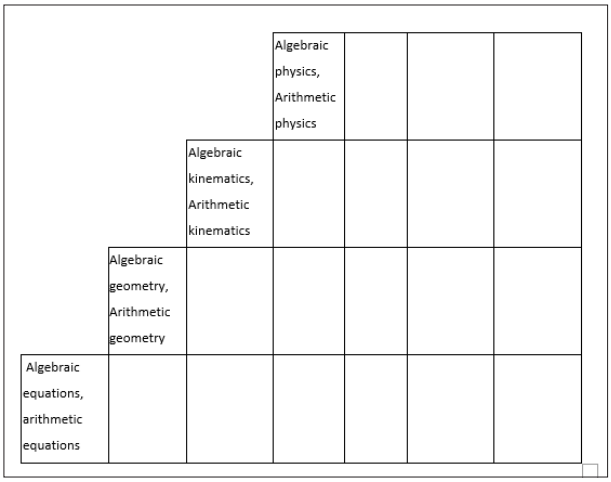


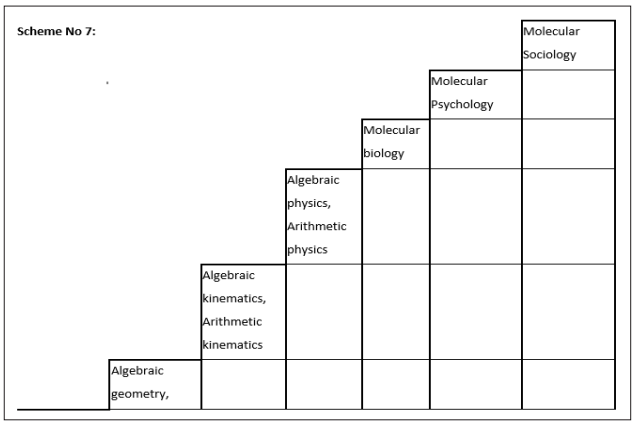


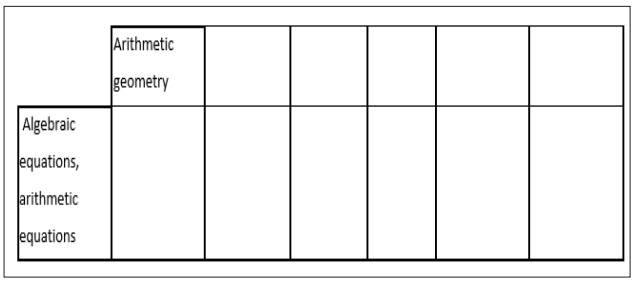
And also, the main results taken into account using scheme 6 and 7

Scheme No 6:









which were obtained by combining the results taken into account using schemes 2 and 3, as well as schemes 4 and 5. Therefore, the nature of which can be understood as the results obtained as a consequence of the unification of the foundations of physics. Then, based on the analysis of these results, it was possible to realize the following. That all these results taken into account in constructing these schemes were obtained when solving the problem of interaction of substances with substances (IPS). Then it was possible to realize the following. All these results, which were

obtained during the development of the foundations of quantum theory. Therefore, they can still be accepted as components of the content

Theories of Natural Intelligence (NI). (1)
When speaking about the main results (1), the following relationships are meant:

$$\text{а) } E = -\frac{me^4}{2\hbar^2}\cdot\frac{1}{n^2}, \qquad \text{б) } 2\pi r = n\lambda; \tag{2}$$

$$\text{а) } K = \frac{n_{AB}}{n_A \cdot n_B}, \qquad \text{б) } \theta = \frac{bn_A}{1+bn_A}. \tag{3}$$

These results were obtained in the field
Theories of the Structure of Matter (4)
Physical Chemistry (5)

Moreover, when solving the problem of many particles for:
α) for many particles subordinate to the connection;
β) for many particles moving randomly.

When receiving them for the results, the roles
of the basis of the theory of thinking are fulfilled (6)
the results were accepted **Probability Theories** (7)

Therefore, the nature of (2) and (3) can be interpreted as the main results of (1) obtained with the accuracy of probabilistic physics. Moreover, from the very beginning, which were obtained as inherent to quantum physics.

On the other hand, when speaking about the basic equations (1), I also mean the basic equations of Hamilton, which is the fundamental equation of theoretical physics:

$$\dot{q}_i = \frac{\partial H}{\partial p_i}, \quad \dot{p}_i = -\frac{\partial H}{\partial q_i} \tag{8}$$

And also, equations

$$\text{а) } \frac{\partial S}{\partial t} + H\left(q_i, \frac{\partial S}{\partial q}, t\right) = 0,$$
$$\text{б) } H\left(q_i, \frac{\partial S}{\partial q}\right) = E,$$
$$\text{в) } \Delta\psi + \frac{8\pi^2 m}{\hbar^2}(E-V)\psi = 0, \tag{9}$$

$$\text{а) } \frac{\partial \rho}{\partial t} - [H\rho] = 0,$$
$$\text{б) } [H\rho] = 0,$$
$$\text{в) } \rho_i = \exp\frac{F-\varepsilon_i}{kT},$$
$$\text{г) } \rho_{i,n} = \exp\frac{\Omega + \mu n - \varepsilon_i}{kT}, \tag{10}$$

which are obtained by solving (8) for α) and β).

Then, after interpreting the nature of equations (9) and (10), using the possibility of 3N+1 and 6N+1 dimensional spaces, more results were obtained

$$E_i = \alpha + k\beta_i, \qquad \psi_i = \sum_{ir} C_{ir} x_r, \tag{11}$$

$$n_A^0 = \frac{n^0}{\frac{1}{n_A}\exp\frac{\varphi - f}{kT} + 1}, \tag{12}$$

Thus, results of nature were obtained that can be understood as a justification for (2) and (3).
For all these results as (8), (9) and (10), (11) and (12) were obtained in the way where from the very beginning for (6) it was taken

a) Algebraic Equations c) arithmetic equations. (13)

At this stage I would like to say the following. Assuming that **in the brains of people from the moment of birth, information-chemical particles begin to accumulate, which are synthesized as corresponding to the assimilated information.** (14)

Then all these results could be taken as the basic equations for **content theory of information.** (15)

On the other hand, there is the equation of K Shannon:

$$\mathrm{H} = -\sum p_i \log_2 p_i \tag{16}$$

where the symbol H is the amount of information, p_iand are the probabilities corresponding to the choice of some one message from the set of all admissible messages, each of which is assigned a certain probability. This (16) is the main result for **formal information theory.** (17)

Thus, after it was possible to realize that there are basic results inherent to (15) and (17), now we have the following possibilities. There is an opportunity for a comparative analysis of results (2), (3), (11), (12) and (16) to describe the experimental data. The analysis showed that on the basis of results (2), (3), (11), (12), obtained as inherent to (15), it is possible to describe the experimental data in more detail than on the basis of (16) obtained as inherent to (17). Because when obtaining results (11) and (12), it is possible to take into account not only the concentrations of particles (information), it is also possible to take into account their nature. Therefore, in this way, the nature of the action potential can be understood at a more subtle level. For example, by taking as a basis the results obtained in the field of the theory of the double electric layer. On the other hand, in the case when it is necessary to use the possibility of (16), it is not possible to understand the nature of the action potential at all at the molecular level. That is why we can come to the following conclusion. The thoughts that the supporters of psychologism tried to defend are truer than the thoughts that were expressed by the supporters of the doctrine of logicism. That is, such a doctrine, the fundamental ideas of which Leibniz began to develop in his time. The analysis showed that the main ideas that were obtained on a new path based on Descartes's ideas are fundamentally different from Leibniz's main ideas. The reason why this is so can be understood by reading those new

thoughts that are in the articles given in [4]. Especially carefully reading the text of the article entitled: "Disclosure of the essence of differential and integral calculus based on the ideas of algebra and arithmetic." Here it is written about what is the essence of the main ideas of Descartes's scientific philosophy. Also, about how it was possible to improve and clarify these ideas.

Some of Leibniz's ideas do indeed have some similarities with ideas that are in the minds of (14). For example, the author of the book [6] wrote the following about Leibniz's main ideas:

Leibniz's plan was to express simple ideas and concepts by symbols, and more complex ones by combinations of basic symbols. (18)

In my opinion, there are indeed some similarities between these ideas of Leibniz and the ideas contained in thoughts (14). However, there are some advantages in the ideas contained in (14). For along this path it was possible to use the possibility of the concept of a **physical particle**. Therefore, after it was realized that this was so, the following possibilities appeared. Possibilities appeared in order to further develop the foundations of (1) on the basis of materialistic ideas. That is, on the basis of ideas where, during the development of the foundations of (1), possibilities appeared to use the concept of **physical particles** as the main object of nature. That is, with those ideas that began to be used when obtaining results (2) and (3). Thus, it was possible to implement some valuable ideas that representatives of the school of "associative psychology" began to realize at one time.

Thus, bearing in mind the above, we can draw the following conclusion. That at the time, Leibniz did not quite clearly understand the full depth of Descartes's idea. Therefore, he began to develop his ideas in such a way that they later led to the receipt of results inherent to

theories of artificial intelligence. (19)

On the other hand, the results that were developed by the supporters of psychologism at the very end led to the receipt of results that reveal the essence of (1).

The possibility of new results for revealing the essence of the thought expressed by philosophers H. Dreyfus and D. Searle. As is known, these philosophers defended the idea that it would never be possible to create AI that could think like people. As it is stated in the book [7], H. Dreyfus asserted the following:

it is impossible to achieve human-like efficiency from AI programs. (20)

D. Searle pointed out the following:
That the computer is just a very fast symbol-crunching machine using a set of syntactic rules. What it lacks is the ability of the biological mind to interpret semantics. The biological roots of semantics, the comprehension of meaning, remain a mystery. (21)

In my opinion, taking as a basis the above results in §1 and the ideas set out in article [4], it is possible to reveal the essence of the thoughts contained in these lines (20) and (21). To do this, it is necessary to pay attention to the following facts. The content of thoughts that are usually processed by a computer is very limited. Because the possibility of the program is limited. Because when compiling a program, programmers use the possibility of probability theory in a very limited sense. In doing so, they are forced to use the possibility of only the numbers 0 and 1. On the other hand, this means the following. This means that they use the possibility of probability theory as with the results of reliability theory. Therefore, further, when it becomes necessary to use the possibility of information theory, one has to limit oneself to the possibility of results (16) and (17). That is, the theory within the framework of which it is not possible to take into account the role of the nature of information. In the same case, when results (2), (3) and (11), (12) obtained in a new way are taken as a basis, it is possible to compensate for these shortcomings. In this case, it is possible to take into account the role of the nature of information. That is, their meaning. In this way, this goal can be achieved due to the following reason. The meaning of information is determined by the nature of those particles that were synthesized in the brains of people when they managed to assimilate this information. Therefore, in the case when the adsorption of these particles (information) occurs in the cerebral cortex, it is possible to take into account the role of the nature of these particles (information). In my opinion, taking these facts as a basis, we can come to the following conclusion. Based on the possibility of a meaningful information theory, it is possible to satisfactorily solve those problems that were formulated by the authors of the work [2,3]. That is, the problems that are contained in thoughts (20) and (21).

In order to further reveal the meaning of the thoughts expressed by the authors of the work [2,3], we can analyze the ideas that were taken into account when constructing diagrams 4 and 5. When constructing these diagrams, an attempt was made to take into account how and in what sequence the evolution of nature occurred. Also, those factors that contributed to the process of evolution. Analysis of the ideas taken into account when constructing these diagrams makes it possible to understand the following. In order for the process of evolution to occur, the results inherent to (4) and (5) played a fundamental role. That is, theories for which the results (2), (3) and (11), (12) are the main ones. Of course, at first, nature was formed, where the main role continued to be played by substances of the still dead world. Nature, which physics and chemistry are trying to study. Then nature was formed, where various plants had already appeared... nature, which biology is trying to study. That is, for this, trying to obtain the results inherent to:

Molecular Biology (22)
Physical Chemical Biology (23)

Then the world of nature was formed, where animals and people already appeared. Nature, which such branches of science as:

Molecular Psychology (24)
Physical and Chemical Psychology (25)

Now, taking as a basis the stated results, let us try to interpret the content of the thought, which is in lines (20) and (21). In my opinion, the essence of H. Dreyfus's thought (21) can be understood for this, comparing the possibilities of the results (2), (3) and (11), (12), as well as the results (16). Because when obtaining (2), (3), (11), (12) it was possible to realize the following. When people think, information-chemical particles are processed in their brains, which move chaotically or obey the connection. On the other hand, all this is fundamentally different from the

principles that are taken as a basis when a program for computers is compiled. For example, from the principle where it is assumed that real neurons, like formal neurons, obey the yes or no principle. However, although formal neurons work on this principle, this is absolutely not the case with real neurons. For real neurons work as an object formed from physical particles. Therefore, all this can serve to realize that the thoughts that are in the lines are actually true.

Similar to what J Searle, when he formed his thoughts (21) probably wants to say the following. That the ability to think is inherent only to living beings. At the same time, he also wants to say that the ability to form a concept that has meaning is also inherent only to living beings. Of course, especially to people. As it is not difficult to understand, thereby he in his thoughts tries to take into account those factors that took place during the evolution of nature. As it was pointed out in the work [4] when taking as a basis the possibility of (2), (3), (11), (12) it was possible to explain the molecular mechanism of the processes that led to evolution. For this, taking as a basis new relationship that were obtained on the basis of generalization of these relationships. Thus, having in mind all this, we can come to the following conclusion. That computing machines created by people can never acquire the ability to think. At least because they are dead. Therefore, they cannot evolve to become alive. Because in the structural features from which they are created there is no possibility for this to become possible. Especially then to evolve to acquire the ability to think. Although they can be improved to improve such abilities as imitation of thinking.

Is the Possibility or Impossibility of Artificial Intelligence Mathematically Provable or Unprovable?

As is known, in 1943 W. S. McCulloch and W. Pitts published an article that laid the foundation for the theory of neural networks [8]. In this work, a series of theorems was put forward and proven, the meaning of which is as follows. That neural events can be described by means of propositional calculus. It is believed that they proved the possibility of describing the behavior of any network of "formal neurons". Moreover, in a certain logical language. Then in 1948, J. von Neumann published an article [9]. It is usually believed that he fully supported the truth of the conclusions of the authors of the work [8]. However, for some reason, they usually do not pay attention to the fact that he then wrote another work [10]. So, in this work he made a number of reservations. Analyzing the thoughts that are in these reservations, we can understand the following. Here are the thoughts limiting the penitentiary force of the epistemological conclusions from the results of the work [8]. However, as is known, usually without taking this fact into account, they began to consider the creation of artificial intelligence possible. As was pointed out in the work [10] von Neumann believed that a fundamentally **new logical theory would be needed to understand highly complex automata**. By this he wanted to say the following. That a **new logic would also be needed to understand the central nervous system**. Thus, bearing in mind all these thoughts, I want to say the following. The essence and content of such a new logic are in the above results. And also, in the results of the work [4], as well as in the works cited in this article.

The fact that there is still no complete clarity about the essence of mathematical proof is also a well-known fact. This is because there is still no clear answer to the question: **what is the essence of true mathematics? This conclusion was made in the book [11]. However, in the work [12], where the possibilities of the idea of scientific philosophy were taken as a basis, it was possible to prove that the basis of true mathematics are the equations of algebra and arithmetic. This means that the true essence of mathematics is directly related to the results of algebra and arithmetic. Of course, further in their correct use. Moreover, for the correct solution of the problem of the relationship between subject and object. Therefore, in this sense, the results of algebra and arithmetic can be considered the basis of scientific philosophy**. Consequently, it can be considered that the thoughts contained in lines (18) of Leibniz actually contain some elements of truth. He came close to realizing the following. The need to assume that concepts correspond to **information-chemical particles** synthesized during their assimilation. However, unfortunately, he could not clearly realize that this was really so. Therefore, he limited himself to a proposal about the need to express simple words and concepts with symbols, and more complex ones with combinations of basic symbols.

Thus, in conclusion, I would like to note the following once again. For the results of the new logic that von Neumann wrote about in [9] it will be possible to accept the results that were obtained in this work and in [4]. This means the following. At one time, von Neumann, as well as Brouwer E., came close to realizing the truth of the basic ideas inherent in intuitionism. This means that the true essence of this teaching as well as the essence of psychologism at a deeper level could be revealed on this new path. On a path where the basic ideas of scientific philosophy are taken as a basis.

Conclusion

Some scientists defending the point of view that it is possible to create AI with the ability to think, give the following argument [13]. That

there are programs, executing which, the computer produces the derivation of all sorts of theorems from axioms or consequences from premises. This means, in principle, that even a robot can have the "abilities" of logical inference. (26)

However, it does not take into account the following facts. That such possibilities really exist when solving the problem of geometry and logic. However, it is not at all suitable for solving the problem of probabilistic physics and theoretical physics. That is, the teachings that study problems for those cases when processes occur on the basis of interaction and transformation of many physical particles. For example, for this, obtaining such results as (2) and (3) as well as such as (11) and (12). That is, results that have the possibility for the process of evolution to occur further.

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