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The Negative Effect of The Idea of The Principle of Conformity Has Suddenly Become More Widely Considered More Important Than the Cartesian Science of Philosophy

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ABSTRACT

Gibbs, who obtained his results in thermodynamics and statistical mechanics, realized the following. For the proper development of the foundations of a scientific theory of knowledge, it is necessary to obtain a justification for the results obtained with the accuracy of empirical and probabilistic physics based on the results obtained with the accuracy of theoretical physics. However, he did not manage to complete his program to the end. Then Planck, who got his results in the field of electrodynamics, also tried to realize the same program. However, he also failed to realize this program to the end in full. Then the basic equations of quantum mechanics were derived. However, as Dirac realized it the results of these teachings turned out to be inherently contradictory. The results of wave and matrix mechanics did not turn out to be equivalent as had long been thought. Consequently, the basis of the scientific theory of cognition has not been fully developed so far because of these reasons. In this paper, taking as a basis the fundamental ideas of Descartes' scientific philosophy, an attempt is made to solve these problems in full.

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§1. How Gibbs tried to develop the foundations of theoretical physics for the case when the object of study is many chaotically moving particles, and why he failed to complete his program.

As it is known, the results inherent to Cartesian coordinate systems were introduced so that, from the very beginning, for the results of performing the roles of was accepted

basic theory of thought (1)

(a) algebraic equations, (b) arithmetic equations. (2).

Then tried to solve the problems.

(a) geometry, (b) kinematics, (c) physics. (3)

Then realized the need to interpret the philosophical nature of the results inherent to:

(a) Algebraic geometry, arithmetic geometry;
(b) Algebraic kinematics, arithmetic kinematics;
(c) Algebraic physics, arithmetic physics. (4).

That is, the results obtained by solving problem (3) based on possibility (2).
As is well known, when attempting to implement this program, the differential equation for:

(a)1st geometric point, (b)1st kinematic point, (c)1st physical particle. (5).

Then realized that further there is a need to solve them for:

(a) Many geometric points of subordinate links, the number of which tends to infinity,
(b) Many kinematic points of subordinate links, the number of which tends to infinity,
(c) For many physical particles subordinate to a bond, or for many physical particles moving chaotically. (6).

Then, at first, Newton's equation was obtained for (5c)

$$F = m\frac{d^2r}{dt^2} \qquad (7)$$

Then, based on the generalization of (7), the canonical Hamilton equation was derived:

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

Then the Hamilton-Jacobi-Jacobi-Schrödinger equations were derived based on (8):

$$\frac{\partial S}{\partial t}+H\left(q_i,\frac{\partial S}{\partial q},t\right)=0$$

$$H\left(q_i,\frac{\partial S}{\partial q}\right)=E,$$

$$\Delta\psi+\frac{8\pi^2 m}{\hbar^2}(E-V)\psi=0 \qquad (9)$$

$$\frac{\partial \rho}{\partial t}-[H\rho]=0,$$

$$[H\rho]=0,\ \ \rho_i=\exp\frac{F-\varepsilon_i}{kT},$$

$$\rho_{i,n}=\exp\frac{\Phi+\mu n-\varepsilon_i}{kT} \qquad (10)$$

As the equation has the sense of the solution obtained by solving (8) for:
α) of many particles that move in an orderly fashion, obeying the force;
β) of many particles that move freely, chaotically.

After such results have been obtained, it would of course be better to proceed as follows. Taking as a basis the possibilities of these equations, try to obtain a justification for those results, which were obtained in the field of empirical physics and probabilistic physics. As it is known, Gibbs, based on the possibility (10), managed to obtain a justification for the basic equations of technical thermodynamics:

$$\begin{aligned} dU &= TdS - PdV \\ dH &= TdS + VdP \\ dF &= -SdT - PdV \\ dG &= -SdT + VdP \end{aligned} \qquad (11)$$

As well as for the basic equations of chemical thermodynamics:

$$\begin{aligned} dU &= TdS - PdV + \sum \mu\, dn_i \\ dH &= TdS + VdP + \sum \mu\, dn_i \\ dF &= -SdT - PdV + \sum \mu\, dn_i \\ dG &= -SdT + VdP + \sum \mu\, dn_i \end{aligned} \qquad (12)$$

However, he failed to derive from these equations a justification for relations such as:

$$K=\frac{n_{AB}}{R_A\cdot n_B} \qquad (13)$$

which are widely used in the field of physical chemistry when attempting to describe experimental data. Therefore, his program to develop a foundation for theoretical physics was still a state of affairs that was not quite complete.

§2. How Planck tried to develop the foundations of theoretical physics for the case where the object of study is many orderly moving particles obeying a force, as well as for the case where the particles move chaotically, and why he failed to complete his program.

Planck, who, based on an analysis of Maxwell's equations.

$$\nabla^2\vec{E}-\frac{1}{c^2}\cdot\frac{\partial^2\vec{E}}{\partial t^2}=0,$$

$$\nabla^2\vec{H}-\frac{1}{c^2}\cdot\frac{\partial^2 H}{\partial t^2}=0, \qquad (14)$$

Obtained the basic equation of quantum physics in the following form:

$$\rho_v=\frac{8\pi v^2}{c^3}\times\frac{hv}{exp\frac{hv}{kT}-1} \qquad (15)$$

where υ is the frequency
Based on which equation was it possible to describe the experimental data in full? Therefore, it was necessary to obtain the justification for this equation. Of course, for this purpose, we take as a basis the possibilities of equations (9) and (10). However, he could not successfully solve these problems. As is known, in this state of affairs, some physicists having analyzed the nature of equation (15) came to the following conclusions. It seemed to them that in this equation, although the second multiplier is obtained with the accuracy of quantum physics, the first multiplier is obtained with the accuracy of classical physics. Then, based on this thought, the results of the correspondence principle were formulated. Further, by accepting its possibility at first, the basic equations of matrix mechanics were derived:

$$\dot{q}_i=\frac{\partial H}{\partial p_i},\ \ \dot{p}_i=\frac{\partial H}{\partial q_i};$$

$$q_i q_s - q_s q_i = 0;$$

$$p_i p_s - p_s p_i = 0;$$

$$p_i q_s - q_s p_i = \frac{h}{2\pi i}\delta_{is} \qquad (16)$$

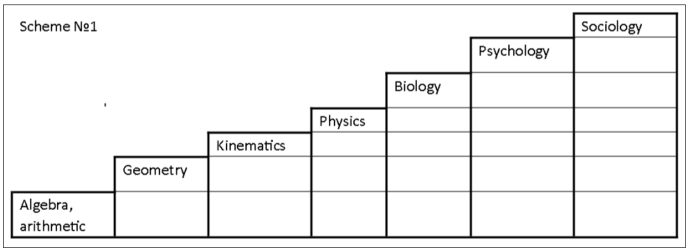
The time-dependent Schrödinger equation was then derived:

$$i\hbar\frac{\partial\Psi}{\partial t}-H_\Psi=0 \qquad (17)$$

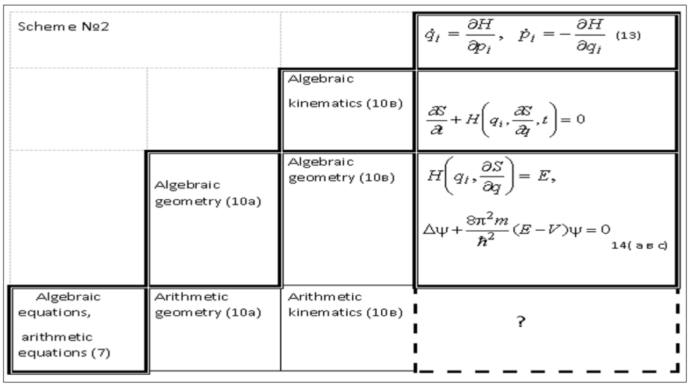
Where ψ is the wave function. As it is known, taking as a basis the possibilities of these basic equations of quantum mechanics, physicists tried to solve some fundamentally important problems. For example, the problems of interaction of substances with substances (BVSV), interaction of substances with radiation (BVSI), and interaction of substances with heat (BVST). However, as it is known based on the possibility of these equations, it was not possible to solve these problems successfully. That it is so was realized by Dirac when writing the book "Lectures on quantum field theory" / 1 /. It turns out that the basic results of wave and matrix mechanics are not equivalent, as was long thought before. Of course, with this state of affairs, the problem now arises about the necessity to find out exactly which equations are the basic equations in the foundation of theoretical physics. Are such equations (9) and (10) or equations (16) and (17)?

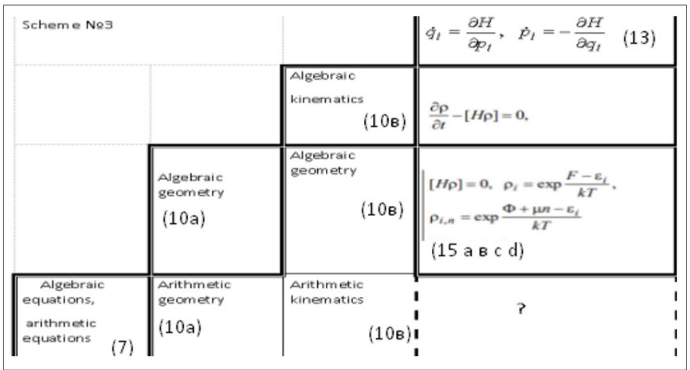
§3. On how, when taking Descartes' idea of scientific philosophy as a basis, it was possible to complete the development of the foundations of theoretical physics in its entirety.

As it is stated in paper / 2 /, when taking as a basis the possibility of the ideas taken into account with the help of scheme-1

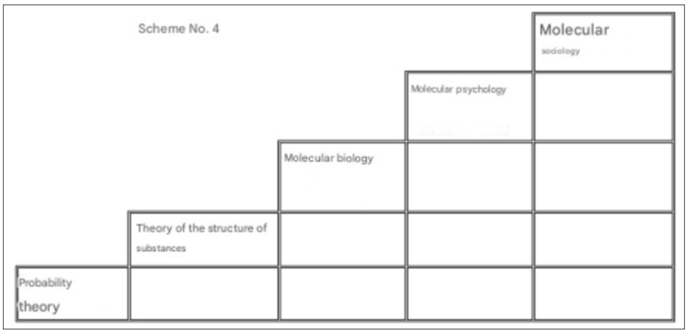


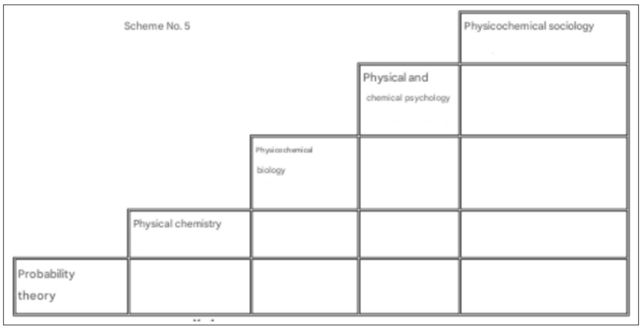
It was possible to realize the following. When analyzed together with the results obtained on the basis of science, it was possible to realize that there are results that can be taken into account with the help of
scheme-2 and 3:





In theoretical physics. And also schemes 4 and 5.





In the field of probabilistic physics. In obtaining the results inherent to theoretical physics for the results performing the role (1) is taken, (2) the solved, problem (3) is solved. On the other hand, when obtaining the results inherent to probabilistic physics for the results fulfilling the roles (1) are taken as the results fulfilling the roles (2), then the solved problem (3).

Of probability theories (18).
Problems for many orderly and chaotically moving particles are then solved on this basis. As discussed in / 3 /, with this approach, further from the possibility of equations (9) and (10) were able to obtain results:

$$E_i = a + k\beta_i$$
$$\Psi_i = \Sigma_{ir} C_{ir} x_r \qquad (19)$$

$$n^0_{,A} = \frac{n^0}{\frac{1}{n_A} exp\frac{\varphi - f}{kT} + 1} \qquad (20)$$

That is the results that in the usual three-dimensional space make sense is inherent in quantum physics. And for the cases when the problems are solved for many particles subordinate to the coupling, and many chaotically moving particles. The results (19) and (20) could be obtained as a justification for the

$$E = -\frac{me^4}{2\hbar^2}\frac{1}{n^2}$$
$$2\pi = n\lambda \qquad (21)$$

$$\theta = \frac{bn_A}{1+bn_A}, \qquad (22)$$

Which have been obtained with the accuracy of probabilistic physics (schemes and 5). Therefore, further, it is possible to combine the results taken into account using schemes and 4, as well as schemes and 5. In this way, it is possible to realize that there are results which are taken into account in the construction of schemes, and 7, which are available in the paper / 1 /.

Thus, as it is not difficult to notice from the above results, expressions (19) and (20) are the most valuable. Therefore, based on the analysis of these results, we can try to make some inferences about their nature. For example, the analysis has shown that the nature of these expressions can be understood by the results at obtaining of which the relationship between the observed quantities is correctly established. Besides, the nature of these expressions can still be understood as having sense for the cases when equation (8) is solved for many particles subordinated to the coupling and for the cases when (8) is solved for many chaotically moving particles. In our opinion, these new results from (16) and (17), which are also obtained from (8), are fundamentally different. If in obtaining the results (16) within the framework of the possibility of matrix mechanics, to set the goals to obtain relations only for the interrelation of observable quantities, then in obtaining the new results, plus to all this, we still managed the following. The canonical Hamilton equation is necessary from the very beginning to solve on two independent paths. Thus, to prove that in nature there are processes when a set of particles move in an ordered way, obeying external forces, and also processes when a set of particles move freely and chaotically.

Thus, based on analyzing the obtained results, we can see the following. The main ideas taken into account with the help of scheme 1 are, without doubt, true results. On the other hand, equations (9) and (10) are also without doubt true results. However, the philosophical nature of which is still undiscovered. Therefore, when it was possible to analyze these results together, together with the ideas accounted for by Scheme-1, it led to the discovery of their nature. For example, that (9) and (10) are the basic equations of classical statistical mechanics, Hamilton-Jacoba-Schrödinger, as well as Gibbs, having sense in 3N+1 and 6N+1 dimensional spaces. This means our equations are making sense for cases where the number of degrees of freedom is equal to these same numbers. Consequently, the nature of the results (19) and (20) can also be understood as the main results inherent to quantum statistical mechanics, by obtaining which it was possible to obtain to reveal the features of the interrelation of observable quantities. As it is known, R. Feynman in / 4 / wrote the following: "The next era of awakening of intellect will come when it will be possible to reveal the philosophical nature of the equation". In my opinion, these new results, when obtaining which it, can possible to taken as a basis for the basic ideas of scientific philosophy of Descartes can be defined as the realization of the program contained in the thoughts of Feynman. Consequently, it is still possible to draw the following conclusion. The use of the possibility of the basic ideas of scientific philosophy not only led to the disclosure of the true nature of the equation GYASH (9) and Gibbs (10). It has also led to the discovery of the true nature of quantum physics. By doing so, it became possible to understand and accept the nature of these results as a basis for awakening the human intellect.

Conclusion

If Gibbs tried to develop the foundations of the theory of many chaotically moving particles, Planck tried to develop the foundations of the theory of many orderly moving particles as well as many chaotically moving particles. It is also known that both Gibbs and Planck came very close to achieving the goal. Only the final steps were left to be taken in interpreting the philosophical nature of their results. The following is also known. Under this condition, the basic equations of quantum mechanics were suddenly derived. It was then long believed that there was an equivalence between the basic results of wave and matrix mechanics. However, as Dirac realized, this was not the case. On a new way of acceptance as a basis of ideas of scientific philosophy of Descartes, it was possible to complete as programs of geniuses of theoretical physics, Gibbs and Planck. Thus, it was possible to prove that the basic equations of quantum mechanics are obtained on false grounds [1-4].

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