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ANTIQUE PHILOSOPHY AND MODERN SCIENCE: THEOLOGY, PHILOSOPHY, SCIENCE. AMPLIFICATION OF RATIONALITY

The article examines the problem of the influence of ancient philosophy on various branches of modern sciences through the prism of the doctrines of such important philosophers of ancient times as Plato, Aristotle, Heraclid and Parmenides. In spite of disputes and mutual criticism in their time, the works of most philosophers have common roots and each of them is an invaluable foundation for the development of modern science and philosophy and and so on. The author asserts that G. Galilei lay the foundation of modern science base oneself upon the works of Plato, which influenced the further development of philosophy to this day and created a deep and original physical conception of the number. Also work of Heraclitus who, due to the dominance of the positivist-pragmatic worldview of philosophy, was not recognized in his time, but gave impetus to the development of the natural sciences of the present are of great importance. Parmenides, in his turn, was the first linguistic philosopher and his contribution to the development of modern languages is difficult to overestimate. In the article, the authors explore the common features and roots in the works of all noted philosophers of antiquity, and reveal that their knowledge and achievements could not be used at that time in full force due to the complete dominance of theocentrism. Nevertheless, it is pointed out that the classical model of science was formed under the influence of the intellectual, political and legal life of antiquity, which was based on the general idea of the mind, which, as the authors note, was largely divine.

Key words: philosophy; science; antiquity; Plato; Aristotle; Heraclid; Parmenides; theology; Galilei

Introduction. Yu.V. Gavrichenkov, referring to the work of I. D. Rozhansky "The Development of Natural Science in the Antiquity" (1979), writes that in "Timaeus", Plato, having synthesized the doctrines of Leucippus and Democritus with the Pythagorean concept of number, created so a deep and original physical concept that its heuristic character was understood only in the era of the crisis of classical science, when physicists such as Heisenberg referred the doctrine of substance of the founder of

the Academy. According to Plato, the idea gives birth to substance, is the principle of its structure. Plato's doctrine about ideas and the soul is a doctrine about the creation by man of his soul for the world-cosmos and nature.

The purpose of this article: analyzing the influence of ancient philosophy and its outstanding representatives on the development of various branches of modern science.

Statement of the main material. The researcher claims that the development of modern science begins with the discovery by G. Galileo of the "principle of inertia", which, as shown in his monograph, directly follows from the Parmenides' "principle of one", determined by Plato and Aristotle in the foundation of dialectics (Gavrichenkov Yu.V. 2006, p. 101). The scientist also notes the inevitability of the first Aristotle's mover in the teachings of the latter about the eternal motion in nature, although, in fact, the eternal and continuous motion (divine) created by the prime mover can only be steady and continuous movement in a circle. By the age of forty, Aristotle realized the world as a self-organizing and self-developing system and devoted the rest of his life to the study of the specific processes of development in nature. However, his manuscripts lay in the cellar unpublished for 130 years, where they were damaged by worms and dampness, and then (in Roman times) and by ignorant copyists. As a result, only a quarter of his works have been preserved.

At the same time, Plato was more in demand both by ancient society and the Christian religious and ideological doctrine, and his works were almost not affected. From Plato's Academy left schools of academics, skeptics and Neoplatonists that have had a lot of attention "to the rest of his philosophy to this day."

Plato's influence was permanent, and when it is claimed that the Epicureans, Stoics, academics, skeptics, and Neoplatonists equally used in their works both the philosophy of the first one and Stagirite, then the ideas of the latter were used mainly in that part that does not contradict the Plato's[1] doctrine.

P. Muursep points out the importance of Heraclitus's philosophy for modern physics, noting that his philosophy of nature represents an example of a powerful mind at an early stage of the development of European civilization, working in the same direction as the intellects of majority of the most modern natural scientists dealing with problems of self-organizing systems. Therefore, during the dominance of a positivist-pragmatic worldview, the philosophy of the Ephesian could hardly be adequately understood. He was considered as being in absolute opposition to Parmenides, and

[1] At the same time, saying that the philosophical synthesis of Plato and Aristotle for its time as a worldview was of exceptional importance both for the religious-mythological and scientific understanding of the world and man, Gavrichenkov does not mention the important fact that in antiquity there was no contradiction between scientific and theological knowledge, moreover, the latter was often the basis for the first one.Therefore, if, for example, Hegel built his philosophy on the model of religion, then in this he only followed the great paradigms of Plato and Aristotle.

philosophy was understood as a description of nature, based on common sense, which is extremely far from a scientific approach. However, from the point of view of the "new science" things are seen differently: Heraclitian fluidity and flexibility as a methodological basis has become almost inevitable for modern science that studies nature.

Again, it should be taken into consideration (although Muursep does not say this) that both Heraclitus' and Parmenides' philosophy are theocentric; without this factor, the basic meanings and intentions of their discourses will remain significantly incomplete and hidden. It is obvious, however, that only the Heraclitian basis is insufficient foundation for the methodology of modern science, especially since the ideas of the Ephesian were sharply criticized by Aristotle, whose views, in its turn, were often opposed to Plato. And it is precisely the criticism of Plato by Aristotle that can become that theoretical point of support with which he opens a new approach to both Stagirite himself and to all modern science. The French philosopher and mathematician R. Thom writes: "It seems to me that in the heart of Aristotelism there is a latent (and permanent) conflict between Aristotle - a logician, a rhetorician, and even when he criticizes Plato and the ancients, a sophist, and another Aristotle, who is intuitive, a phenomenologist and, almost contrary to himself, a topologist. And I work exactly with this second (extremely misunderstood) Aristotle and I am inclined to forget the first one" (Frede M. 2004, p. 113). Herewith, the development of Aristotle went more to Platonism than from him. It is clear that in the XIX century the "first" Thom's Aristotle was rejected, and no one seriously thought about the existence of a "second". But today things have changed, and we can begin to analyze the second type of Aristotelism. Finally, Thom concludes that the Aristotle's physics and metaphysics are a valuable source of deep thoughts for any progressive thinker in our century. Moreover, it is exactly in the light of Aristotelian metaphysics that modern science and mathematics can find their own different and new path in the era of the end of the rule of classical science and positivist philosophy.

V.I. Przhilensky considers including mthe influence of ancient doctrines (many of which are philosophical and theological in the primary sources, what is ignored by them) on modern ideas about the origin and development of science.

Referring, in particular, to the topic of the linguistic turn of the 20th century, Przhilensky points out that Parmenides can be considered the first of the well-known representatives of the philosophy of language, since his answers to questions about the origin of being (herewith this scientist does not note the theological connotations of this concept, which Parmenides directly calls God) or the possibility of his disappearance are based on an appeal to the meaning of the word. Parmenides's thesis "the same thing is for thinking and for being" is the law of the correspondence of a word and its meaning, a program for comprehending things based on trust to a language. But if earlier this meaning lived its own life, fixing the sphere of inaccessible for a man, that, reigning over him, limited his will, but nowadays technologies that transform meaning

into the goal will follow researchers. Thanks to this, according to the researcher, one can try to set new rules, generate new language games, create new forms of life.

Considering the opposition of Plato and Galileo in classical science of science (as representatives of the contemplative-scholastic and experimental-scientific types of thinking) or, more generally, of Plato and Aristotle as surmountable in the process of the birth of new European science (the overcomers were Galileo, Newton and Descartes), Przhilensky notes that the subsequent development of thought led to the statement of the similarity and even genetic connection between the doctrines of Galileo and Plato. Thus, the Neo-Kantians Kogen, Cassirer, and then other scientists who were engaged in the problems of the history of science (Koyre, Losev, Gaidenko) showed that the mathematization of nature by Galileo can be considered as the embodiment of Plato's doctrine about ideas (which, let's not forget, Plato considered divine) as essences of mathematical nature. Moreover, during the reconstruction of the struggle of Platonism and Aristotelism, which went both in late antiquity and in the Middle Ages, it became clear that Galileo can generally be considered as a representative of late Renaissance Platonism, because the anti-scholastic movement has always sought to find mathematical essences behind the material forms of the visible world. In the XX century philosophy entered the post-theoretical stage of development, when it was time to search for implicit ontological assumptions, hidden metaphors and metonyms. It became clear that implicit assumptions are the result of a long experience of a certain kind. The classical model of science was formed under the influence of the intellectual, political and legal life of antiquity, which were based on the general idea of reason (which, again, was considered divine in various forms and measure). The last one was supposed to fulfill the function of an authority which protects as much as possible from mistakes and misconceptions. Moreover, the ancient doctrine of reason found its practical application in the concept of improving the soul through education and upbringing or the search for a personal good (ethics), the definition of a collective good (politics), and finding justice (law). Both rationale for moral choice and reasoned imputation of guilt or political rhetoric are related to the idea of reason, through which one citizen convinces others of the correctness of the proposed decision.

Pre-theoretical knowledge was obtained without applying theory and reasoning, and the process of its obtaining is still a mystery, since references to intuition or millennia-old random experience and non-methodological observation seem unconvincing. Theology, according to Przhilensky, arises from the desire to systematize the knowledge obtained from the dogmas of the creed. Christian revelations, scripture and tradition arose in a situation where the laws of logic had no power, and the Old and New Testaments were given to those who lived in the pre-theoretical world, where the prohibition of contradictions did not make sense. As in their time mathematicians and lawyers built deductive systems based on the obvious axioms of geometry and law, theologians build a deductive system of conclusions from

the truths received in revelation. Therefore, the initial truths may not obey the laws of formal logic, but conclusions are drawn in accordance with all principles of the mind.

An Aristotle's central, far-reaching and rich in implications idea of the need for the existence of intangible substances for a complete understanding of the natural world is also relevant for modern heuristic discussions about the possibility of a deeper understanding of the nature of the world, as M. Frede writes in his article (Frede M., 2004). Although he focuses more on Aristotle's presentation of the history of philosophy from its beginning to his own time (Met. A 3–10, especially A 3–6). It occurs according to available sources for the first time in history; Aristotle also experienced significant difficulties, trying to explain what is substance. The difficulty of the material is such that, up to the present day, commentators disagree on the views the philosopher kept up about it.

The highest form of knowledge is wisdom, that is, knowledge of the origin and root causes. "Metaphysics" begins with the requirement (A 3) for people to know them, and that there are four kinds of reasons or principles: substance, form, motive and final cause. In fragment A 2, Aristotle claims that wisdom, knowledge of the original and the root causes, is unproductive, it is not aimed at practical use. Philosophers are attracted to it because they want to get rid of their ignorance and strive for knowledge for the sake of knowledge itself. Stagirite also believed, as already mentioned, that it is necessary to allow the existence of intangible substances for a complete understanding of the natural world. The differences were only in the question of the interpretation of the nature of these intelligibles: whether to consider them as opposed to sensually perceived essences or as substances. Plato and Platonists postulated ideas or mathematical essences of various kinds. But according to Aristotle, they were of a different kind than the Platonists thought, namely separated intellects (divine), especially God (Met. Z 16 1040 b 27–32; Met. L 6–10). In any case, he believed that our understanding of wisdom depends on whether the physical world is all that is. And it is reflected in A 1-2, where the difference between wisdom in the broad sense of the word are pointed out, which covers theoretical knowledge in general, and wisdom in its highest form, in which it deserves the name "divine", as it includes the knowledge of God, origins of all, and therefore also because, perhaps, only God can have this knowledge.

A number of heuristic ideas and concepts developed in antiquity on the basis of religious and theological thinking, apparently, had an impact on the formation of the basic principles of anthropogenic civilization and its science through Christianity. V.S. Stepin, among the values of anthropogenic civilization which arose as a development of the synthesis of the achievements of ancient and Christian cultural traditions, notes "the perception of nature as a naturally ordered field of objects" (which, one should keep in mind, and from the point of view of antiquity is one of the most important demonstrations of God's action in the world) (Pzhilensky V.I. 2006, p.12).

Socrates' example shows that the idea of rational comprehension of the world in Western culture is a condition for correct action, embodied in the ideal and practice of scientific rationality, in the formation of which the Christian world view also played an important role. Within its framework, the concept of the human mind as a small copy of the divine mind developed which is capable of comprehending the plan and law of the divine creation, embodied in the universe was developed. (but, it must be said, the similar understanding is already present among the pre-Socratics) in order to understand how the latter acts, to reveal its logic and comprehend the internal law. Exactly based on this understanding that a special type of rationality gradually emerged with its orientation on the reasonableness of the world order and on its cognizability for man, which was then realized in the development of the new European science, which took a priority place in technogenic culture.

It is significant that, according to S. Fuller's competent opinion, "there's no sense in speaking about the confrontation between science and religion, which first emerged, as science historians consider, in the last quarter of the XIX century, when Darwin's supporters clearly challenged theological control over universities" (Pzhilensky V.I. 2006, p. 121).

Stepin also notes that a new vision of the natural environment has formed in modern science - nature is no longer regarded as a conglomerate of objects and a mechanical system, but as an holistic living organism. Moreover, these ideas are related, inter alia, to the concepts of V.I. Vernadsky about the biosphere, are substantiated by numerous facts and scientific theories. The scientist points to the connection of these views with the worldviews of eastern cultures and traditional cosmogony of the East.

Conclusions: Although ancient philosophical thought developed under the dominant pressure of a theocentric worldview, it made an invaluable contribution to the development of all modern, including natural, sciences. This gives us the opportunity to conclude that the output truths may not obey the laws of formal logic, but the conclusions are maden in accordance with all principles of the mind.

REFERENCES

Gavrichenkov Yu.V.(2006). Chto takoe samodeyatelnaya filosofiya? // Lichnost. Kultura. Obshestvo: Mezhdunarodnyj zhurnal socialnyh i gumanitarnyh nauk. – M., T.8, Vyp. 3 (31). – S.84–105.

Pzhilensky V.I. (2006). Doteoreticheskie iskusstva i postteoreticheskaya filosofiya. Izv. vyssh. ucheb. zavedenij. Severo-Kavkazskij region. Obshestvennye nauki. – Rostov n/D. № 2. S.3–6.

Stepin V.S. (2006). Science, religion and modern problems of dialogue of cultures // Science and religion: Interdisciplinary and cross-cultural approach. - M. - S.11–25.

Frede M. (2004). Aristotle's account of the origins of philosophy. Rhizai journal for ancient philosophy and science. – Sofia. – № 1. – P.9–44.

Muursepp. The need for Aristotle in contemporary science. Problemos. – Vilniaus, 2003. – T.64. – P.111–123.

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У статті досліджується проблема впливу античної філософії на різноманітні галузі сучасних наук через призму доктрин таких значимих філософів античного часу як Платон, Аристотель, Галілей, Стагирит, Гераклід та Парменід. Не зважаючи на суперечки та взаємну критику в свій час, праці більшості філософів мають спільні корені та кожна з них є неоцінимим підґрунтям для розвитку сучасної науки та філософії тощо. Автор стверджує, що початок розвитку сучасної науки поклав Г.Галілей, відкривши, тісно пов'язаний з «принципом єдиного» Парменіда, «принцип інерції». У своєму відкритті Галілей опирався на праці Платону, який не лише задав поштовх філософії епікурейців, стоїків, академіків, скептиків і неоплатоників, але й вплинув на весь подальший розвиток філософії до наших днів та створив глибоку і оригінальну фізичну концепцію числа. Але й вплинув на весь подальший розвиток філософії до наших днів та створив глибоку і оригінальну фізичнуконцепціючисла. Також зауважується велика значимість робот Геракліту, який через домінування позитивістськи-прагматичного світогляду філософії не був визнаний в свій час, але надав поштовх до розвитку природознавчих наук сучасності. Пермінід в свою чергу був першим лінгвістичним філософом та його вклад у розвиток сучасних мов важко переоцінити. Автори акцентують увагу на тому, що античне вчення про розум знайшло своє практичне застосування в таких важливих сучасних концепціях як вдосконалення душі за допомогою освіти і виховання або пошуку персонального блага - етиці, визначенні колективного блага – політиці, знаходженні справедливості – у праві. За Пржеленським, теологія виникає з прагнення систематизувати знання, отримані з догматів віровчення. Святе Писання виникло в ситуації, де закони логіки не мали ніякої сили, і Старий, і Новий заповіти були дані тим, хто жив в дотеоретіческой світі, де заборона на протиріччя не має сенсу. У статті досліджуються спільні риси та корені у працях усіх зауважених філософів античності та виявляють, що їх пізнання та набутки не могли буди використані у той час у повну силу через повну домінацію теоцентризму. Незважаючи на це, вказується що класична модель науки сформувалася під впливом інтелектуального, політичного та правового життя античності, яке ґрунтувалося на загальній ідеї розуму, який, як зауважує автор, і був в більшості своїй божественний.

Ключові слова: філософія; наука; античність; Платон; Арістотель; Гераклід; Парменід; теологія; Галілей

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В статье исследуется проблема влияния античной философии на различные области современных наук через призму доктрин таких значимых философов античного периода как Платон, Аристотель, Галилей, Стагирит, Гераклид и Парменид. Несмотря на споры и взаимную критику в свое время, труды большинства философов имеют общие корни и каждая из них является неоценимой основой для развития современной науки и философии. Автор утверждает, что начало развития современной науки положил Г.Галилей, открыв, тесно связанный с «принципом единого» Парменида, «принцип инерции». В своем открытии Галилей опирался на труды Платона, который не только задал толчок философии эпикурейцев, стоиков, академиков, скептиков и неоплатоников, но и повлиял на всё дальнейшее развитие философии до наших дней и создал глубокую и оригинальную физическую концепцию числа. Также отмечается огромная значимость работ Гераклита, который из-за доминирования позитивистски-прагматического мировоззрения философии не был признан в свое время, но дал толчок к развитию естественных наук современности. Перминид в свою очередь был первым лингвистическим философом и его вклад в развитие современных языков трудно переоценить. Авторы акцентируют внимание на том, что античное учение о разуме нашло свое практическое применение в таких важных современных концепциях как совершенствование души с помощью образования и воспитания или поиска персонального блага - этике, определении коллективного блага - политике, нахождении справедливости - в праве. По мнению Пржеленского, теология возникает из стремления систематизировать знания полученные из догматов вероучения. Святое Писание возникло в ситуации, где законы логики не имели никакой силы, и Ветхий, и Новый заветы были даны тем, кто жил в дотеоретической мире, где запрет на противоречия не имеет смысла. В статье исследуются общие черты и корни в трудах всех упомянутых философов античности и обнаруживают, что их познания и достижения не могли быть использованы в то время в полную силу из-за полного доминирование теоцентризма. Несмотря на это, указывается, что классическая модель науки сформировалась под влиянием интеллектуальной, политической и правовой жизни

античности, которая основывалась на общей идеи разума, который, как отмечает автор, и был в большинстве своем божественный.

Ключевые слова: философия; наука античность; Платон; Аристотель; Гераклид; Парменид; теология; Галилей

СПИСОК ВИКОРИСТАНИХ ДЖЕРЕЛ

Гавриченков Ю.В. Что такое самодеятельная философия? // Личность. Культура. Общество: Международный журнал социальных и гуманитарных наук. – М., 2006. – Т.8, Вып. 3 (31). – С.84–105.

Пржиленский В.И. Дотеоретические искусства и посттеоретическая философия // Изв. высш. учеб. заведений. Северо-Кавказский регион. Общественные науки. – Ростов н/Д., 2006. – № 2. – С.3–6.

Степин В.С. Nauka, religiya i sovremennye problemy dialoga kultur // Nauka i religiya: Mezhdisciplinarnyj i kross-kulturnyj podhod. – M., 2006. – S.11–25.

Frede M. Aristotle's account of the origins of philosophy // Rhizai journal for ancient philosophy and science. – Sofia, 2004. – № 1. – P.9–44.

Muursepp P. The need for Aristotle in contemporary science // Problemos. – Vilniaus, 2003. – T.64. – P.111–123.

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