HISTORY OF THE FORMATION OF NATURAL PHILOSOPHICAL IDEAS IN CENTRAL ASIA

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ABSTRACT

The nature of the philosophical thought of the medieval East is considered. The socio-cultural prerequisites for the formation of natural philosophy of Abu Raikhan al-Beruni are analyzed. Examples of natural-scientific substantiation of Beruni's philosophical views are given and his role in the development of the methodology of modern philosophy is emphasized.

Keywords: natural philosophy, Beruni's deism, Aristotle, the category of time, geometric atomism.

INTRODUCTION

The worldview of Abu Raikhan al-Beruni was formed in the era of the Eastern Middle Ages, when philosophy was presented as a kind of synthesis of the cultural heritage of the peoples of Central Asia of the pre-Islamic period, advanced Arab philosophical thought and natural philosophical teachings of the Greeks. Considering the great contribution of the scientist to the study and structuring of natural phenomena from the standpoint of a philosopher, Abu Raikhan al-Beruni is considered the founder of one of the natural philosophical schools of the East [1]. Explaining to his student the connection between philosophy and natural science, Beruni emphasized the importance of experience as a way to comprehend the "divine sciences" through the development of natural sciences. The scientist's logical mindset was formed under the influence of his Khorezm mentor, Abu Nasr ibn Iraq. Beruni, following his teacher, believed that philosophy obeys the principles of proof2 and contrasted experimental knowledge with speculative, criticizing Aristotle's concept of a "natural place" and his argumentation about the absence of emptiness in correspondence with Ibn-Sina [2].

LITERATURE ANALYSIS AND METHODOLOGY

A distinctive feature of the natural philosophy school of al-Beruni is his deistic view of the universe. Recognizing the existence of God, the thinker denied blind obedience to religious dogmas and used logic and reason in observing nature, considering such an approach to be a true means of knowing the will of the Most High [3]. Biruni's scientific works contributed to the disclosure of the philosophical problems of natural science: • continuity and discreteness in nature,

- essence and transmission of motion,
- structure of matter,
- transformation of matter.

In "Science of the Stars", refuting Euclid, who first defines a point, line, surface and only then a body, Beruni moves in the reverse order, defining:

- the body as a reality that can be discovered through the senses,
- surface as the boundary of the body,
- line as edge of surface, point as end of line.

Thanks to the solution of theoretical problems of gnomonics and spherical astronomy associated with trigonometry, Beruni approached the idea of the Earth's motion, in particular, in measuring the angle of inclination of the ecliptic to the celestial equator.

DISCUSSION AND RESULTS

In the definition of "time" Beruni stood on atomistic positions and appealed in his reasoning to the teachings of Indian astronomers, which he described in the "Canon of Mas'ud". He took the positions of the Moon on the ecliptic as the starting point of the proof: if such stations are sprayed onto the smallest particles of the signs of the Zodiac, it will turn out to be similar to their equality. Regarding Aristotle's statement that time is represented by separate "now", Beruni noted that Indian astrologers allow the expansion of time and its transformation from "now" into specific time intervals, indicated by the beginning and end. Apparently, this point of view was confirmed by his conclusions from the infinite division of quantities on the example of approaching, but never meeting lines [4]. The philosopher compared the principles of the natural movement of Aristotle (light body towards fire, heavy - towards the Earth) with other statements, according to which "natural place" (object of gravitation) was associated with one of the four elements:

- water and earth move towards the center,
- air and fire - from the center.

Such comparisons often became the starting point of his experiments. Denying the thesis that bodies in circular motion are not characterized by either heaviness or lightness, Beruni questioned the entire cosmological system of Aristotle and came to the conviction that the movement of absolutely all bodies is directed to the center of the earth, which he considered the only "natural place". Today, any schoolchild who is familiar with gravity as a special case of the law of universal gravitation discovered by Newton in 1666 will agree with him [5]. It is noteworthy that the thoughts of ancient authors survived only due to the fact that they were supported by Arab thinkers at a time when the views of Plato and Aristotle were rejected by Christian theologians of the Middle Ages.

From the above, it follows that the achievements of Abu Raikhan al-Beruni in the philosophy and science of the medieval culture of the East are key links in the development of human civilization. Having developed a scientific method based on the formulation of a problem with subsequent analysis, justification and search for solutions, the scientist approved the principle of scientific and logical generalization, which guides modern philosophy in obtaining reliable knowledge:

- Objectivity.
- Experiment.
- Observation.
- Comparison.
- Analysis.
- Impartiality and critical approach.
- Synthesis.

CONCLUSION

Today, the study of the philosophical and scientific works of Beruni helps to assess the progressiveness of his style of thinking and develop his own creative thinking in the best traditions of the philosophers of the Eastern Middle Ages.

REFERENCES

1. Umarova R. Some aspects of the relationship between nature, man and society in the views of Abu Ali Ibn Sino and Abu Raikhan Beruni // Theoretical & Applied Science. 2015 №10. 127-129

2. Umarova R. Sh. Being and philosophical views of Abu Raikhan Beruni // Achievements of science and education. - 2019. - No. 3 (44).

3. Majidov D. Kh. Natural philosophy of Abu Reikhan Biruni: dis. - Institute of Philosophy, Political Science and Law. AM Bakhovaddinova, 2015.

4. Gordienko V.A. Starkova M.V. Physical aspects of the philosophy of knowledge - Moscow State University named after M.V. Lomonosov, 2010.
5. Umarova R. Sh. The role of Abu Raikhan Biruni's natural philosophy in the development of modern science // Economy and society. - 2020. - No. 3. - S. 685-688.
6. Zhurabaev N. Yu. Studying history as a factor in educating the young generation of Uzbekistan in the spirit of the ideology of national independence // Academy. - 2019. - No. 5 (44).
7. Rakhimova MI, Khasanov MN The role of Central Asian philosophy in the development of world and European science // Bulletin of science and education. - 2020. - No. 4-1 (82).