THE WORLD OF ABU ALI IBN SINA AND ABU RAYHAN BERUNI THE ROLE OF SCIENCE IN THE PROGRESS OF SCIENCE

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Annotation

This article analyzes the place and role of Abu Ali ibn Sina and Abu Rayhan Beruni, two great scientists and thinkers who lived and worked in Movarunnahr, in the development of world science. Opinions were also expressed about the role of the bridge connecting West and East, South and North.

Key words: civilization, science, culture, spirituality, politics, economics, man, society, technology, public consciousness, marriage, family, state, information.

INTRODUCTION

The land of Khorezm, one of the first centers of world civilization, is distinguished by its ancient roots. Khorezm Ma'mun Academy, which was established in the 11th century, left a bright mark on the development of world science and thought, and worked under the names "Baytul Hikma" and "Majlisi Uloma" in its time, was of great importance. Because he (Khwarazm Ma'mun Academy A.Q.) gathered the greatest scholars of the East, including scholars from Central Asia, like the "Bayt ul-Hikma" founded in Baghdad during the time of Ma'mun ibn Harun al-Rashid.

It is known that thousands of scholars, great thinkers, poets, and saints emerged from the land of our country, which is the crossroads of ancient cultures and civilizations, in the Middle Ages. Their invaluable legacy in the field of exact sciences and religious sciences is considered the spiritual property of all mankind[1,82].

Here it can be said that it is important to deeply discuss and understand the scientific legacy of the great scholars and thinkers who lived and worked in Movarounnahr, and to reveal its place and role in the history of modern civilization. Because, "Alomalar with their culture and science have been able to reach the front lines of the world several times in history, they have made a significant contribution to the development of world civilization" [2,95]. It is one of the urgent issues of today to give a new impetus to efforts aimed at further research and popularization of this priceless scientific heritage.

MATERIALS AND METHODS

Abu Ali ibn Sina (980-1037), who is known in the world as Avicenna, who founded the rise of medical science in the whole world, created more than 450 works during his lifetime, about 190 of which are philosophy, psychology, ethics, logic, chemistry, physics, astronomy, although he is devoted to mathematics, music, literature, linguistics and socio-political fields, the great scientist is known to the world primarily for having founded medical science and taking it to the highest heights. His name is written in golden letters in the history of world science and culture. In the work "Hayyi ibn Yakhzon", which surprised and amazed mankind with its deep philosophical and logical content, he created a new philosophical novella,

narrative, poem about the world and man, the soul and Allah, which in the future A. Dats provided inexhaustible inspiration and creativity for the work of Shota Rustaveli, Braitel for the pictorial clock of Bosch [3,89].

Abu Ali ibn Sina, who devoted his whole life to the path of science, was a very hardworking and enthusiastic scientist, and his incomparable scientific heritage is of great importance in the history of science and culture. He created many works on philosophy, mathematics, astronomy, chemistry, physics, medicine, medicine, geography, music and other subjects. Also, his works on logic, psychology, methods of state administration, military science, marriage, family issues, and his services in the field of literature greatly contribute to the development of the spiritual life of the society and the process of modern civilization.

Abu Rayhan Beruni (973-1048) expressed his scientific-philosophical views in the works "Relics of Ancient Nations", "Masud Law", "India", "Geodesy", "Minerology". G. T. Lemmlein, one of the Russian scientists who studied the mineralogical heritage of the scientist, commented on the method he used in mineralogy: "The scientific method, which requires the observation and determination of logical structures in the experiment, is also a method that meets the rules of modern science"[4,31].

One of Beruni's great services to science is that he tried to cleanse science from various persecutions, fought for the purity of science. Beruni argues that the magician and the astrology based on him are far from a science. In his work "Geodesia" he wrote that "as the art of astrology has a weak basis in general, so do the results obtained from it. The conclusions drawn from them are confusing compared to real science.

In his work "Relics of Ancient Nations", Beruni provides valuable information about the chronicles and traditions, religion, beliefs, science and history of Central Asian peoples and several peoples such as Persian, Greek, Shaybi, Christian, Arab. The ideas advanced in this valuable work on the history of the peoples of the East have not lost their importance even today, including in the process of modern civilization. Also, "One of Beruni's major works is Tahqiq moli-l-Hind, (Researches about India) this immortal book of his gives rich information about Indian customs, science, history, political, economic, and spiritual life of that time" [5 ,94-95].

This work consists of eighty chapters, the beliefs of the Indians from ancient times to the time when Beruni lived, their views on matter, God, the universe, man, soul, their religions and the history of their origin, their prophets, their scientific knowledge, the boundaries of countries and cities. and related to them included various fields such as legends and histories, writing and language, poetry and poetry[6,149].

When the time comes, it should also be noted that although Beruni wrote in Arabic and Persian languages, as Iranian Dr. Ismail Hokimi admits, despite the fact that his famous work "At-tafhim" was created in purely Persian astronomical and mathematical expressions, the elegance of the sentences, the richness of the style, the words and the beauty and precision of the expressions, the thoroughness and sophistication of the issues, the authenticity, attention-grabbing and solidity of the themes are among the merits and unique aspects of this book..

DISCUSSION AND RESULTS

Encyclopaedic scholars and thinkers who flourished in Movarounnahr in the early Middle Ages were convinced of the nature of philosophy, its reliance on worldly sciences, especially natural sciences, and the fact that philosophical and natural sciences cannot develop without close connection with each other, as well as those who are inclined to think

logically. Also, they called "... to coordinate the evidence of faith with the evidence of reason, to thoroughly acquire worldly and religious sciences, and to know the secrets of the universe" [7,78].

The scientific-philosophical heritage of thinkers is multifaceted. Their component is science, the classification of sciences, their arguments about its social and spiritual essence. According to Ibn Sina, science should serve humanity, scientists should discover the laws of nature and leave their knowledge as a legacy to future generations.

Allama wrote in his correspondence with scholars, including Beruni, "...not knowing what sleep is at night and what happiness is during the day, I was only engaged in science. I tried and sweated to the extent that human nature is capable of strengthening its knowledge and advancing in the path of science." [8,195], - states.

Abu Ali Ibn Sina's desire for science and the secrets of nature was endless. The fact that he covered various fields of science with his multifaceted creativity allowed the scientist to understand nature in a comprehensive way, to penetrate deeper into faith and its spirituality. At the same time, the great thinker left a deep mark in the history of science and art and showed the importance and place of philosophical art science in the life of man and society, as a value in spiritual development.

Abu Rayhan Beruni made a great contribution to the development of almost all sciences of his time, is a famous encyclopedist, a great philosopher, and his scientific legacy is eternal. With his great merits and discoveries in the field of exact sciences, he is far ahead of his time and has left a unique and invaluable scientific and spiritual wealth for the development of modern science.

Beruni's works in the fields of natural science, history, philosophy and linguistics are a valuable source that shows the level of development of scientific understanding and thinking in the Middle Ages. English, Russian, German, Spanish, French and other scientists have devoted their large works to this source, to the topic of its great contribution to the science of the Middle Ages.

Beruni's natural-scientific heritage, the problems he raised in specific sciences had a great impact on the process of science becoming a value in creating a general view of the world, as well as in forming a philosophical worldview. The results of this can be clearly seen in the issues that he raised in astronomy, geology, mineralogy, and biology and based his scientific-practical solution.

Another famous work of Beruni is Kitab al Jamahir fi Marifat al Jawahir (The Book of Knowledge of Precious Stones). In this work, the scientist provides very good sources about minerals in Central Asia and their locations. He touched on the mineral resources of Fergana and said that asphalt, oil, black wax, novjadil, totium, mercury, iron, copper and other minerals can be obtained there.

Beruni was a scientist who mastered the most difficult sciences, and was deeply involved in mathematics, astronomy, mineralogy, pharmacology and a number of such sciences. With his excellent ability, sharp logic and sharp mind, he makes a great contribution to the development of the society in finding the value of existing knowledge and sciences in his time.

CONCLUSION

It should be noted that "the correspondence of Ibn Sina and Beruni, which has reached us, devoted to the analysis of Aristotle's work "The Book of the Universe", is a classic example

of the high level of our great scholars in scientific communication, deep understanding of ancient philosophical views and their development"[4, 41]. They serve as a school of philosophical, spiritual and moral education for the development of modern science and civilization, for peace and prosperous life of the peoples of the world.

Today, the people of the world have fully realized that the works of Abu Ali Ibn Sina and Abu Rayhan Beruni, like thousands of scientists and scholars who have come from our motherland, have taken a worthy place in the golden treasury of world civilization and left an indelible mark in the history of world science culture.

In conclusion, it can be said that the natural-scientific and philosophical views of Abu Ali Ibn Sina and Abu Rayhan Beruni, new trends in science, have a life-giving influence on the development of natural-scientific and philosophical thinking of the Muslim East, and the whole world.

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