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THE ROLE OF ABU RAYHON BERUNI'S HERITAGE IN WORLD CIVILIZATION

Annotation. *In this article, the place of Abu Rayhon Beruni in world civilization and his scientific and spiritual heritage are mentioned.*

Key words: *Spiritual heritage, material culture, renaissance, monastery, madrasa.*

РОЛЬ НАСЛЕДИЯ АБУ РЕЙХАНА БИРУНИ В МИРОВОЙ ЦИВИЛИЗАТSIИ

Аннотация. *В статье рассматривается место Абу Райхана Беруни в мировой цивилизации, его научное и духовное наследие.*

Ключевые слова: *Духовное наследие, материальная культура, Возрождение, ханака, медресе, мавзолей.*

ABU RAYHON BERUNIY MEROSINING JAHON SIVILIZATSIYASIDAGI ROLI

Annotatsiya. *Ushbu maqolada Abu Rayhon Beruniyning jahon tamaddunidagi o'rni va ilmiy ma'naviy merosi keltirib o'tilgan.*

Kalit so'zlar*: ma'naviy meros, moddiy madaniyat, renessans, xonaqoh, madrasa, maqbara.*

Historical and cultural heritage is enriched by the interdependence and influence of material and spiritual values and historical traditions. After Central Asia became part of the Arab Caliphate, a new political system and governance, socio-economic relations, and procedures were established in the region; Islam spread widely, and spiritual life completely changed. The Arabic language and its script were also introduced. For this reason, works related to literature, art, history, and other fields of science began to be written in Arabic script.

The Renaissance period began in the 9th–12th centuries, based on the upsurge and dramatic changes in the culture, art, literature, and science of Central Asia [8]. During this period, the architectural appearance and internal structure of cities were renewed; religious and public buildings reflecting the architectural features of Muslim countries were built—mosques, madrasas, khanaqahs, mausoleums, caravanserais, and administrative buildings—and handicrafts, applied, and fine arts developed on new foundations. At that time, scientists from Central Asia contributed to the development of science in Eastern and Western cultures [6]. Khorezm became one of the scientific centers of Islamic civilization. At the beginning of the 11th century, during the reign of Khorezmshah Ali Ibn Ma'mun, a scientific society called "MajlisiUlama" was formed in the city of Gurganj, a kind of academy, where such great scientists of their time as Abu RayhanBeruni, Abu Ali Ibn Sina, Abu Nasr Ibn Iraq, Abu SahlMasihi, Abu Mahmud al-Khujandi, and Abdumalik as-Salibi conducted research in the fields of mathematics, chemistry, geodesy, mineralogy, medicine, and history. The scientific heritage of the Academy has been widely used in the fields of science for centuries [5, 297–303 p.]. One of the outstanding scientists of the Renaissance, Abu RayhanBeruni (973–1048), mastered all the sciences of his time—physics, mathematics, astronomy, geodesy, geography, and history [1, 5–6 p.].

Beruni corresponded with Ibn Sina during his stay in Urgench. Eighteen of their correspondences have survived to our time. This correspondence testifies to the extent of Beruni's

interest in natural philosophy and physics. In the content of the questions and answers, Beruni opposed the conclusions drawn by Aristotle through reason and perception with his own conclusions determined through correction and experiment. It is known that Ibn Sina defended Aristotle. While living in Khorezm, Beruni, despite being still very young, made important astronomical observations in the city of Kat. He himself invented the instruments for these observations. At the age of 22, Beruni was forced to leave his homeland and first came to Ray, then to Jurjan. Here he met and studied with the famous physician, astronomer, and philosopher Abu Sahl Isa al-Masihi.

Abu RayhanBeruni, a scholar of encyclopedic knowledge, was a great scientist who made a huge contribution to the development of world science. His works show that the scientist considered the origin of all sciences to be connected with the vital needs of man. He confirmed that the basis of scientific research is experience, but did not reject theory. In this matter, he continued the direction started by Ibn Sina. Beruni stands out among the Eastern scientists of that time for his emphasis on experience. It is worth noting that Beruni's progressive ideas in the field of natural and social sciences influenced not only his contemporaries, including the works of Ibn Sina, but also the scientists who mentored Beruni and Ibn Sina, such as Abu Nasr Iraq, Abu SahlMasihi, and Abu Ali Hasan.

In addition to his native Khorezm language, he studied several other languages—Sogdian, Persian, Hindi, Greek, and ancient Hebrew. While in India, he soon studied not only the history and culture of India but even Sanskrit. Among the works created by Beruni, the largest in terms of both volume and importance was the work *India*. According to modern Indian scholars, the Indians themselves have not et created such a wonderful work about India, and before Beruni, nothing had been written at all. Therefore, the Indians mention the name of Beruni with deep respect [7, 240 p.]. The work was written on the basis of rich sources in Sanskrit and personal observations and discussed the geographical conditions of India, its population, occupations, the socio-political system of the Indians, their religion, customs, and traditions [4, 44 p.]. Beruni understood well that the development of a country depends on the development of science. Later scholars verified the accuracy of the information provided by Beruni, once again recognizing the scholar's inherent scientific integrity. "The information provided in the work *India* is so rich and valuable that it has not lost its essence to this day" [2, 21 b.]. "We cannot name any work that is equal to this work," say the authors of the Preface. Al-Biruni is the author of such great works as *Monuments*, *Mineralogy*, *Saydana*, *Al-Qanun al-Mas'udi*, *Geodesy*, and *Astronomy*, but he is highly regarded as the author of *India*. Another valuable aspect of the book is the many excerpts from lost Indian, ancient Iranian, and Manichaean books, through which we can learn about the character of those works. In addition to this large work, Biruni also provides information about India in small scientific treatises. Biruni began writing one of his famous works, *Monuments of Ancient Peoples*, in Jurjan.

It is known from history that in 1017, Mahmud of Ghazni conquered Khorezm and took Beruni to the city of Ghazna along with several scholars from the Khorezmshah's court. It is known that Beruni lived in Ghazna from 1017 to 1048. These ears were a unique period in Beruni's life. On the one hand, he lived in exile; on the other hand, it was a very productive period in his scientific activity. According to scholars who study Beruni's work, such a situation—when a scientist who did not interfere in state affairs and stayed away from political activities—spent all his free time on scientific research.

Al-Biruni was a scientist who also contributed to the development of the natural sciences. Although he relied on Ptolemy's ideas when discussing the structure of the world in his scientific works, in practice he expressed ideas about the movement of the Earth that contradicted the Ptolemaic system.

In his works on mathematical issues, Biruni described the concepts of geometry, arithmetic, algebra, number theory, and trigonometry in a certain order. Modern researchers recognize Biruni's contribution to the development of the science of trigonometry as particularly noteworthy, acknowledging him as a scientist who considered trigonometry as an independent discipline in

mathematics. His work *Osar al-Baqiyya* stands out from other historical works of the Middle East in its method of presenting information, critical approach to sources, comparative analysis, and interpretation of general events in relation to the time of their occurrence, that is, the use of the calendar and periodization system.

Beruni was one of the first in world science to propose his own new ideas on the theory of the seas and the creation of a spherical globe of the Earth, and calculated the radius of the Earth. Five hundred ears before Columbus's voyage, he put forward the idea of the existence of a continent behind the Pacific and Atlantic oceans, developed a classification of minerals and a theory of their formation, and laid the foundation for the science of geodesy. Therefore, it is not for nothing that the 11th century is called the "Age of Beruni" all over the world.

During the reign of the AnushtaginKhorezmshahs, the territory of Khorezm became a large and powerful state of the East in economic, cultural, and military terms [9, 144 p.]. The economic importance of cities such as Dargan, Hazorasp, Khiva, and Gurganj, located on the caravan route along the Amu Darya, in international caravan trade with Eastern Europe and the Caucasus, grew [10, 150–168 p.]. The development of the material and spiritual culture of this period was largely determined by political, socio-economic, ethnocultural, and religious factors, as well as external relations and interaction. These factors played a decisive role in the development of civilizations in different periods.

The development of Central Asian civilization was driven by the flourishing of the Khorezm oasis culture. During this period, changes in socio-economic life, including the implementation of large-scale construction work in cities, the emergence of new branches of craftsmanship, ensuring efficient production in mining and agricultural sectors, and the development of new commodity-money relations in the trade and financial system, were required. These could only be solved by relying on knowledge and science.

Although the material and spiritual culture of Khorezm underwent radical changes in the Middle Ages, traces of historical legends, traditions, and pre-Islamic beliefs and customs were preserved. For example, although the ancient Khorezm script completely lost its significance, the old Khorezm language was preserved among the Khorezm people until the 11th–12th centuries. In the literature written in Arabic during this period, many words and expressions in the Khorezm language are found. Al-Biruni's work contains the names of holidays, months, and days in the local language and their meanings, as well as narrations about Zoroastrianism and the *Avesta* [3, 83–84 b.].

In conclusion, it can be said that in the Khorezm oasis, since ancient times, the pursuit of science, art, writing, and spiritual values, as well as knowledge and inventions in various fields, served to enrich the content of the historical and cultural heritage and contributed to the emergence and prosperity of a unique urban planning culture, state system, and Khorezm civilization. Thanks to this, great scientists and thinkers emerged from Khorezm. They made a huge contribution to the development of world civilization.

List of References

1. Abdullayev I. Beruniy va uning "Qadimgi Xalqlardan qolgan yodgorliklar" asari // Abu Rayhon Beruniy. Tanlangan asarlar. T. – Toshkent: Fan, 1968. – B. 5-6.
2. Абу Райхон Беруний . Танланган асарлар, 2 том. Тошкент, 1963 й. 21-бет.
3. Абу Райхон Беруний. Танланган асарлар. I том. … Б. 83-84
4. А.Сагдуллаев, А.Сотлиқов. Хоразм Маъмун академияси илдизлари. Урганч, 2003. 44 бет
5. Бўриев О. Хоразм Маъмун академияси илмий меросининг кейинги асрлар илм-фани ривожига таъсири // Хоразм тарихи замонавий тадқиқотларда. – Тошкент. Урганч. 2018. – Б. 297-302.
6. Сулаймонова Ф. Шарқ ва Ғарб. – Тошкент: Фан, 1997
7. Ф.Сулаймонова. Шарқ ва Ғарб. Т., "Ўзбекистон", 1997. 240 бет.

8. Хайруллаев М. Ўрта Осиёда илк уйғониш даври маданияти. – Тошкент: Фан, 1997

9. Жабборов И. Буюк Хоразмшоҳлар давлати (қадимги тарих саҳифалари). – Тошкент. Шарқ, 1999. – 144 б.

10. Вактурская Н.Н., Вишневская О.А.Памятники Хорезма эпохи Великих Хорезмшахов (XII-XIIIвв) // Материалы Хорезмской экспедиции. Вып. 1. – М., 1959. – С. 150-168.