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THE EASTERN RENAISSANCE AS A PHENOMENON OF MUSLIM CULTURE

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ВОСТОЧНЫЙ РЕНЕССАНС КАК ФЕНОМЕН МУСУЛЬМАНСКОЙ КУЛЬТУРЫ

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*“Setting the issue of the Third Renaissance as a strategic task,
we are raising it to the level of a national idea”.*

*Shavkat Mirziyoyev,
the President of the Republic of Uzbekistan*

АННОТАЦИЯ

В статье рассмотрена роль мусульманской культуры в Восточном ренессансе X-XII веков. В качестве примера приведены научные исследования таких великих ученых, как Абу Райхон Беруни, аз-Замахшарий, Ал-Хорезми, Абу Али ибн Сино. Показано роль работ этих ученых в становлении мировой науки. Также приведены работы ученых второго ренессанса, который охватывает XIV-XVI века. В настоящее время под руководством Президента Республики Узбекистан Ш.М. Мирзиёева ведется огромная работа по развитию науки, привлечению молодежи в науку, созданию современных научно-исследовательских лабораторий. В свете этого, сделан акцент на научные достижения Хорезмской академии Маъмуна, которая считается третьей академией в истории мира.

ABSTRACT

The article examines with the role of Muslim culture in the Eastern Renaissance of the 10th-12th centuries. As an example, the scientific works of such great scientists as Abu Rayhon Beruni, az-Zamakhshariy, Al-Khorezmi and Abu Ali ibn Sino are cited. Also, the role of the works of these scientists in the science world formation is shown as well. In addition, the works of scholars of the second renaissance are cited, which covers the 14th-16th centuries. Currently, under the leadership of the President of the Republic of Uzbekistan Sh.M.Mirziyoyev, a huge work is being conducted on the science development, attracting young people into the science world, and creating modern research laboratories. Seeing this the emphasis is made on the scientific achievements of the Khorezm Academy of Mamun, which is considered the third academy in the history of the world.

Ключевые слова: Восточный Ренессанс, второй ренессанс, Хорезмская академия Маъмуна, астрономия, математика, медицина, минералогия

Keywords: Eastern Renaissance, Second Renaissance, Khorezm Academy of Mamun, astronomy, mathematics, medicine, mineralogy.

Central Asia is one of the ancient cradles of human civilization, which is of great importance with its rich history, unique cultural and scientific heritage. Located at the crossroads of interregional trade, economic and cultural ties, including at the heart of the Great Silk Road, the

countries of the region share science, education and enlightenment, as well as advanced ideas, knowledge, crafts, cultural elements and other achievements of their time over the past millennia and served as key centers in distribution.

Researchers of different periods and regions have always emphasized the invaluable contribution of Central Asian countries to human development, the emergence and prosperity of states, empires and civilizations, as well as the strengthening of peace, consensus and harmony among peoples. Moreover, the achievements of the region laid a solid foundation for the period of the Western 'Renaissance' and great discoveries. This view continues to arouse indescribable recognition and interest in the unique historical, cultural and spiritual-enlightenment heritage of Central Asia in the world community, including in the field of culture and science.

The deep roots of Central Asian civilization are associated with the spread and development of science and enlightenment.

In particular, the emergence of the Ghaznavids, Khorezmshahs and Karakhanids, independent from the Arab caliphate in the late ninth century, led to the development of science and the formation of large cultural centers in the region. Crafts, trade, social and cultural life and scientific centers flourished here. At the same time, architecture, construction and beautification works were well developed. In this region, cities such as Bukhara, Samarkand, Marv, Kat and Urgench were known as major cultural centers of that time.

Peaceful cultural construction processes, in turn, laid the foundation for the development of science. The rulers made the use of scientific achievements one of the main goals in improving the economic life of the country, the development of agriculture, the welfare of the people.

The 10th-12th centuries are called the period of the Eastern Renaissance. During this period, scientists and thinkers living and working in the Central Asian region made significant contributions to the development of many fields and sciences, including physics, chemistry, mathematics, astronomy, geography, medicine and agriculture.

The scientific center in Baghdad, founded by Caliph Mamun ar-Rashid (813-833) in the first half of the ninth century, was originally known as the 'Bayt ul-hikmat' (The House of Wisdom). The academy brings together scholars and well-educated people from all Muslim countries, including Central Asia. Scholars from Movaraunnahr and Khorasan, such as Musa Khorezmi, Ahmad Fergani, Marwazi, Marwarudi, Jawhari have made a huge contribution to the world-famous reputation of the Baghdad Academy. Following the example of the Academy of Sciences in Baghdad, the Mamun Academy was established in Khorezm in the 10th century, and the scholars of its time, who were its members, spread the knowledge of Movaraunnahr with their works. In this scientific center, many scientific, literary, philosophical and moral works from Greek, Jewish, Sanskrit, Syriac, Persian have been translated into Arabic. Owing to these translations, commentaries were written on them and spread to the Muslim world, and reached us.

In 828, the first observatory was opened in the ash Shammasi district of Baghdad, the capital of the Arab Caliphate. In 831 a section of the observatory was built on Mount Cosian near Damascus.

Our compatriot Muhammad al-Khorezmi, the leader of 'Bayt ul-hikmat', was the first to calculate the radius of the Earth (in Syria).

The first Eastern Renaissance is the 'Muslim Renaissance' that took place in our region in the 9th-12th centuries. The development of this process is associated with the fact that in the late tenth and early eleventh centuries, during the Mamun dynasty, Khorezm became one of the major political and cultural centers. During this period, the socio-economic life of the country developed and its political power increased. Under the leadership of Khorezmshah Ali ibn Mamun (997-1010) the attention and patronage of scientific thinkers increased. Based on the development of cultural life in the capital of Khorezm – Gurganj (now Old Urgench) 'Majlisi ulamo' was established, and later scientists named this scientific center as Mamun Academy.

Abu Nasr ibn Iraq and Beruni played an important role in the formation of the 'Majlisi ulamo'. They invited many scientists from the Middle East to work at the scientific center under the Mamun Palace.

At their suggestion, many scholars from Nishapur, Balkh, Bukhara, and even Arab Iraq came to Gurganj.

Thus, from 1004, a scientific institution called 'Dorul hikma va maorif' (in some sources called 'Majlisi ulamo') was fully formed in Gurganj. This scientific institution was formed as one of the largest academies after the Platonic Academy in Athens and the Bayt ul-hikmat Academy in Baghdad. In this academy extensive research and studies were carried out, a huge number of sources were collected, translation works were done, the works of Indian, Greek and Arabic scholars were studied, the immortal, scientific works of Al Khorezmi and Al Fergani were used and studied.

At the Khorezm Academy of Mamun, under the leadership of Abu Rayhan Beruni, Khorezmian scholars such as mathematician and astronomer Abu Nasr Iraq, al-Khariji, al-Khamdoki, chemist Abul Hokim Muhammad ibn Abdumalik as Salih al-Khorezmi al-Kosi, Ahmad ibn Muhammad as-Suhayli al-Khorezmi and among others encyclopedic scholar, famous physician Abu Ali ibn Sina of Bukhara, the historian, philosopher and poet Abul Khair ibn Hammar of Baghdad, the physician and philosopher Abu Sahl Iso ibn Yahya al-Masihi al-Jurjoni, the mathematician and astronomer Mahmud ibn Khidir al-Khorezmi, historian and poet Abu Mansur Abdumalik ibn Muhammad ibn Ismail as Saalobi, Abul Khair al-Hasan ibn Sivar ibn Baba ibn Bihnam, Abu Sayyid Ahmad ibn Muhammad ibn Iraq, al-Hamadani, Abu Abdullah Biyan Naysaburi, Ahmad ibn Hamid as Naysaburi, the historian Ibn Miskawayh, Abul Fazl Bayhaqi, the naturalist Abu Abdullah Husayn ibn Ibrahim al-Tabari an-Natili, Ahmad ibn Muhammad as-Sahri and other leading scholars of this time solved many scientific and practical problems and made a huge contribution to the development of science.

Scholars have done in-depth research with secular and natural sciences, especially astronomy, mathematics, physics, chemistry, mineralogy, cartography, geography, geometry, environmental sciences, medicine, philosophy, history, Arabic, logic, literature, Islamic jurisprudence and other sciences. They were fluent in Arabic, Persian,

Hindi, Latin, Greek and Turkish. They wrote in-depth analysis commentary to the works of Greek scholars such as Plato, Aristotle, Ptolemy, Euclid, Pythagoras, and Galen. They themselves conducted research in the field of the above sciences and enriched science with new ideas. At the same time, they made a great contribution to the education of young people in Gurganj madrassas and the training of talented students. The academy also provided in-depth knowledge to Beruni's schools of astronomy, Abu Nasr's mathematics, and Abul Khair Hammar's chemistry schools. By this time, the Gurganj madrassas and the above schools had become real places of learning. The young people who were educated in them later became famous scholars of the East.

Scientists of the Khorezm Academy of Mamun have written and inherited many works on the exact and humanitarian sciences. They still retain their importance today. Abu Rayhan Beruni (973-1048) is one of the leading scholars, great leaders and skilled organizers of the Mamun Academy. As a young man, he studied under Abu Nasr Iraq, al-Masihi, and al-Hiraji, and at the age of 21 became a leading scholar in astronomy, mathematics, biology, and history. Beruni is the author of 156 works on various sciences, of which only about 30 have survived. "Monuments of Ancient Peoples", "India", "Mineralogy", "Qanuni Masudi", "Saydana" and others are the works that brought great fame to the scientist in his time and are still rare in the world of science. The great service of the scientist in the field of astronomy is that he thought about the Sun, the Moon and the planets, drawing clear conclusions about their place in the universe. Almost six centuries before European scientists, he substantiated the scientific idea that the Earth revolves around its own axis. His scientific conclusions about the dimensions of the Earth are also close to modern science and are more accurate and perfect.

Beruni also defined the concepts of arithmetic, algebra, geometry, and number theory in a certain order, elevating trigonometry to the level of an independent science. In his geographical research, he showed the exact coordinates of countries, seas, and islands in seven climates, and developed the most perfect map of the world. With the help of his astronomical instruments, he discovered a unique shape-globe of the Earth, which was one of the greatest inventions in the history of mankind. He proved in an original way that the Indian and Atlantic oceans were connected, unlike Greek scientists, and scientifically predicted the existence of a large continent – the American continent – unknown to us five hundred years before Christopher Columbus. Beruni is one of the encyclopedic scholars who left a rich legacy in the fields of history, ethnography, language, literature and medicine.

The Second Eastern Renaissance is the second "Timurid Renaissance" of the 14th-16th centuries. The period known as the "Renaissance of the Timurids" was founded by Amir Temur, a great commander and statesman. He established a strong centralized state based on the rule of law in Central Asia and left an indelible mark on the course of history as a creative person. During the reign of Amir Temur, the world's greatest scientists and thinkers, the best architects and craftsmen aspired to the

city of Samarkand, which became a center of culture and art. The huge architectural masterpieces created by them with high skill still amaze the people of the world to this day. During the reign of Timurids, the development of cultural fields such as calligraphy and miniature art, poetry and folklore was fully supported. It is marked as a period of brilliant changes in the history of the reign of Amir Temur and his descendants.

The great scientist of all time, the Timurid Muhammad Taragay (Ulugbek) was a famous statesman and a unique scientist. Academician W.W. Barthold (1869-1930), while evaluating Ulugbek, said that the scholar who was the owner of the throne, Muslim world had never seen such a person before.

Indeed, Ulugbek was a statesman and a great scientist who sought the development of education, enlightenment, science and culture. The Ulugbek Observatory was the center of scientific development in Movarounnahr in the 15th century.

The largest scientific work created by Ulugbek is his "Astronomical Table" dedicated to the motion of stars and planets. It is known as "Ziji Koragoniy", "Ziji jadidi Koragoniy", "Ziji Ulugbek". This table of Ulugbek was published in 1665 in Oxford (England), in 1767 and 1843 in London, in 1853 in Paris, in 1917 in America. Ulugbek also compiled geographical tables, which were published in London in 1652 together with the geographical tables of Nosiruddin Tusi.

In our days, the adoption of the Decree of the President of the Republic of Uzbekistan 'The reorganization of the Khorezm Academy of Mamun' (November 11, 1997) to increase the scientific potential of Uzbekistan, strengthen its position in the world scientific community, further develop science in the regions was an important step in the development of national traditions in creating a highly intellectual environment.

Today, under the leadership of the President of the Republic of Uzbekistan Sh. Mirziyoyev, the great history of the new Renaissance with rich in bright pages, is being created in our country with great intentions.

A great turn has been made in the reforms in science, economy and education, and the noble reforms carried out by prestigious research centers and higher education institutions in the field of research of scientific, religious and spiritual values, the results of their projects are being implemented.

In particular, the initiatives of the Republic of Uzbekistan to establish international research centers named after Imam al-Bukhari and Imam at-Termizi, a center for the study of cultural values of Uzbekistan in foreign funds, the Center for Islamic Civilization are important for the development of science and in-depth study of scientific heritage. The focus and care, especially on education and academics, is one of the main goals of the government.

Scientists of the Khorezm Academy of Mamun have had success in their researches in recent years. In particular, the artifacts obtained as a result of excavations at the archeological monuments of Khumbuztepa, Qalajiq qala, Kat qala have been studied and put into scientific circulation, and the history and culture of Khorezm are on permanent display.

Eight of nine volumes of the multi-volume monograph ‘Muhammad Rizo Erniyozbek ogli Ogahi’ works have been published. An electronic database of unique resources has been created in the Khorezm Regional Information and Library Center. The history of Khorezm applied and decorative arts, developed fields (ceramics, carving, jewelry, wood and plaster carving), their current state, traditions and innovations, prospects and problems were analyzed and studied. Researches are being carried out on the cities of Khorezm and on the ethnography of the Khorezm oasis on honoring the memory of the victims of repressions in the Republic of Uzbekistan.

In the department of exact sciences, researches were conducted in the framework of the ‘M-subharmonic functions and their application to calibrated geometry’ project.

In the historical and architectural monuments of the State Culture Preserve ‘Ichon-qala’ of Khiva as well as in the historical and architectural monuments owned by the VAQF charity fund – the mausoleums of Said Alouddin, Pahlavon Mahmud, Uch avliyo and Sayyid Mohi Ro’yi Jahon works have been carried out to identify the termite damage and struggle against them.

In order to determine the damage of termites in the historical and architectural monuments of the State Culture Preserve of ‘Khichon-qala’ in Khiva and to study the effectiveness of food-baits based on the fungus *Baveria tenella* in the biological control of them, researches were conducted at Juma Mosque, Kutlug-Murad Inoq Madrasa.

‘KHURMA’ and ‘NIYAT’ cotton varieties were planted on the experimental base of the academy, tested and patented. Today, these varieties are included in the list of commercialization in accordance with the Decree of the President of the Republic of Uzbekistan dated July 14, 2018 PQ-3855 ‘Additional measures to increase the effectiveness of commercialization of scientific and technological activities’. According to this decree, starting from 2019, 120 hectares, and in 2020 - 1,047 hectares have been planted on farms in Khorezm region.

Today, the availability of technical and material base for the development of science, the prudent policy of our state in this direction greatly contributes to the implementation of our plans.

Today, the scientific potential of the Mamun Academy is growing, and researches aimed at improving the science

of Uzbekistan is of great importance. The Academy currently cooperates with the world’s leading international scientific centers. In particular, cooperation was established in the field of science, culture and enlightenment with the University of Aachen and University of Bonn (Germany), the University of Marseille (France), the Holon Institute of Technology (Israel) and the Department of Agriculture of Saudi Arabia.

Khorezm Academy of Mamun is currently working in the following priority directions:

- Studying the problems of Khorezm’s ancient history on an inextricable background, the unique civilizations and culture, the role of rich scientific potential in the development of world science and culture;

- Continuous archaeological expeditions on the study of archeological monuments located in the Khorezm oasis, systematic organization of ethnological researches and source studies, and wide dissemination of their results to the world scientific community;

- Development and introduction of scientific bases for protection of architectural monuments of Khorezm oasis from biological, physical and other adverse effects;

- Conducting regular scientific observations on the ecological condition of the oasis, rational use of existing land and water and biological resources, studying the issues of salinization and desertification by climaticization of agricultural plants, suitable for the soil-climatic conditions of the Khorezm oasis, on the basis of existing experimental base, creation of innovative developments in fishing;

- Fundamental scientific researches in the field of mathematics using the historical traditions of Khorezm and the existing scientific potential;

- Establishing and implementing scientific foundations for local mineral processing (mining chemical industry and non-metallic resources).

It is very important that the country’s leadership pays special attention to this issue. Today, the state support is focused on the development of science and it was pointed that academic institutions function on a budget, the allocated grants are an additional source of funding for researches in laboratory and natural conditions.

Undoubtedly, the initiatives of President Shavkat Mirziyoyev will bring the development of science in Uzbekistan to a new level.

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