

EASTERN THINKERS OF THE ERA OF THE FIRST RENAISSANCE

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Annotation: Life and works of encyclopedic scientists from Central Asia, as well as world science

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We have all often heard the phrase “Uzbekistan is a country of scientists”. These words are based on such great truth and exemplary recognition that we are very glad that only a few countries in the world have won them. But over the years this fact has been refuted, and its universal significance has been deliberately undermined. Times have changed today, our people rejoice at independence, all material and spiritual treasures belong to it. In particular, we are rediscovering the development not only of the Muslim world, but also of our ancestors.

The scientific rise of science and culture of the peoples of the East in the 9th-11th centuries is undoubtedly largely due to a part of the effective work of the thinkers of Central Asia. During this period, new discoveries in mathematics, astronomy, medicine, chemistry, geography, linguistics, hadith, literature and even music could not be imagined without the services of Central Asian scientists. To prove our point, let's turn to historical evidence.¹

According to experts, the formation and recognition of algebra as a science is directly related to the name of the famous Khorezm scholar Muhammad al-Khorezmi (783-850). He created several sections and basic teachings of mathematics and systematized them. Al-Khwarizmi officially used the number 0 (zero) in arithmetic, and as a result, the current decimal positional calculation system spread throughout the world. Although the decimal place system was invented by the Indians, it became widespread thanks to the merits of al-Khwarizmi.² At the same time, it is safe to say that he was a Turk in the development of astronomy and geography.

Another such scientist was Ahmad al-Fergani from Fergana. He is a renowned encyclopedist who lived from about 798-865. He is a renowned scientist who demonstrated the achievements of Central Asian science in Baghdad.³ With his works, he made a worthy contribution to the development of such sciences as astronomy, geography and mathematics, and was able to demonstrate to the world his high qualifications in the design of astronomical instruments. In addition, the fact that in 86 he repaired a kilometer on the island of Rayodo (Egypt) is a vivid confirmation of our opinion. There are about a dozen works of the scientist, some of which were published by the decision of UNESCO in October 1998, on the eve of the 1200th anniversary of the international celebration in Uzbekistan.

Another encyclopedist, Abu Nasr al-Farabi (873-950), was born in Farab (Otrar) on the banks of the Syr Darya and was formed under the influence of the traditions of the Central Asian school of science. Al-Farabi, who focused his scientific potential mainly on philosophy, logic and sociology, wrote more than 160 works in mathematics, medicine, music and other sciences. His great legacy occupies a unique place in the development of the aforementioned sciences.

¹ Abduhalimov B. "Bayt ul-Hikma" Scientific activity of Central Asian scientists in Baghdad. - T.: "Tashkent Islamic University" printing and publishing association. 2004. - B. 95

² Akhadova M. Famous mathematicians of Central Asia. - T.: Fan. 1964. - B. 40

³ Akhmedov A. Ahmad al-Fargani. - T.: Sharq. 1999 - B. 95

The origin of Abu Bakr al-Razi (865-925), one of the greatest scientists in the field of medicine, is also associated with the most educated country of the Arab Caliphate - Khorasan and Movarounnahr. He was originally born in Ray. In addition to medicine, the works of the scientist in the field of alchemy, philosophy, physics, astronomy, mathematics and other sciences are of great importance.

Muhammad Ismail al-Bukhari (810-870), who was recognized as the sultan. hadiths and other later scholars of hadiths: Abu Isa Muhammad at-Termizi (824-894), al-Nasai (ninth century), Abdullah ad-Darimidi al-Samarkandi (798-869), founder of Sunni theology Abu Mansur al-Moturudi (853-944)), later theologians: Abu Saloam al-Samarkandi (XI century) and Abu-llyas al-Samarkandi (ca. 920-1000) were also descendants of the Central Asian lands.

Mahmud al-Zamakhshari (1075-1144) from Khorezm was one of the outstanding scientists of his time. His thirst for knowledge led him to life in Bukhara, Merv, Nishapur, Isfahan, Damascus, Baghdad, Herat and Mecca, where he studied Arabic language and literature, religious sciences, calligraphy, Arabic proverbs and traditions. He collects information about the geography of the region, Mahmud Zamakhshari has written over 50 works in various fields. His book *Al-Mufasssal*, on the phonetics and morphology of the Arabic language, and *Al-Kashshaf*, a commentary on the Qur'an, are especially popular in the Muslim world. Zamakhshari was awarded such titles as "Teacher of Arabs and Non-Arabs", "Honor of Khorezm".⁴ He was nicknamed "Jarullah" ("God's Neighbor") because he wrote most of his poems in Mecca. Al-Azardini's disciples still study the Qur'an based on *Al-Kashshaf*. He was also the founder of the first-ever multilingual dictionary, Arabic-Persian-Turkish. Mahmud Zamakhshari died in Khorezm in 1144. In 1995, the 920th anniversary of Mahmud Zamakhshari was widely celebrated in Uzbekistan.⁵

Abu Rahayan Beruni (973-1048) from Khorezm, Abu Ali ibn Sino from Bukhara, who lived at the end of the period covered by our study (IX-XI) and was studied in detail in the scientific literature and therefore excluded from our area studies (980-1037), there is no need to literally acquaint with the great encyclopedias, not only for specialists, but also for the general public. Due to his unique talent and glorious scientific heritage, Abu Raikhan Beruni (973-1048) was born in Kat, Khorezm, and received education in Urgench. Khorezmshah Abul Abbas worked at the Mamun Academy together with the scientists gathered in the palace of Mamun II. After the conquest of Khorezm by Mahmud Ghaznavi, Beruni and other scientists were taken to Ghazni, where he worked for the rest of his life. Beruni died in the treasury in 1048. Beruni wrote over 160 works in astronomy, geography, mathematics and history. Among his major works are "Monuments of ancient peoples", "Khin Diston", "Mineralogy", "Geodesy".

In his writings on astronomy, he was the first in the Middle Ages to put forward the idea that the earth revolved around the sun about five centuries before Copernicus. Beruni argued that the Earth is round. He compiled a table of stars with the coordinates of 1029 stars and a map of the world.⁶ Beruni wrote several times in his works, suggesting that America existed 450 years earlier than European scientists. Beruni's assertion about the existence of a large land mass in the Western Hemisphere was confirmed in the 15th and 16th centuries. Beruni developed a new method for measuring the circumference of the Earth - a mathematical method. He was the first to create a globe. The huge scientific and philosophical heritage of Beruni, undoubtedly, was a great contribution to the treasury of world science and culture. After graduating from high school, he studied logic, philosophy, hypocrisy and jurisprudence with his teacher Abu Abdullah. From the age of sixteen, he independently studied the work of Eastern and Western scholars in various disciplines. At seventeen, Ibn Sina became a wise judge and scholar. After he healed Amir Nuh ibn Mansur, he received permission to use the library of the Samanid palace. Ibn Sina was one of the

⁴ Abdulloh Abdulhamid Saad. Encyclopedia of Central Asian Scientists. - T.: Imam Bukhari Republican Scientific and Enlightenment Center Publishing House. 2007 - B.363

⁵ Abduhalimov B. "Bayt ul-Hikma" Scientific activity of Central Asian scientists in Baghdad. - T.: "Tashkent Islamic University" printing and publishing association.2004. - B. 118

⁶ Abduhalimov B. "Bayt ul-Hikma" Scientific activity of Central Asian scientists in Baghdad. - T.: "Tashkent Islamic University" printing and publishing association.2004. - 236 pages

scholars of the Khorezm Academy of Mamun in Gurganch (Urgench). He died in 1037 and was buried in Hamadan.

Ibn Sina wrote over 450 works, including 43 works on medicine. In his 5-volume encyclopedic work "Al-Qanunfit-tib" ("Laws of Medicine"), he described the causes and sources of diseases, diagnosis, treatment, properties of medicinal plants and medicines, diet, the importance of physical education for humans. health. Particular attention is paid to the most important issues of medicine. His work "Alqonun fit-tib" was translated into Latin in the 12th century and was used as the main guide in European medicine until the 17th century.

Most of the scientific heritage of the scientists we have listed is the lost for various reasons, surviving, but surviving works themselves have become unique masterpieces of the treasury of world science. Many of these works have been translated into European languages and widely distributed there. It is important to note that the cultural upsurge in Central Asia served as the basis for the formation of the Renaissance.

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