

Conquering the Pinnacle of Science

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Abstract: This article reflects on the great scholar and thinker grandfather Abu Abdullah Muhammad bin Musa Khorezmi who lived on our land.

The great person is admired not only as a mathematician, but also as a philosopher and a poet.

In the words of Islam Karimov, the first President of the Republic of Uzbekistan: "Today, as we look at the great achievements of mankind in the field of science and modern technologies, our hearts are filled with pride that the Uzbek people, like our great grandfather, have a worthy contribution in achieving such high goals."

In this article, what periods the Eastern Renaissance includes, at the same time, the names of the bright representatives of the Eastern Renaissance of the 9th-11th centuries: Narshahi, Farabi, Ibn Sina, Beruni, Mahmud Kashgari, Yusuf Khos Khajib are mentioned with special attention.

We found it permissible to talk about our thinker grandfather Abu Abdullah Muhammad bin Musa, who reached the pinnacle of science with his great contribution to the development of science, enlightenment and spirituality, and his prolific creativity.

Keywords: thinker, wisdom, productive creativity, morals, manners, habits, education, kindness, science, development, sincerity, respect, thoughtfulness, honesty, love, humanity, courage, generosity.

Introduction. Eastern Renaissance refers to the period in which science, philosophy, and culture developed in the Muslim East in the 9th-11th centuries. During Al-Ma'mun's caliphate (813-833), the state sponsored the growth of knowledge. Astronomical observatories were built in Baghdad and then in Damascus. Asian scientists actively participated in the work of these observatories, as well as in the scientific work of the "Bayt ul-Hikma" ("House of Wisdom") established in Baghdad. In addition to the representatives of Arabs and other nations, the famous Abu Abdullah Muhammad bin Musa Khorazmi, Ahmed al-Farghani, Ahmed bin Abdullah Marwazi, Abbas bin Saeed Jawhari and others can be mentioned among the scholars who carried out effective creative work in Baghdad. They played a very important role in the scientific activity of the "House of Wisdom". At the same time, the bright representatives of the Eastern Renaissance of the 9th-11th centuries: Narshahi, Farabi, Ibn Sina, Beruni, Mahmud Koshgari, Yusuf Khos Khajib and others made a great contribution to the development of science, enlightenment and spirituality. We all know that Muhammad Musa Khorezmi was the first in the world to introduce the decimal number system, algorithm and algebra concepts into the field of science and created a solid foundation for the development of exact sciences on this basis.

The main part. The original son of Khorezm, the grandfather of scholars Abu Abdullah (Abu Ja'far) Muhammad ibn Musa al-Khorazmi, al-Majusi al-Qatrabbuli was born in Khiva, one of the cultural centers of Khorezm, in 783 in a fire-loving Mughal family.

In his childhood and adolescence, the future scientist received primary education in his homeland, diligently studied Arabic, Persian, Indian, and Greek languages, read books in these languages, and became a popular scientist.

Khorezmi is the author of "Sind Hind", "Ziji Khorezmi", "Treatise on Astrolabia", "Treatise on the Sundial", "Book on the Shape of the Earth", "Trigonometric Tables", "Treatise on Music", "On History" and other works. One of his great services was introducing European and Middle Eastern science to the ancient Indian decimal system. They called it "Algoritmus" in Europe.¹ Algorithm is its Latin name.

In the words of Islam Karimov, the first President of the Republic of Uzbekistan: "Today, when we look at the great achievements of mankind in the field of science and modern technologies, we are filled with pride that the Uzbek people have a worthy contribution to achieve such high goals, as our great grandfather did."²

Worked at the "Bayt-ul-Hikma" scientific center in Baghdad. He worked there as a scientific supervisor. Alloma created a number of masterpieces in the field of science and introduced the following universal scientific and practical innovations to human practice:

1. Al-Khorazmi is the founder and incomparable discoverer of the science of algebra. The scientist is the author of several books and treatises, the most famous of which is "Kitab al jabr va al-muqabala" on the science of algebra.

This work became the basis for the emergence of a new science of algebra. He discovered two methods of solving equations - al-jabr, that is, bringing opposite signs into a single positive sign, and al-muqabala, that is, putting the same terms opposite (equation). In this work, he created, for the first time in history, a branch of algebra that studies the general laws of operations on quantities. Al-Khwarizmi's work "Al-Jabr" was translated from Arabic and from Arabic into "Algabr..." in medieval Europe, and later it was read as "algebra". This work was first translated into Latin in 1145. During the 19th and 20th centuries, it was published in English, French, German and other languages. It was published in Russian and Uzbek in 1964 and 1983.

2. Al-Khwarazmi is the inventor of the algorithm, that is, for the first time in history, he created a system of rules that allows solving any specific problem belonging to a class of problems purely mechanically. The word "algorithm" is the reading of the word "al-Khorazmi" in medieval European science (originally, the translators translated the Arabic word "al-Khorazmi" into Latin as "algorithm"). Al-Khwarizmi's indelible service in science and practice is that he developed a set of rules that serve as a basis and ground for the creation of management systems in all fields of science, cosmonautics, nuclear power plants, electronics, economy, national economy, and in the creation of families of electronic computing machines and computers came out. As engineering, science, technology and life in general become more complex, the importance of algorithm is increasing.

3. Al-Khwarazmi's "Book on Indian Accounting", "Astronomical Ziyj", "Book on the Earth's Shape" were translated into Latin in the 11th-12th centuries, and in the 19th-20th centuries into the most common languages of today, because al-Khwarazmi He wrote his works in Arabic, which was the common language of all sciences in Muslim countries at that time. These works have been serving science, practice, and human interests for almost twelve centuries in all Muslim countries and for almost a thousand years in European countries.

In 1983, by the decision of UNESCO, the 1200th anniversary of Muhammad al-Khorazmi was held. Currently, there is an "Algorithm" institute under the Academy of Sciences of Uzbekistan, and an "Algorithm" plant is operating in the capital of our country.

The great person is admired not only as a mathematician, but also as a scholar of the science of words.

¹ Ўзбекистон миллий энциклопедияси. 10 – том. Т.: Давлат илмий нашриёти, 2000 йил. 521 – бет.

² Каримов И. Юсак маънавият – энгилмас куч. Т.: Маънавият, 2008 й., Б. 41.

Khorezmi is a poet who lived in the XIY th century and wrote in Turkish and Persian. However, only one of his works, "Muhabbatnama", written mainly in Uzbek and partly in Tajik, has reached us.

Noma is one of the genres of Uzbek classical literature. Lexically, this Persian word means "letter".

Khorezmi's "Muhabbatnama" is considered the first bright example of the noma genre in Uzbek classical literature. Of course, "Muhabbatnama" is not only a collection of poems, it also contains works of small lyrical genres such as ghazal, kita, fard.

A LOVE LETTER

In the evening, the month of celebration appeared,

Muhammad Khojabek is a state protector.

He ordered, and there was a great commotion,

They brought a glass, the meeting was established.

Hosseini composed a song over the curtain,

Mughanni wrote this ghazal...



In short, this work, which started the noma genre, played an important role in the development of Uzbek literature and brought it to a new stage. Also, this work of Khorezmi has a special place as it has taken Uzbek classical poetry to a new level artistically.

Georg Sarton (1884-1956) expressed the following thoughts about Al-Khwarizmi: "...he is not only a great mathematician of his time, but also a great scientist in the history of mankind." At the end of the documentary about Al-Khorazmi, the presenter of the BBC TV channel said: "Today, regardless of where and when we are, when we freely communicate with whoever we want over coffee or tea on the Internet, or watch web pages, or want to save an unlimited amount of information, from the almost unknown corner of Central Asia, which left an indelible mark on the development of all new hi-tech technologies. "We should not forget that there was a man named Al-Khorazmi, and we must be grateful to him."

Conclusion. So, the great thinker of the East, encyclopedist Muhammad Musa al-Khorazmi's knowledge in literature, astrology, geodesy, geography, especially in mathematics, is incomparable. The scientist was fluent in Arabic, Indian, Latin, Greek, and Persian languages. We all know that Alloma was the first in the world to introduce the decimal number system, algorithm and algebra concepts into the field of science and created a solid foundation for the development of exact sciences on this basis, and how important it was in the development of universal human development. Today, when we look at the great achievements of mankind in the field of science and modern technologies, we are filled with pride that the Uzbek people have a worthy contribution in achieving such high goals, as our great grandfather did. Our famous ancestor Muhammad al-Khorazmi is the pride of Uzbekistan, and his memory is always in our hearts.

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