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**Abstract** - In the article, the authors attempt to show the contribution of the fine arts, poetry, handicraft, needlework, and music that the people of Mawarannahr made to the development of Islamic culture. The main works and their brief description are given. The contribution of the talents of the region to the cultural sphere, place, and role is described. The narration is carried out in chronological order, brief information is given about the figure, his works, and the contribution that he made to the development of world science and Islamic culture and sciences. The article attempts to analyze the activities of medieval cultural figures concerning today. At the end of the article, general conclusions on the article are given. Within the framework of a brief article, information is given only about the most prominent talents and geniuses who over the centuries have contributed to the development of the world and Islamic culture.

**Keywords** – **Culture**, contribution, Central Asia, Islam, Mawarannakhr, music, poetry, handicraft, carpet weaving, painting, Makom, Shashmaqom, art, Islamic culture.

**I. INTRODUCTION**

At the end of the 9th century, Central Asia was liberated from Arab rule and several independent states were formed on its territories. During this wave of changes in the 9th-12th centuries, trade, crafts, arts, and sciences were rapidly developing. Thus, among the sciences, the most developing ones were the exact and natural sciences (mathematics, astronomy, geodesy, mineralogy, medicine, pharmacology, and others). The works of Plato, Aristotle, Hippocrates, Galen, Archimedes, Ptolemy, Euclid, and other great thinkers works have been translated into Arabic.

During this period, the Khorezm state, created in the 10th century by Shah Mamun ibn Muhammad with its capital in the city of Urgench, again entered the political arena<sup>[1]</sup>. Many scientists, poets, musicians, calligraphers, architects, and artists of that time from Khorezm, Fergana, Sogdiana, Shash, Farab, and Khorasan have resided in Urgench. At this time, the first scientific institutions and societies similar to modern academies were launched to function. The Khorezm Academy, which was the first one in Mawarannahr called “Dar ul-Hikma” (“House of Wisdom”) can be attributed to them. Subsequently, it was renamed the Mamun Academy in honor of its creator Caliph al-Mamun, whereas the Academy was led by the great Uzbek scientist Abu Raikhan al-Biruni. The Academy consisted of scientists, specialists in all branches of science known at that time, including well-known doctors.

## II. EMINENT SCIENTISTS AND THINKERS OF MAWARANNAHR

At different times, great thinkers of the East such as medic Ibn Sina (Avicenna) and representative of exact sciences Abu Raikhan al-Biruni, historian Ibn Miskawaykhi, mathematician Abu Nasr ibn Iraq, philosopher Abu Sahl Masihi, doctors Ibn Hammar, Sharahdin Ibn Abdullah Iloki, Abu Mansur Kamari and others; each of them left their marks (synonym) on the development of the world medicine.

Abu Nasr Muhammad Al-Farabi (872-950) with the full name Abu-Nasyr Muhammad Ibn-Muhammad Ibn-Tarkhan ibn-Uzlag al-Farabi at-Turki was a philosopher, mathematician, and musicologist. He was born in the town of Farab<sup>[2]</sup> (now Kazakhstan) and received his basic knowledge in Shash, Samarkand, and Bukhara, then he worked in Baghdad for many years.

He has written over 160 works, many of which have been translated into Latin, Hebrew, Persian, and later into other foreign languages in the XII-XIII centuries. He was known as a master of Ibn Sina (Avicenna), a recognized commentator on Aristotle’s works and Plato’s “Laws”, as well as the author of many compositions on philosophy and politics. In the field of

philosophy, he was considered the second after Aristotle. As a sign of recognition of his merits, he was called Muallim al-Sani (“the second teacher”)[3].

Abu Ali Ibn Sina (880-1037), also known as Avicenna throughout the world, was the founder of modern medicine and also made a significant contribution to science and philosophy. Ibn Sina owns poetry collections and theological treatises. For 57 years of his life, he wrote more than 450 works in 29 fields of science and 242 of them have been preserved to this day. Among his most important works one can indicate “The Book of Knowledge”, “The Book of Healing”, “Medicines”, and “The Canon of Medicine” (in 5 volumes), the latter is considered one of the most famous books in the history of medicine and the crown of his work[4].

Ibn Sina was born in the village of Afshana (Afshina) near Bukhara. He began to demonstrate his genius at a young age. When he was 10 years old, he already knew the Quran by heart, and at the age of 20, he began to heal people. His unusual for that time method of treatment made it possible to raise patients with serious illnesses on their feet, for what they began to call him “the prince of doctors”. Ibn Sina was truly an encyclopedic natural scientist, philosopher, physician, astronomer, mathematician, musicologist, writer, and poet. The phrase characterizing the activities of Ibn Sina – “Madadi Sino” - in an adapted form has been transferred into European languages as a whole direction in the science of “Medicine”[5].

The Institute of Oriental Studies named after Abu Raikhan Biruni of the Academy of Sciences of Uzbekistan contains 50 works of Ibn Sina and several comments to them. From among these works, the five-volume “Al-Qanun fi-t-Tibb” (“The Canon of Medicine”) was translated into Latin and distributed in the form of manuscripts in the 12th century and it was reprinted 16 times within just one century. In all reputable educational institutions in Asia and Europe, medical science has been taught based on his works for 500 years. This invaluable canon of medicine has not lost its scientific significance to this day[6].

Abu Raikhan Muhammad Ahmad al-Biruni (973-1048) was a great scientist-encyclopaedist from Khorezm and an author of numerous major works on history, geography, physics, botany, philology, astronomy, mathematics, geodesy, mineralogy, pharmacology, geology, ethnography, chronology, and others. In addition to the ancient Khorezm language, he perfectly knew Arabic, Persian, Sogdian, Hebrew, Greek, and Sanskrit languages. Also, he knew the Quran very well[7].

For the first time in the Middle East, al-Biruni expressed an opinion about the possibility of the Earth’s movement around the Sun and determined the circumference of the Earth. Biruni can be rightfully called as the triumphant of science in the medieval East[8].

Among his main works, we can indicate “The Canon of Masud on Astronomy and Stars”, “Pharmacognosy in Medicine”, “India or a Book, containing an explanation of reasonably acceptable or rejected Indian studies”, “Science of the Stars”, etc. He theoretically substantiated and calculated the presence of a new continent on Earth and solved several other problems that have received worldwide recognition[9]. According to some reports, the total number of works written by Biruni exceeds 200 (among them: 70 works in astronomy, 20 in mathematics, 12 in geography, 3 in mineralogy, 4 in cartography and other sciences)[10].

Ahmad al-Fargoni (798-861) with the full name Abul Abbas Ahmad ibn Muhammad al-Fargoni was one of the prominent medieval scientists, astronomer, mathematicians, and geographer of MAWARANNAHR in the 9th century. In Western Europe, he was known under the Latinized name of Alfraganus, and as a native of the Fergana Valley he was called Hasib which means “mathematical”.

While working at the al-Mamun Academy in Baghdad, he made contributions to astronomy, mathematics, and geography. Among the major works, there are “The Book of Astronomical Movements and A Brief Summary of the Science of Stars”, “Thirty Elements”, “Theoretical Calculations on a Sphere”, “A Treatise on the Time when the Moon is Under and Above the Earth”, etc. Furthermore, Ahmad al-Fargoni also wrote comments to Ptolemy’s “Almagest”[11].

Al-Fargoni was one of the first scientists of the Middle Ages to prove the sphericity of the Earth who discovered the presence of spots on the Sun and identified June 22 as the longest day of the year, and December 23 as the shortest[12]. In Europe, for several centuries, al-Fargoni’s work has been used as a teaching syllabus and is still appreciated in the scientific sector to this day. For a long time, he has worked at the Damascus Observatory. His main book titled “*Kitab al-harakat as-samoviyya wa javomi ilm an-nuzhum*” (The Book of Celestial Movements and Collection of the Science of the Stars) written in the 12th-13th centuries published in almost all European languages and served as a textbook on astronomy. His 8 books on astronomy are quite well-known. Moreover, his invention of the nilometer - a device that was used to measure the water level in the Nile - is still in use today[13].

Abu Bakr Muhammad ibn Jafar al-Narshahi (899-959) is the author of the very first ancient historiographic work on Central Asia “Tarikh-i Bukhoro” (“History of Bukhara”), written in Arabic in 933-934.

The value of this work lies in the fact that the author described extensive information not only of a historical nature for which the book became famous but also a detailed description of

geographical objects, rivers, canals, and even songs of the Bukhara oasis and the Zaravshan river of the 7th-12th centuries. Narshakhi's work has been edited and updated several times. In 1128, Abu Nasr Ahmad ibn Muhammad al-Kubawi makes an abridged translation of "Tarih-i Bukhara" from Arabic into Persian. In the XIII century, the events described in the work were brought to the attention of an anonymous author in 1220. Abu Nasr Ahmad supplemented the work with new evidence and historical events in 1220 and this edition reached the current period[14].

Abu Abdullah Muhammad ibn Musa al-Khwarizmi (783-846), who was born in Khiva, was the founder of classical algebra. In some sources, he was called "al-majusi", i.e. magician, which means that he is a descendant from a family of Zoroastrian priests who later converted to Islam. In all historical sources, al-Khwarizmi was called as a father of algebra who presented it as an independent science of general methods for solving numerical linear and quadratic equations[15].

Al-Khwarizmi was the first one who solved several algebraic equations and introduced a new sign of "zero" into the numerical series, which expanded the theory of numbers and made it possible to pass to negative digits. Therefore, for these achievements, a new branch of mathematics – "algebra" was named in honor of al-Khwarizmi. In al-khwarizmi's famous work "Kitab al-Jabr wa-l-Mukabala" ("The Book of Reconstruction and Contradistinction"), algebra was depicted for the first time as an independent branch of mathematics. The fundamental concept of modern cybernetics, as well as one of its indispensable foundations – "algorithm" is etymologically associated with the name al-Khwarizmi, since the word "algorithm" originates from his name, i.e. algorithm – is a distorted name for al-Khwarizmi[16].

The greatest scientists of those years worked in the Baghdad Academy of Bayt al-Hikma ("House of Wisdom"), where al-Khwarizmi was invited too. Then al-Khwarizmi headed the first scientific academy in the Muslim East[17]. In addition to the book "Kitab al-Jabr wa-l-Mukabala", he authored essays on the designing of an astrolabe, scientific works, one of the first "Astronomical tables" in the world, as well as some other scientific treatises titled "Treatise on Indian Counting", "Treatise on Sundial", "Treatise on Music" and others. In general, the scientific heritage of al-Khwarizmi amounted to almost twenty books, of which no more than ten have been preserved[18].

Giyasiddin Jamshid Kashi (1380-1429) was a distinguished mathematician and astronomer. He devoted a number of his outstanding works to astronomy. Al-Kashi together with Kazizade Rumi, supervised the construction and operation of the observatory of Ulugbek. He

published the first systematic exposition of the theory of decimal fractions. In the treatise “The Key of Arithmetic”, al-Kashi described the sexagesimal numeral system[19].

Muhammad Taragay Ulugbek (1394-1449) was a great astronomer, scientist, educator, and poet of his time, who was also interested in history and poetry. He was Amir Temur’s grandson and founder of one of the most important observatories of the Middle Ages.

He left behind him a huge scientific and cultural heritage, “Zij-i jadidi Guragoniy” (“New Guragan astronomical tables”) - the worldwide famous work of the great scientist “Zij Ulugbek”. Ulugbek built an observatory and a madrasah in Samarkand and organized his own Academy[20]. In 1428, one of the outstanding astronomers Mirzo Ulugbek worked in the observatory built by him, and made a huge contribution to the development of this science. The preserved underground part of Ulugbek’s observatory is one of the most popular touristic sites. In this observatory, the great Ulugbek compiled his catalog of the starry sky - Zizhzh-i Kuragoniy, in which he described 1018 stars and determined the length of the sidereal year as being: 365 days, 6 hours, 10 minutes, 8 seconds. Together with his students, he studied and compiled a list of more than a thousand stars – “a map of the starry sky”. At the Ulugbek Academy, scientists conducted research not only in astronomy but also in mathematics, philosophy, history, and other sciences. Mirzo Ulugbek, al-Kashi, and Ali Kushchi made a significant contribution to the development of the theory of numbers and raised the existing knowledge of observational astronomy to a higher level. The accomplishments of Ulugbek’s astronomical school had a great influence on the development of science in the West and the East. His scientific works have been translated into many languages around the world, widely disseminated in Europe and the USA. The name of Mirzo Ulugbek lies in the history of world science on par with the names of Tycho Brahe, Johannes Kepler, Nicolaus Copernicus, and Galileo Galilei[21].

Ali Kushchi (1403-1474), who was also known as Maulana Alauddin Ali bin Mohammed Kushchi, worked at the Ulugbek Academy and left behind worldwide famous scientific works in mathematics and astronomy[22]. In his opinion, the change in the seasons depends on the approach or distance of the Earth from the Sun and the effect of sunlight on the Earth’s surface. He correctly identified the process of the eclipse of the Sun. The works of Ali Kushchi significantly influenced the development of astronomical and mathematical science in the Middle and Near East in the 16th-17th centuries. As a faithful disciple of Ulugbek, Ali Kushchi preserved his valuable work “Zizhzh-i Guragan” or “Zizhzh-i Ulugbek”, multiplied it into



numerous copies, translated it into the Turkic language, and wrote commentaries on it. Subsequently, this work became the scientific property in Europe and Asia.

Ali Kushchi also wrote “Treatise on the Science of Arithmetic” and “Treatise on the Science of Astronomy”, which played a significant role in the teaching of mathematics in the countries of the Middle and Near East in the 16th-17th centuries. He also wrote commentaries on al-Kashi’s “Stairs of Heaven”. In total, Ali Kushchi left behind about 30 treatises on mathematics, astronomy, and linguistics. Among them, there is “Risala fi al-Hisab” (Treatise on arithmetic) compiled in Samarkand in 1425. Kushchi also authored several other works on linguistics and the “Book of China”, where he traveled as Ulugbek’s ambassador[23].

The above treatises were widely known in scientific circles not only in MAWARANNAHR, but also in Europe, the Near and Middle East, and served as the basis for the further development of the research directions put forward by Ali Kushchi.

### **III. EMINENT GOVERNMENTAL ACTORS OF MAVAUNNAHR AND TURKESTAN**

One can assert without a doubt that, the personality in the history of mankind plays a great, sometimes even a decisive role. There have been many such personalities in the history of Uzbekistan, and in this work, we will focus only on those who lived and created in the Muslim period of the development of this region. These personalities, first of all, include Amir Temur, known throughout the world as Tamerlane or the Iron Lame.

Amir Temur (1336-1405), with the full name of Temur ibn Taragay Barlas, was born in Kesh (Karshi). He was a great military leader, conqueror, and statesman who played a significant role in the history of Central, South, and Western Asia, as well as the Caucasus, the Volga region, and Russia[24]. Amir Temur not only created a powerful centralized state but also clearly defined its structure and law system. Favorite sayings of Temur were: “Truth is health, truth is order, truth is justice”; “The belt is on the loins and praise is on the tongue” (that is, action and speech in a single order); “Philanthropy and courage are glorified by both the Almighty and the people”; “If the commander is heartless and reckless, then troops cannot escape the defeat”. State-legal views of Temur outlined in the Temur’s Code (other names: “Temur’s Dictums”, “Temur’s Memories”) was a unique document resembling the medieval constitution of that era. This historical work sets out the biography of Temur, as well as his views on the structure and management of the state and the army.

Many books and legends have been written about Amir Temur[25]. More specifically, we can read about them in many other books, that's why we will not repeat them in this article, but some of his features as a statesman should still be dwelt on. Temur was a very brave, courageous, and restrained person, a visionary ruler and a talented organizer. Possessing a sobriety of judgments, he was able to make the most correct decision in difficult situations. According to sources, Temur was fond of playing chess and may have been the champion of his time[26].

As a founder of the Timurid empire with its capital in Samarkand, he created one of the greatest empires in world history by the beginning of the 15th century. Samarkand, the capital of the empire, became the largest and richest city in the East[27]. To defend his lands - from the Volga River and the Caucasus Mountain ranges in the West to India in the Southwest - he created a perfect army. During his rule, large-scale construction projects were carried out in Samarkand and other cities, monumental buildings were erected, and codes of laws and art were developed. Temur left behind dozens of monumental architectural structures and some of them were included in the treasury of world culture. Temur's buildings, which were created with his active participation, reveal his outstanding artistic taste[28].

Amir Temur introduced in Central Asia the institution of the highest cleric in the Muslim community - Sheikh ul-Islam, making him an adviser to the ruler. The period of his rule again became a flourishing era for Sufism.

The next most important statesman of Central Asia after Temur was Mirzo Ulugbek. Ulugbek (1394-1449) with full name Mohammed Taragay ibn Shahrukh ibn Temur Ulugbek Guragan was a ruler of the Timurid state, son of Shahrukh, and grandson of Temur. He was known as an outstanding scientist and wise statesman. Historians unanimously assert that, during the reign of Mirzo Ulugbek, Samarkand became one of the centers of medieval science in the world. This is not surprising, because this ruler himself remained in the chronicles as a great scientist, mathematician, and astronomer. Science played an important role in his life and during the years of his reign in MAWARANNAHR, he raised it to incredible heights. Mirzo Ulugbek at the age of 15 was appointed the ruler of Samarkand in 1409, and from 1447 he headed the Timurid dynasty after the death of his father *Shahrukh* (the eldest son of Amir Temur).

In 1417-1420, a madrasah built in Samarkand by order of Ulugbek became the first building in the future architectural ensemble of Registan. Under Ulugbek, construction activities were carried out in two directions: on the one hand, building of cultural institutions, and on the other, completion of those started before him. By the order of Ulugbek, madrasahs, as well as



charitable institutions and baths were being built in Bukhara and Samarkand. He completed the construction of the “Bibi-Khanum” mosque, the “Gur-Emir” mausoleum, and also the “Shahi-Zinda” ensemble. Ulugbek owned beautiful suburban gardens[29].

Zakhiriddin Muhammad Babur (1483-1530) was one of the brightest representatives of the Timurid dynasty, a commander, poet, and statesman, as well as padishah of India and Afghanistan and founder of the dynasty and Empire of the Baburids[30]. In Europe, he was known as the founder of the Moghul Empire. This name has been used by European travelers since the 17th century[31].

Babur left a deep mark on the political and literary life of MAWARANNAHR in the 15th-16th centuries. He was born in Andijan in the family of the emir of Fergana Umar-Shaikh-Mirza II, the great-grandson of Sultan Miran-shah, the third son of Amir Temur[32]. At the age of 11, he was declared as a ruler of Fergana; however, just 10 years later in 1504, under pressure from the Shaybanids, he was forced to leave his lands and move to Kabul, where he established a new state. In 1526, he conquered India and founded there the Baburids’ Empire, which lasted for 300 years[33]. Along with enormous accomplishments in state affairs, Babur left behind a very valuable literary heritage. His main work was his autobiography “Babur name”, which describes the life, traditions, and customs of the people of that era[34].

It was the Baburids, who brought Sufism to India, which turned out to be close to Indian religious beliefs. Researchers note this closeness as being inherited from the Turkic period, and in many respects, an identity composed of the cultural and civilizational elements of Central Asia and the northern regions of India[35].

With the arrival of Babur, India learned the delights of landscape architecture and gardening. Because of his talent for arranging gardens in the most difficult natural conditions and terrain, the people of Hindustan awarded him the nickname of “Tsar-Gardener”. Not only the shady gardens of Agra but also palaces built of red sandstone and white marble, majestic mosques, and tombs remained in the memories to this day.

Out of forty-eight years of his life, Babur ruled the state until his thirty-six. The era of the Baburid empire does not have historical value only, it has enriched India with grandiose architectural monuments, unique literary and research works. The royal palace complex at Fatehpur Sikri, the palaces and gardens of the forts of Agra, Delhi, and Lahore are the main monumental architectural objects of India, which the country owes to the dynasty of the Great Baburids. Vivid examples of the country gardens created by the Baburids are the “Shalimar” gardens of the same names in Kashmir (1620) and Lahore (1642), “Achabal” garden near

Anantag, “Chashma Shahi Garden” (1632), “Nishat Garden” in Kashmir (1633); numerous other gardens inside the forts of Lahore, Delhi, Agra; memorial gardens flanking the mausoleums of the emperors: “Baghi-Babur garden” in Kabul, the garden at the Humayun mausoleum in Delhi, “Akbar” in Sikandra, “Jahangir” in Lahore, “Taj Mahal” - Shah Jahan's mausoleum and Mumtaz Mahal in Agra[36].

#### **IV. PROMINENT POETS, MUSICIANS, AND WRITERS**

Among the Uzbek poets of the Muslim period of development, a special place was occupied by the work of Lutfi, who before Alisher Navoi was the best in poetry. Subsequently, Alisher Navoi, Babur, Shaybani Khan, Ubaydullakhan, Mashrab, Agakhi, Mukimi, Munis Khorezmi, Nodira, Fizuli, Furkat, and Uvaysi highly uplifted the poetry and prose of the region.

The Timurid Renaissance in literature is represented by the poetry of Lutfi, Sayyid Ahmed, and also Alisher Navoi, who wrote his works in the Uzbek language in the genre of *gazels* and rubai that included in divans. Engrossing love (muhabbat) and moral edification became the main theme of poetry. The folk-romantic epic (dastan) was often enveloped in a poetic form.

Temur's grandson Iskandar Sultan had a court that hosted a group of poets, scientists, and artisans. Among them there was Mir Haydar Khorezmi (late 14th - 1st half of the 15th centuries), who thanks to the patronage of Iskandar Sultan, wrote the poem “Gul and Navruz”. As Alisher Navoi noted, Iskander Sultan had invited Mir Haidar Khorezmi to his royal court to write by his order a poem titled “Treasury of Secrets” in the Turkic language.

One of the poets of the late 14th - early 15th centuries was Durbek, who was considered a major representative of Uzbek secular literature of that period. From among the legacy of Durbek, only the elaborated version (in two manuscripts) of a romantic poem titled “Yusuf and Zuleikha” into the Old Uzbek language has been preserved. The plot is based on the biblical legend about Joseph the Beautiful and the wife of the noble Egyptian Peterffy. Durbek completed the poem with living images, human experiences, and everyday details[37].

In the 15th century, one of the brightest representatives of literature was the medieval poet Lutfi (1366-1465), who wrote in the Chagatai (Old Uzbek) language. He lived almost all his life in Herat. Movlana Lutfi was known as “a shah of the eloquence of his period”, who glorified ideal love in the poem “Gul and Navruz”. He perfectly knew Persian and Uzbek languages. When he lived and served in Samarkand at the court of Temur's son Shahrukh, he

was close to the latter's son, the great scientist and future ruler of Samarkand Mirzo Ulugbek. Kemal Khujandi and Hafiz paid great attention to his works.

The work of Alisher Navoi (1441-1501) occupied a special place in the poetic art of Uzbekistan. With the full name of Nizomiddin Mir-Alisher, he was known under the pseudonym Navoi (melodic). He was a great Uzbek philosopher, poet, classic of the modern Uzbek language and literature. Alisher was brought up together with the children of the palace nobles since his father Giyasiddin Kichki served as an official in the Timurid state. A strong friendship connected Navoi with Sultan Hussein Baykaro, who later became his patron and like-minded fellow.

Already at the age of 15, Alisher became well-known as a poet and started to write his poems both in the Old Uzbek and Farsi languages. Alisher Navoi received his education in Herat and Samarkand. In 1469, he was appointed a seal keeper by the Sultan - his friend Hussein Baykaro. Against the background of his political activities (he was the chief vizier), Navoi paid special attention to creativity. The legacy that he left to his descendants was quite huge.

Among his literary works, "Khamsa" ("Quintuple") had a separate pillar, which was the first "answer" in the Turkic language to the same-named composition written by the Azerbaijani classic of Persian-language poetry Nizami Ganjavi. Navoi worked on it between the years of 1483-85 and it included five epic poems: "Confusion of the Righteous" (1483), "Leili and Majnun" (1484), "Farhad and Shirin" (1484), "Seven Planets" (1484) and "Iskander's Wall" (1485).

"Miracles of Childhood", "Rarities of Youth", "Curiosities of Middle Ages", and "Edification of Old Age" - these are the lyrical works of Navoi in the Turkic language, which he combined into the Divan. He included his best qasida, gazels, qyta, and rubais therein.

In total, Alisher Navoi left behind about 30 collections of poetries, major poems, essays, and scientific treatises. His work is included in the modern educational system of Uzbekistan and is considered a classic in the Uzbek language and literature.

Oral poetry of Uzbekistan, represented by proverbs and sayings, fairy tales, and *Dastans*[\[38\]](#) and *Latifa*[\[39\]](#) widespread in Uzbekistan, is a special pillar of the Muslim poetic art among the classics.

Fairy tales and dastans occupy a significant place, and among them, there are "Alpamysh-Batyr", "Korogly", "Kuntugmysh", "Shirin and Shokar", etc. There are also famous folklore works such as "Takhir and Zuhra", the cycle of "Rustamkhon" and others. The plots are stemming from classical works in Arabic, Perso-Tajik, or Old Uzbek languages, such as "Khosrov and Shirin", "Leyli and Majnun", "Yusuf and Zuleikha", etc.

In Uzbek folklore, there are labor, love, and ritual songs, some of which are already mentioned in the 11th century. Among them there are the lasting songs "*kushik*" and the wedding songs "*yor-yor*".

At the end of the X and the beginning of the XI century, for the first time in the history of the Turkic peoples, Tafsir (a commentary on the Koran) was translated into the Turkic language. During this era, the largest Turkic-speaking literary works appeared in MAWARANNAHR: "*Kutadgu bilig*" ("Blessed Knowledge"), written by Yusuf Balasaguni (d. 1015-16)[40], "*Divan*" by Ahmad Yassavi, and "*Khibatul hakoik*" ("Gifts of Truth") by Ahmad Yugnaki (Uzbek poet XII century)[41]. "Dictionary of Turkic dialects", compiled by Mahmud al-Kashgari (1029-1101), represented the main genres of Turkic folklore - ceremonial and lyric songs, fragments of heroic epics, historical traditions, and legends, more than 400 proverbs, sayings, and oral dictums[42].

The Islamization of Khorezm was also reflected in the creation of literary, scientific, and religious works and the translation of Arabic and Persian works into the Turkic language. The Quran with an interlinear translation into the Turkic language made in Khorezm and dated on January-February 1363 is kept in the Suleymaniyah library in Istanbul. The famous Khorezm Turkic poet, writer of the late XIII - early XIV centuries was Rabguzi. The main work of Rabguzi was "*Kissa-i Rabguzi*" ("Rabguz's Tales about the Prophets", 1309-10) consists of 72 tales on religious themes, mainly from the Bible and the Quran. The stories are didactic, they preach virtue and condemn sins[43].

Another famous Turkic poet of Khorezm was Hafiz Khorezmi, who wrote a poem, titled "*Muhabbat-name*" in the Turkic language in 1353. Shaybani-khan (1451-1510) was writing poetry under the pseudonym of "*Shibani*". The divan of Shaybani Khan's poems, written in the Central Asian Turkic literary language, is currently kept in the *Topkapi* manuscript collection in Istanbul.

During the existence of the Bukhara, Khiva, and Kokand khanates, a significant popular trend in literature was expressed by prominent representatives of democratic poetry of the 17th and 18th centuries, such as Boborakhim Mashrab (1653-1711), etc.

Khorezm, Fergana Valley, and Bukhara were also important literary centers in Central Asia. The Fergana Valley had its own famous poetesses - *Nodira* (1792-1842), *Uvaisi* (1780-1845) and *Makhzuna* (19th century). The traditional love theme and the formal excellence of the verses are characteristic of their works.

The literature of the first half of the 19th century was headed by the poets Mohammed Sharif Gulkhani, Makhmur, Agakhi, and others. The poetic heritage of the poet Munis Khorezmi (1778-1829) became a masterpiece of classical literature. He authored the pieces titled "Treatise on Literacy" (1804), as well as the historical "The Garden of Happiness"[\[44\]](#).

Another integral type of intangible wealth of the Uzbek people is Makom. This is a kind of vocal and instrumental music that originated in Central Asia and belongs to the ancient arts [\[Rajabov I., 1963\]](#). It has more than a thousand years of history. In the 9th-10th centuries, makom was a part of the social and cultural life of the countries of Central Asia and the East. It is noteworthy that makom is closely related to Central Asian classical Sufi music and is a legacy of the high-level traditions of palace art of the medieval East[\[45\]](#).

At all times, Uzbek makoms have been recognized for their deep semantic content, because melodies of makom convey the deepest feelings of a person. Makoms reached their peak and crystallized by the 18th century. In the 19th-20th century, it flourished in the form of three style traditions: Bukhara shashmakom (a cycle of 6 makoms), Khorezm makom, and Fergana-Tashkent makom[\[46\]](#). At the end of the 16th century, Bukhara became the capital of the Bukhara Khanate, which caused the rise of that genre; therefore, this period was considered classical for Shashmakom. Shashmakom was performed by both Muslims and Jews; it was considered one of the traditions uniting Central Asia.

The tradition of makom is passed down orally from teachers to students. Each makom is divided into sections: instrumental and vocal. Instrumental sections are performed by a soloist or ensemble; vocal sections by a soloist accompanied by one or several instruments[\[47\]](#). The main musical instruments of the makom are the string-plucked tanbur and the circled (doyra) tambourine. When performing makom, the following instruments were also used: (1) bowed ones - sato, ghijak; plucked - dutar, Kashgar rubab, tar, Chang; (2) wind instruments - nay, boloman, and others.

The classic 16th-century Shashmakom ensemble consisted of two tanburs, dutar, ghijak, and doyra, and also included 2-3 performers; this kind of composition is still typical. The duration of a composition of the Shashmakom genre can be comparable to that of a European opera. One makom can sound like 2-3 hours or more. In Bukhara shashmakom, one can find makom, there are about 40 vocal sections alone.

It should also be noted that the Shashmakom of Khujand, Samarkand, Kokand, and Tashkent were historically shorter than the Bukhara one.

**V. FINE ARTS: MINIATURE, CARPET WEAVING AND GOLD-SEWING**

The artistic fabrics of Mesopotamia in the early Middle Ages were among the greatest achievements of the applied arts of the East. Small pieces of silk found in the Mug castle explain the brilliant luxury of clothes, carpets, and decorative fabrics captured by the paintings of Balalyk-Tepe and Varakhsha[48], which is common at that time in Sogd and Tokharistan. The motives of the patterned decoration of fabrics in the wall and clothing paintings were pearl circles with a rosette inscribed in them, heads of bearded men, images of animals, heraldic signs, seven-lobed palmettes in a rhombic mesh of pearls, card suits, figurines of fish, and other signs or ornaments that had a conventional meaning[49].

In the 9th-10th centuries, the development of production created a single market in the Middle and Near East, where the richest traditions of the art of artistic fabrics of MAWARANNAHR manifested themselves. In Bukhara, next to the cathedral mosque, there was a famous weaving workshop of carpets, curtains, pillows, and prayer rugs. The fabrics were so good that even the visiting tax collectors from Baghdad collected taxes with sewn clothes and carpets. People from Syria, Egypt, and Byzantium came to buy products from Bukhara weavers. Even in Khorasan, where the weaving business was at its best, they were inferior in weaving before Bukhara. Silver fabrics exported from Samarkand gained greater fame[50].

The fine arts of the region reached a high rise at the end of the 14th century and the beginning of the 15th century. Development proceeded in two directions: monumental and miniature painting. The first was associated with architecture, interior design, and the plane of the walls; the second one with the art of the book and the decoration of the manuscript. The 15th century marks a brilliant stage in the development of miniature painting in the Middle East. This was the final stage of the manuscript creation[51]. In the field of book art, the so-called *murak'a* gradually shows up – such as separate sheets containing an example of magnificent calligraphy and miniature.

Samples of thematic landscape painting have survived to this day in rather a poor condition only in three Samarkand mausoleums: Shirin-bika-aka (1385), Bibi-khanym (1404), and Tuman-aka (1405). In the Shirin-bika-aka mausoleum, the painting is barely visible - here you can guess the contours of a wriggling stream, bushes, and trees with spreading branches on which magpies are sitting. The preserved colors are black, brick red, and bluish; the colorful range was primarily saturated and richer.



It is significant to note the Samarkand school of miniature, which began to show up in the XIV-XV centuries. In his crusade, Temur brought craftsmen and artists, among whom Khadja Abd-al-Khaya was the best specialist in painting and Divani inscription.

Kamoliddin Behzod (1455-1535) was one of the greatest painters of this era. Behzad's artistic authority was so lofty that Zakhiriddin Babur himself considered it necessary to mention him in his memoirs[52].

From the end of the XIV century, MAWARANNAHR became the main center of the creative forces of the Near and Middle East with the emergence of a new direction of art.

Many architectural ensembles of the XVI-XVII centuries were built in the "Kosh" style, that is, mirror reflections of each other. In addition, the ensembles of the tombs of Bahauddin Nakshband and Chor-Bakr in Bukhara, Khoja Akhrar in Samarkand, al-Kaffal ash-Shashi in Tashkent, Khoja Ilim Kan near to Kitab are monuments of the same style. Many manuscripts and collections were decorated with magnificent miniatures belonging to the great masters of MAWARANNAHR like Behzod, calligraphers Mir-Ali al-Hussein and Sultan-Mirek Kitabdar[53]. Further, it should be noted the brilliant master, calligrapher, miniaturist, and illuminator Mahmud Muzahib (worked in 1520-60s) who worked at the Bukhara court of Ubaydullakhan and Abdulaziz [Dahl's Explanatory Dictionary] and then decorated books of Navoi and Nizami[54].

From the era of the late medieval Renaissance, in addition to the monuments of Samarkand, Bukhara, and Shakhrisabz, Muslim historical monuments such as the Shaikh Khovand Takhur complex (15th century), the Yunuskhan mausoleum (15th century), the Barakkhan madrasah (1532) and the Sheikh Abu Bakr Muhammad al-Kaffal ash-Shashi mausoleum (XVI century) have reached us. It is also worth mentioning that the Mir-i Arab madrasah was separately built by Ubaydulakhan in Bukhara in 1535-1536. In the XVI-XVII centuries, in Bukhara and Samarkand many Muslim complexes and monuments, such as Labi-Khavuz (XVI century), Madrasah of Ulugbek, Sherdor, and Tillakori in Samarkand, were either erected or finalized. Thus, by the 16th century, the monumental ensemble in Registan Square was entirely completed.

Of particular note are the Khiva monuments, which were fully completed by the 19th century. Among them we should note the Zhuma mosque rebuilt in the 18th century, surrounded by a brick wall and standing on 212 wooden pillars-columns. Among them, only 24 early columns dating back to the X-XII centuries have been preserved. Also, the mausoleum of Pakhlovon Mahmud (1806-1825) belongs to the historical monuments of that period[55].

It should be noted that the calligraphers of MAWARANNAHR made their special contribution to the written art of the Muslim world. Along with the Moroccan, Cairo, Cordoba, and Arabian writing styles, the Samarkand, Bukhara, Khorezm, Herat/Khorasan, Tashkent and Fergana (later Kokand) styles of monumental and small-plastic epigraphy have become notorious in the Islamic world[56]. There are references to this in medieval historical sources. A special stage in the development of Muslim epigraphy falls in the era of Amir Temur and the Timurids, especially in Samarkand. One of the striking examples of such creativity of the Timurid era is the Shakhi-Zinda funerary complex. It was then that the Samarkand School of Epigraphy was founded, represented in samples of the art of marble carving[57].

The production of silk and woolen carpets is considered one of the oldest types of folk arts and crafts in Central Asia. Home carpet weaving is developing in the Fergana Valley, Nurata Intermountain, Kashkadarya, Surkhandarya, and Syrdarya velayats, as well as Karakalpakstan. Uzbek carpets are usually produced as long-piled, napless, and short-napped. Sketches of ancient national drawings, which traditionally carry Central Asian symbols, are carefully preserved in the carpet weaving centers.

Carpet weaving in Uzbekistan was one of the most ancient types of folk arts and crafts and has been widely known in Uzbekistan since immemorial times. A connoisseur immediately recognizes by the pattern and colors the products of Khiva or Samarkand, Kashkadarya, or Surkhandarya carpet-makers. Depending on the region, carpets vary in color and ornamentation. For example, in Samarkand carpets, black, red, and blue tones were more prevalent. Long-nap Bukhara carpets were dazzling with their multi-colored patterns. In the Fergana Valley, the carpets have red and blue stripes. Khiva carpets were mainly made from plant patterns. But the real glory of the Uzbek carpets was created by the Bukhara carpets. In past centuries, carpets were very expensive and served as a luxurious decoration in the chambers of rulers and nobles. Only the best wool sheep have been always selected to manufacture the Bukhara carpet. Since ancient times, it was believed that sheep wool carpets can heal diseases and can provide good health. There are many legends about the ornaments of Bukhara carpets. Carpets depicting the sun, *tumor* amulets, and argali horns have a magical meaning and are designed to protect their owner from harm and bring good luck and prosperity to the house[58].

Carpets are divided into several types according to the length of the pile: “*julhirs*”, “*gilams*” and “*palazs*” (rugs). Julhirs are long-pile carpets. This type of carpet has most of all preserved the traditions of monumental weaving, usually, it is woven with the help of stone and wooden spindles. Julhirs are most often found in Samarkand. *Gilams* are short-haired carpets.

Usually, gilams are reddish brown with simple geometric patterns, and they are widespread in Bukhara. Palazs (rugs) are lint-free carpets. These rugs are usually woven from cotton, kenaf, and wool. They are also subdivided into several types – “*koshma*”, “*arabi*”, “*gazhari*” and “*terma*”. Most often they can be found in Bukhara[59].

We know about carpet weaving in the Muslim Middle Ages thanks to numerous written sources. So, Narshakhi in the “History of Bukhara” mentions that there was a large workshop in Bukhara “*Bayt-ut-Tiraz*”, where, among other things, carpets were woven with epigraphic decor (*tirazi*)[60].

The information of Narshakhi is not the only evidence of the existence of carpet weaving in MAWARANNAHR, although this craft was still the prerogative of the inhabitants of the steppe nomads and villages [Ibid]. Whereas, they did not use tribal markers in carpets, although they retained pre-Islamic symbols (cosmogonic, totemic, and *tamga* signs) which is significant for nomads. The diaries of the Spanish ambassador Rui Gonzalez de Clavijo, who arrived in Samarkand to the court of Amir Temur in 1404, also mentioned the carpets embroidered with gold in the home of the Timurid nobility[61].

Thus, in Central Asian carpet-weaving one can see two main lines of development: the Oghuz-Turkmen (from the 10th century), which was dominated by the system of gels as identification of tribal “coats of arms”; and the Dashti-Kipchak (from the 16th century) decor of which reflected general nomadic worldview ideas. Both lines had much in common since they belonged to the same circle of steppe culture, and at the same time retained some differences in the specific assortment of products and manufacturing techniques. In general, the history of carpet weaving in Uzbekistan is the history of the shift of large styles associated with certain ethnic groups, their cult, and aesthetic preferences.

A special focus should be made on the art of gold embroidery in Uzbekistan. The decoration of fabrics with embroidery has been known in the region for a long time. Rui Gonzalez de Clavijo also noted in his diaries that at the court of Amir Temur, there were embroideries and gold embroidery of a fairly high level[62]. Thus, by the 15th century, the art of gold embroidery was well-developed in Samarkand. Since then, gold embroidery moved to Bukhara to serve the palace of the Emir and his high-ranking entourage[63].

Thus, applied art in Uzbekistan had its own distant historical roots dating back several millennia ago, and consistently absorbed the Turkic and then Islamic elements.

## CONCLUSION

Widespread Islamization in the MAWARANNAHR made the population of the region not only adherents of Islam but flag-bearers in many areas of Islamic science and culture, but flag-bearers in many areas of Islamic science and culture, recognized throughout the Muslim world.

It should be emphasized that along with a huge contribution to Islamic culture, the talents of MAWARANNAHR made a huge contribution to the development of Islamic civilization and culture. Here for the first time, such organizations of scientific activity in the form of an *academy* began to operate - the Academy of Ma'mun in Khorezm, the Academy of Ulugbek, etc.

The first libraries began to appear on the bases of madrasas, which became an integral part of academic science. Thus, for the first time, a balanced teaching of secular and religious knowledge was laid in educational institutions, which gave impetus to the flourishing of Islamic sciences and arts in the Timurid era.

Thus, it can be argued that the fertile land of MAWARANNAHR gave the world-famous cultural figures and thinkers. Architects, poets, and musicians not only promoted art in the region itself but also glorified MAWARANNAHR throughout the Muslim world. Philosophers and encyclopedic scientists, statesmen, with their natural science, logical, religious-philosophical research, their state-building activities in the region, made a great contribution to the development of the world and Muslim civilization. Almost all the cities of this region became famous thanks to their glorious sons, immigrants from Khorezm, Samarkand, Bukhara, Nasaf, Tashkent, Fergana, Margilan, Termez, Shakhrisabz, and other places. They distinguished themselves in public administration, science, poetry and music, culture, theology, medicine, military affairs, architecture, and fine and applied arts.

Studying the legacy of their ancestors, modern scientists of Uzbekistan admire their perseverance, purposefulness, versatility, and genius of minds. At present, purposeful work is underway in Uzbekistan to further reveal glorious names and knowledge of their role in the development of science and Muslim culture. It is possible only briefly to talk about their deeds as this would require a large separate scientific study.

Thus, the land of MAWARANNAHR (present-day Uzbekistan) became, without exaggeration, one of the main centers for the development of Islamic sciences and Islamic culture and made a significant contribution to the development of universal human and Muslim civilizations.

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