

## ISLAMIC CIVILIZATION'S CONTRIBUTION TO THE WORLD AND THE EUROPEAN RENAISSANCE

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### **Abstract**

*This article explores the Islamic Civilization's contributions to world history and especially the history of Western Civilization on the threshold of the European Renaissance. Both civilizations had significant achievements in world history ranging from trade, science, medicine, technology, architecture, art, and literature. It is a fact that the development of world history is interconnected. Every civilization and culture, more or less, has an intellectual endowment that foregrounds the transformation of the world. This article aims at two things: to demonstrate the influence of Islamic civilization on the development and process of human culture over centuries and to support the claims that the Islamic world has excellent contributions to the European Renaissance. Islamic Civilization did its endowments to the world in so many fields, but to limit the study, only some of its important achievements are selected here to discuss. These are the fields including science, medicine, architecture, arts, and literature. This study also attempts to discuss how the translation of the Greek and Arab texts contributed to the developments in the European Renaissance.*

**Keywords:** Islamic Civilization, European Renaissance, Culture, Development, Changing

### **1. Introduction**

Islamic Civilization had significant achievements in world history ranging from trade, science, medicine, architecture, art, and literature. It has a vast intellectual endowment that foregrounds the transformation of the world and the European Renaissance. Spreading over great geography from Asia and the Middle East to North Africa and Spain, it has significant influences on the development and progress of human culture over centuries. Therefore, this study aims to discover the contribution of Islamic civilization to the world and the European

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Renaissance. The discussion here is divided into four sub-units: Arabic and Persian Literature, The Sciences and Medicine, The Arts, and The Islamic Impact on European Renaissance. The association between sub-units is that each indicator ensures the Islamic contributions to the world at cultural and intellectual levels.

## **2. Arabic and Persian Literature**

The two most common languages, Arabic and Persian, have dominated Islamic literature and art over centuries. Each language has distinctive features, forms, metaphors, symbols, and motifs that made the Arabic- Islamic world rich and unique. Before Islam, there was a pre-Islamic literary tradition in the region, including various genres such as poetry, tales, and oratory. The tribal themes and stories which combine the authentic and historical images are pervasive. According to the great historian Ibn Khaldun “Al-Faraj’s *Book of Songs* comprises all that [Arabs] had achieved in the past of excellence in every kind of poetry, history, music, et cetera.” (Essa and Ali, 2012, p: 5). Adding to the tradition of poetry, in the Abbasid Era, more prose studies were also started to be written in the Arabic language. The most famous one even today is *A Thousand and One Nights*.

In the following years, with the rise of Islam in the region, Islam has become a significant influencer in Arabic literature and art. For instance, Muslims’ holy book, Quran, is the most critical religious guidance for Muslims” (Essa and Ali, 2012, p:6). After the death of the Prophet Muhammed, “the compilation of Hadith, known as the Sunnah, which means “the way of the Prophet,” also become another crucial religious guidance for the Muslims

Persian literature of Iran has been another vital contributor to Islamic literature and art. Especially in the golden age of Persian literature, the Iranian scholars had given many successful art pieces. The best Persian poet known in history was Rumi. He was the most outstanding representative of Persian literature to the world. He studied the Quran and Islam in his works. He lived according to Islam’s most fabulous essences, so he was regarded as the “Supreme Mystic” and “Sufi of the Celebration” for Muslims. Rumi’s high esteem has continued in both Islamic and non-Islamic civilizations over centuries. Moreover, the world showed the same respect for another Iranian poet, “Firdausi, whose *Shahnama* totals around 60,000 couplets and is considered the most outstanding of Persian epics” (Essa & Ali, 2012, p:6).

Indeed, these two dominant languages, Arabic and Persian, have influenced both the Islamic and non-Islamic regions' language and literature in Asia and the Middle- East. For example, "by the end of the 15th century, the Persian language and literature had spread to India and influenced the language and literature of Muslims living there. This led to the creation of a new Indian language called Urdu, which descended from Indo-Aryan (Sanskrit) (Essa and Ali, 2012, p:9).

On the other hand, for the first time, the Islamic civilization's language, literature, and materiality were reached to another part of the world, Europe, under the discourse, Orientalism with the translation of *Avesta* by Anquetil's in 1759. This was the first distinction between Islamic civilization and European civilization in literature. The most influential qualities associated with the East appeared in Aeschylus's *The Persian*, the earliest Athenian play extant, and in *The Bacchae of Euripides*, the very last one extant" (Said, 2003, p: 56).

When nothing of any natural intellectual history had taken place in this part of the world since the destruction of Alexandria Library hundreds of years before the emergence of Islam, especially during the Abbasid Era, the Islam Civilization hosted the flourishing of literature and wisdom with real intellectual consequences to the world history (Khalili, 2011, p:45,46). All these mean that the Islamic civilization and its literature, with its long history and extraordinary richness, have contributed to other cultures and regions over centuries.

### **3. The Sciences and Medicine**

In the Abbasid period, advances in science and medicine flowered, especially in the city of Baghdad- the city of knowledge. Muslim scholars translated the Greek, Hindu, and Persian manuscripts in the eighth and ninth centuries. In the following centuries, Western and Eastern knowledge melted in one pot and provided new developments for each civilization. Thus, it is claimed that "the translation movement encouraged by Muslim rulers played a significant role, and the Islamic sciences went on to influence the Renaissance" (Essa and Ali, 2012, p:3).

With the emerge of Islam, for example, the old cities such as Jundishapur, Cairo, Damascus, and Haleb became science centers in this part of the world over centuries. The mosques and madrasas were the prominent knowledge places. For instance, the first university was established in Cairo. It was Al Zahra Mosque Al-Azhar University. A lot of scholars such as Ibnul Heysem gave lectures there. Heysham, known as the first philosopher, combined Greek philosophy with experimental philosophy and science. Some other prominent scholars and

their achievements in Islam civilization include the works of the first Arab philosopher Abu Yusuf in chemistry and Ibn Ishak El- Kindi in science. In mathematics, as well, with Muhammad ibn Musa's algorithm and development of algebra, geometric solutions, degree measurements, and trigonometric tables" (Essa and Ali, 2012, p:3), there happened lots of inventions. Besides, in Haleb, Arab-Syrian polymath Ibn-al Nafis's contributions to science, medicine, philosophy, and biology were the milestone in the period. He was also the first founder of pulmonary circulation of the blood. Another famous Andalusian Muslim scholar Ibn Rushed, or Averroes, influenced the West in philosophy, and [he was] excelled as a judge, physician, and author of a comprehensive medical encyclopedia. (Essa and Ali, 2012, p: 4). Al- Farabi, who combined Islam and Greek philosophy in his works, and El-Biruni, who smoothed the path of Hindu astronomy in his studies, were important figures as well. Finally, an astronomer, al-Farghani, with his invention- the Nilometer, a device that measures the water level in the Nile, is among the scholars who destined the European Renaissance (Khalili, 2011, p:102). Khalili states that his legacy captures the interest of Dante, an Italian writer and poet. In his famous work *Divine Comedy*, as Khalili claims, "[Dante] derived most of the astronomical knowledge he included [...] from the writings of al-Farghani (Khalili, 2011, p:102). Similarly, another Italian scientist Christopher Columbus also provided al-Farghani's project Shammasiyya in his well-known voyage (Khalili, 2011, p:102). Khalili claims that al-Farghani's "treatise on the astrolabe still survives and provides the mathematical principles of astrolabe construction" (Khalili, 2011, p:102).

All in all, both Arab and non -Arab Muslims have made considerable contributions in science and medicine with Greek, Hindu, and Persian heritage to world history and its contributions to the European Renaissance.

#### **4. The Arts**

Islamic civilization is the most significant contributor to art culture outside the Arab world with magnificent monuments and unique decoration techniques in architecture, rich traditions in handiwork, outstanding examples of calligraphy, and marvelous miniatures in painting. Besides, with having perfect city construction and successful architecture tradition, Islamic civilization has made an indelible impression in the world over centuries. The Muslims started building beautiful monuments such as mosques, madrasahs, domes, palaces, and caravanserais after Islam's emergence. Islam architecture can be seen in regions ranging from Asia and the Middle East to North Africa and Spain.

In the Arab world, Mecca, Medina, Jerusalem, and Kairouan are considered the holiest cities in Islam. Inside each city, there are many old mosques, madrasahs, and domes. In Mecca, there is a mosque Ka'ba. In there, Prophet Muhammed's birthplace is housed around a black stone; millions of Muslims fulfill the pilgrimage: Hajj. The second most spiritual place for Islam is Medina. It is a city that hosts the burial site of the Prophet Muhammed. There are three oldest mosques in the city: Al-Masjid and Nabawi (The Prophet's Mosque), Masjid al-Qiblatain, and the Quba Masjid –with domes and minarets. Al-Masjid and Nabawi is the resting place of the Prophet Muhammed with a large green dome. It is considered the most outstanding example of Islam, with its Arabesque architecture.

Similarly, inside the walled city, Kairouan, one of the oldest mosques in the Islamic world, lies The Mosque of Uqba from the seventh century. There are other great architectural examples outside the region. In Spain, The Great Mosque of Cordoba and Alhambra, in North Africa Tlemcen's Grand Mosque and the Mosque, Madrasa, and Tomb of Abu Madyan, in India: Tac Mahal, Grand Mosque and Jama Masjid, in Turkey the Süleymaniye and Selimiye Mosques and Topkapı Palace. These constructions are architecturally awe-inspiring buildings, and they all have religious meanings. Even though there is no clear rule on constructing the mosques in the Quran, except for the obligation to perform prayers, all mosques represent a kind of Muslim religious institution with their physical and spiritual essence.

Besides, the mosques encompass all forms of Islamic art. These buildings are spiritual, bright, colorful, and magnificent, rich in Arabesque architecture, Islamic calligraphy, and geometric designs. Thus, the architecture in Islam and mostly the architecture of the mosques are the most creative and unique pieces of art. According to Grabar, among them, the hypostyle mosque is ideally suited to the purposes of the new faith and the society (Grabar, 1978, p:125), and they are also the “most dominant form of Ealy Islam” (Grabar, 1978, p:127). In the following centuries, the style has been used by other civilizations in architecture.

In these establishments, there also appeared three essential decoration techniques, as Grabar listed “mosaics, paintings, and sculpture” (Grabar, 1978, p:160). The best monumental sculpture examples are Khirbat al-Mafjar, Qasr al-Hayr West, and Mshatta. Indeed, there is nothing new in the use of mosaics and paintings in the decoration. The standards and the system are nearly the same as in the Mediterranean. However, Grabar highlights the variety of the themes in the decorations. He states:

the decoration is, at first glance, quite overwhelming. Some monuments look like enormous bric-a-bracs of motifs and themes whose actual signifying precision is difficult to determine. [...] (the) original impression is all more striking when the decoration is compared as a whole. [...] the key question is whether this impression is valid and whether the decoration of these places does indeed have an iconographic ambiguity, an ambivalence of meaning [...] that we are simply not yet able to understand the structure of the visual language utilized by early Muslim princes (Grabar, 1978, p:161).

Accordingly, decoration in these establishments would be mainly part of symbolic meaning and its artistic and practical significance. To sum up, such establishments perfectly portray the characteristics of Islam religion and culture.

Similarly, another art form: Islamic miniature painting, has reached its finest with the Persian, Mughal, and Turkish miniatures. Their detail is meticulously and exquisitely rendered. The miniature paintings also feature the other Islamic arts, such as buildings (as seen in the architecture examples above), calligraphy, gardens, carpets, and clothes” (Essa and Ali, 2012, p:9).

The other unique form of art in Islam is writing. The most famous and ordinary decoration as a motif in mosques is the various forms of Arabic texts. These writings are primarily including extracts from the Quran (Grabar, 1978, p:135). Thus, as Grabar asserts, Arabic writing as a way of decoration means something more:

It was a subject matter restricted to the Muslim or Muslim ruled community and thereby expressing concrete meanings belonging to the members of the faith. It can appropriately be considered as an invention inspired by Islam (Grabar, 1978, p:135).

Writing, adding to its aesthetic and religious function in Islam, becomes an essential tool to convey a message and thought. As the Word is sacred for Muslims, a great variety of writing has occurred in Muslim art. That is the art of calligraphy. It is unique with its few artistic techniques. As early copies of the Quran were written in a slanting script. The Quranic script developed in Makkah and Madinah in the first Islamic century” (Essa and Ali,2012, p:9). These copies can be regarded as the first example of calligraphy. Thus, calligraphy should not be considered only as a way of writing. As Grabar states, “it was the most important impulse for the formulation of a whole art of the book with a host of ancillary techniques [and it indicates] the Muslim’s most sacred personal experience” (Grabar, 1978, p:136).

All these show that the architecture in Islam, especially the mosques with the combination of all other art forms ranging from mosaics to calligraphy, encompass the Islamic arts, which are artistically perfect and unique in history.

## **5. The Islamic Impact on European Renaissance**

In the eighteenth century, Europe lived its darkest ages in history with the decline of Rome. In contrast, with the rise of Islam and developments in science, medicine, philosophy, art, and literature, the East lived its golden ages. Thus, it can be stated that European civilization primarily benefited from the developments in literature, art, philosophy, science, and medicine in East and Islam. All those learnings provided the birth of the European Renaissance later. This does not mean that they were the single influencer to the European Renaissance. There were a significant number of other factors, such as the invention of the printing press likewise the paper mill in the Abbasids, which provided rapid changes and very fast transmissions of new knowledge comparing to the earlier times (Al-Khalili, 2011, p.234).

The rich knowledge and wisdom of the Islamic Civilization and the East were transferred to the West through academic centers in Spain and Italy. At this point, Khalili (2011) asks the question of why the Renaissance emerged firstly in Italy, not somewhere different in Europe. He (2011) disagrees with common sense that the Renaissance began in Florence because its giant thinkers such as Leonardo, Michelangelo, and Botticelli were born in Tuscany at about the same time. According to Khalili:

these great men were able to rise to prominence only because of the prevailing cultural conditions, just as ninth-century Baghdad allowed the emergence of a scientific movement led by men such as al-Kindi and al- Khwarizmi (Al-Khalili, 2011, p.234).

Thus, the relation between the Renaissance centers Italy, Spain and their relation to Islamic Civilization has been considered. The transformation from East to West is quite apparent. According to research, East to West's old learnings and progressive ideas permeated two most common ways: one is during the Crusades, the other is the translation of sources by scholars, travelers, and missionaries.

Anquetil's translation of the *Avesta* in 1759 illustrates the fact that "for the first time, the Orient was revealed to Europe in the materiality of its texts, languages, and civilization" (Said, 2003, p: 77). This was the Europeans first realization of Islamic civilization, so it is not wrong to claim that the first most greatly influenced area in the West was Islamic literature and art. In the following years, there appeared many translations from Arabic languages, including the holy book Quran. "Different from other translation methods, George Sale's translation of the Quran, let the emerge of the early phase of the comparative disciplines



(philology, anatomy, jurisprudence, religion), which were to become the boast of the nineteenth-century method “(Said, 2003, p:117). All these improvements paved the way for European Renaissance.

The other significant contribution of Islam to the Western Christian world was the translation of the Arabic and Greek (for some authorities, Europe received Greek philosophy from the Islamic civilization) materials in philosophy. “By the close of the 13th century, Arabic [...] philosophy had been transmitted to Europe. Still, Christian Europe was reluctant to recognize Islamic learning and tended to attribute content origins to the Greeks” (Essa and Ali, 2012, p:9). However, through the medium of Spain, once again, Europe encountered the works and vision of Islam and Greek works. For example, the Islam philosopher Al-Farabi, and his Islamic contribution to Christianity also influenced the scholars, Albertus and Anquetil, so intensely that Al-Farabi’s works were used to reconciling Aristotle and Islamic philosophy with Christianity (Essa and Ali, 2012, p:9) for the first time by Anquetil. The other Islamic philosopher that influenced Anquetil and became the authoritative figure in his works was Ibn-Sina. All other translations made in Spain and transferred to Italy “began to cause considerable intellectual ferment in Europe as a whole. Perhaps the most provocative controversy was the work of Ibn Rushd” (Goddard,200, p:115). It is interesting that Anquetil “argued powerfully against other aspects of both Greek and Islamic philosophy, [but] particularly some aspects of Aristotle’s thoughts [were] mediated by Ibn Rushd (Goddard, 2000, p:116).

Of course, the influence of the Arabic world on the European Renaissance and its giant scholars’ can be encountered in other scientific works and achievements. For example, some of the European scholars who were influenced by Islamic counterparts:

Roger Bacon, whose works on lenses relied heavily on his study of Ibn AL Haytham’s *Optics* and Leonardo of Pisa (Fibonacci), introduced algebra and the Arabic numeral characters after being strongly influenced by the work of al-Khwarizmi. Some historians have even argued that the Great German astronomer Johannes Kepler may have been inspired to develop his groundbreaking work on elliptical orbits after studying the work of twelfth-century Andalusian astronomer al-Bitrüji (Alpetragius), who had tried and failed to modify the Ptolemaic model (Khalili, 2011, p:230).

Besides, other prominent transmissions are: “in the mathematics, and in the vocabulary of many European languages: the numerals which are used today in the West known as Arabic numerals, since they were transmitted to Europe from the world of Islam” (Goddard, 2002,



p:117). Similarly, more than 600 English words, including the vocabularies from military, science, and food items, were taken from the Arabic language.

Moreover, Islamic influence can be seen in the works of art and literature in the following years. As such, the Italian poet Dante, in his masterpiece *Divine Comedy*, the Italian artist Michelangelo, in his painting on the ceiling of the Sistine Chapel in Rome and the like. Khalili asserts (2011) that many Latin translations of Islam scholars, including Ibn Sīna, Ibn al-Haytham, Ibn Rushd, al-Rāzi, al-Khwārizmi, in European universities. Thus, it is not interesting that they have influenced their counterparts in Europe.

Interest in the translation of Arabic works has also continued well into the eighteenth century (Khalili, 2011, p:230). Indeed, the influence and enthusiasm toward the East and Islam were mostly synonyms with exotic and the mysterious. This imaginary vision has been encountered in the works of Western writers and painters for many years. For some critics, these works result from “Europe’s collective daydream of the Orient” (Said, 2003, p:52). In other words, the European imagination has flourished extensively from this daydream of the Orient. One good example of how” the dramatic form and learned imagery come together in the Orientalist theater is Barthelemy d’Herbelot’s *Bibliothèque Orientale*” (Said, 2003, p. 63). Perhaps, d’Herbelot’s works are the earliest and the most influential ones, but in the following years, there appeared some other Orientalist projects, such as the studies of William Jones.

Interestingly they are nearly the same. According to Edward Said, the collection of Volney and his assessment of the Orient in his works “*Voyage and Considerations* were effective texts to be used by any European wishing to win in the Orient” (Said, 2003, p:81). As Said argues (2003), such works are well-intentioned and often provocative not only for the scholarships and the conquerors but also for the translators. Indeed, the translation of the Oriental texts provides a new form of teaching, the study of Orientalism in European institutions for over centuries. Some writers greatly influenced Eastern Civilization under Orientalist projects such as Hugo, Goethe, Nerval, Flaubert, and Fitzgerald. Edward Said’s asserts:

Renaissance historians judged the Orient inflexibility as an enemy, those of the eighteenth century confronted the Orient’s peculiarities” somehow experience “with some detachment and with some attempt at dealing directly with Oriental source material” there is no doubt that [...] such a technique helped a European to know himself better” (Said, 2003, p:117).

Obviously, “Western civilization has [also] benefited from the achievements of the Islamic civilization, and Islam exerted a large cultural impact on Christendom (Essa and Ali, 2012, p:9). With the translated works of Arab to Latin and other European languages, the enormous learnings of the West were taken from the Islam world, as well as the translated versions of the Ancient Greek sources, both of which had a significant impact on the birth of European Renaissance and the rise of the modern Western civilization

## **6. Conclusion**

All these mean that there are many outstanding achievements and developments in the Islamic world over centuries that ensure that Islam is one of the most influential civilizations in world history. Spanning over a wide area enables a continuum between past to present as if it was a river running from East to West over the centuries. There is no doubt that it also has excellent contributions to the European Renaissance with science, arts, literature, and medical developments. Moreover, Classical resources have come to light with Islamic scholars’ great efforts. Unsurprisingly, the fact is that Islamic civilization, through an objective lens, stands as a forward civilization in world history from the beginning.

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