

The global civilization created by Islam

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Abstract: *Islam, as a religious ideology, is one of the most durable civilizations with the greatest impact on the world, which is based on a unity that stands completely against any racial or ethnic discrimination. Major racial or ethnic groups as Arabs, Iranians, Africans, Indians, Chinese, etc embraced Islam and contributed to the building of Islamic civilization. This essay, discusses generally the global civilization created by Islam, the characteristics of Islamic civilization and its basis, importance of education and learning in the development of Islamic civilization, the significant impact of the Islamic civilization upon Europe in a number of different ways during the middle ages. At the end of the essay, the writer has proved that the scientific revolution could not have occurred without the help of the Muslims considering the fact that Muslims had numerous advances in various fields like medicine, physics, optics, etc. He then lists some of the medieval European scholars who were influenced by the writings of the Islamic scholars.*

Keywords: *global civilization, Islam, Islamic civilization, characteristics (features) of Islamic civilization, Islamic scholars, the Middle Ages, Scientific Revolution, Renaissance*

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"Thus, We have appointed you a middle nation, that you may be witnesses upon mankind." (The holy Qur'an, 2:143)

What gives birth to a civilization is a belief system according to which specific ways of life appear in a given polity. These specific ways of life of a large social group, then, produce specific way of organizing social, political and economic activities of that polity; this, in turn, necessitates the establishment of institutions to carry out the various tasks, which fulfill the commandments, customs and rites originating from the set of beliefs held sacred by that polity.

By the appearance of Islam, the landmarks of earthly and heavenly lives became clearly distinguished. By divinity, humanity achieved justice, equality, dignity and freedom. Allah alone is worshipped; the Muslim is led and submits to the orders of Allah alone. Allah is also the owner of everything. Islam was neither limited in place, national in scope, restricted to its own followers, nor for a special class. It was rather for all humans, with a broad horizon, establishing human brotherhood.

"O mankind! Lo! We have created you male and female, and have made you nations and tribes that ye may know one another. Lo! The noblest of you, in the sight of Allah, is the best in conduct". The holy Qur'an (49:13).

With the advent of Islam and the spreading of its light over the eastern states, this spirit was bolstered and augmented. It worked to unite individuals of the Islamic State, despite their races and origins. Consequently, Islam, as a religious ideology, an approach to life and a unifying force, managed to establish

a human unity based on freedom, equality and tolerance; acting to abolish political barriers between various countries extending over three continents to give them a certain unified form.

Islam was destined to become a world religion and to create a glorious civilization that stretched from one end of the globe to the other. Already during the early Muslim caliphates, first the Arabs, then the Iranians, and later the Turks set about to develop classical Islamic civilization. Later, in the 13th century, both Africa and India became great centers of Islamic civilization. Soon after Muslim kingdoms were established in the Malay-Indonesian region, while Chinese Muslims flourished throughout China.

It was not the warlike prowess of the early Muslims which enabled them to conquer half the then known world, and convert half that world so firmly that the conversion stood unshaken to this day. It was their righteousness, humanity, and their superiority in those respects over other men.

The Muslims intermarried freely with the conquered people of Egypt, Syria, Iraq, Iran, and all North Africa - none of their conquerors had ever done before. The advent of Islam brought them not only political freedom but also intellectual freedom. The result was what might be expected from so great a liberation of peoples who had never really had a chance before - a wonderful flowering of Islamic civilization, which in the next generations showed its fruits in science, art, and literature.

The simple, rational, and Arab character of Muslim government passed with the last of the Omayyids to Spain; the caliphate of the East was transferred to Abbasids, who were already under the Iranian's influence, and the capital was removed from Syria to Iraq. The city of Baghdad - a much more glorious Baghdad than the present city of the name, a

triumph of town planning, sanitation, police arrangement, and street lighting - sprang into existence.

Nominally, the Abbasid caliphate in Baghdad lasted for full five hundred years, but for the last three hundred and fifty years the real sovereign power had passed to the Turks. There was change of rulers, but the civilization remained that of the Islam. Indeed the condition of the common people throughout the Muslim empire remained other people in the world in education, sanitation, public security, and general liberty.

Its material prosperity was the envy of the Western world, whose merchant corporations vied with one another for the privilege of trading with it. In other countries, even in Europe, in the same period, the peasantries were serfs, bound to the land they cultivated; the artisans had still a servile status, and the mercantile communities were only just beginning, by dint of cringing and of bribery, to gain certain privileges. In the Muslim realm, the merchant, the peasant, and the artisan were all free men.

No color or race prejudice existed in Islam. Black, brown, white, and yellow people mingled in its marts, mosques, and places upon a footing of complete equality and friendliness. It was a civilization in which there were differences of rank and wealth, but these did not correspond to class distinctions as understood in the West, much less to Indian Hindu caste distinctions. No man in the cities of the Muslim Empire ever died of hunger or exposure at his neighbor's gate. A noble feature of Islamic civilization was its cleanliness. In every Muslim town, there was a public hot bath, and public fountains for drinking and washing purposes.

Islam is a religion for all people from whatever race or background they might be. That is why the Islamic civilization is based on a unity which stands against any racial or ethnic

discrimination. Such major racial and ethnic groups as the Arabs, Iranians, Turks, Africans, Indians, Chinese, and Malays, in addition to numerous smaller units embraced Islam and contributed to the building of Islamic civilization.

Moreover, Islam did not oppose learning from the earlier civilizations and incorporating their science and culture into its own world view, as long as they did not oppose the principles of Islam. Each ethnic and racial group, which embraced Islam, made its contribution to the Islamic civilization. The sense of goodwill was so much emphasized that it overcame all local attachments to a particular tribe, race, or language--all of which became subservient to the universal brotherhood of Islam.

The global civilization thus created by Islam permitted people of diverse ethnic backgrounds to work together in cultivating various arts and sciences. Although the civilization was Islamic, even non-Muslim "people of the book" participated in the intellectual activity whose fruits belonged to everyone.

The global civilization created by Islam also succeeded in activating the mind and thought of the people who entered its fold. Because of Islam, the nomadic Arabs became torchbearers

of knowledge and learning. The Iranians, who had created a great civilization before the rise of Islam, produced much more science and learning in the Islamic period than before.

The same can be said about the Turks and other peoples who embraced Islam. The religion of Islam was itself responsible for not only the creation of a world civilization in which people of many different ethnic backgrounds participated, but also it played a central role in developing intellectual and cultural life, on a scale not seen before. For some eight

hundred years Arabic remained the major intellectual and scientific language of the world. During the centuries following the rise of Islam, Muslim dynasties ruling in various parts of the Islamic world bore witness to the flowering of Islamic culture and thought.

The Characteristic of Islamic Civilization

The symbol of Islamic civilization is the holy Ka'aba, the stability of which symbolizes the permanent and immutable character of Islam.

Once the spirit of the Islamic revelation had brought into being, out of the heritage of previous civilizations and through its own genius, the civilization whose manifestations may be called Islamic, the main interest turned away from change and adaptation.

The arts and sciences in Islam are based on the idea of unity, which is the heart of the Muslim revelation. Just as all genuine Islamic art, whether it be the Alhambra or mosque in Paris or London, provides the plastic forms through which one can contemplate the Divine Unity manifesting itself in multiplicity, so do all the sciences that can properly be called Islamic reveal the unity of Nature. One might say that the aim of all the Islamic sciences and, more generally speaking, of all the medieval and ancient cosmological sciences is to show the unity and interrelation of all that exists, so that, in contemplating the unity of the cosmos, man may be led to the unity of the Divine Principle, of which the unity of Nature is the image.

Islamic civilization, as a whole, is like other traditional civilizations, based upon a point of view: the revelation brought by the holy Prophet Muhammad (p.b.u.h.) is the

"pure" and simple religion of Adam and Abraham, the restoration of a primordial and fundamental unity. The very word Islam means both "submission" and "peace" or "being at one with the Divine Will."

This was especially true about the sciences of Nature, because most of the ancient cosmological sciences -- Greek, as well as Chaldean, Iranian, Indian, and Chinese -- had sought to express the unity of Nature and was therefore in conformity with the spirit of Islam. Encountering them, the Muslims adopted some elements from each most extensively, perhaps, from the Greeks, but also from the Chaldeans, Indians, Iranians, and perhaps, in the case of alchemy, even from the Chinese.

They united these sciences into a new corpus, which was to grow over the centuries and become part of the Islamic civilization, integrated into the basic structure derived from the Revelation itself.

The lands destined to become parts of the medieval Islamic world -- from Transoxiana to Andalusia -- were consolidated into a new spiritual universe within a single century after the demise of the holy Prophet of Islam.

Importance of Education in the Development of Islamic Civilization

The Muslim universities of those days led the world in learning and research. All knowledge was their field; and they took in and gave out the utmost knowledge attainable in those days. They were probably the most enlightened institutions that have ever been a part of a religion. Following the commands and traditions, Muslim rulers insisted that every

Muslim child should be educated, and they gave considerable support to institutions, and learning in general.

This contributed largely with to make elementary education almost public among the Muslims. It was this great liberality, which the Muslims displayed in educating their people in the schools, which was one of the most potent factors in the brilliant and rapid growth of Islamic civilization.

Every place, from the mosque to hospital, was a place of learning. Scholars also addressed gatherings of people in their own homes. The mosque played a very great part in the spread of education in Islam. Once established, such mosques could develop into well-known places of learning, often with hundreds, sometimes with thousands of students, and frequently contained important libraries.

Teaching and learning in most large mosques became a fully-fledged profession, and the mosque school took on the semblance of a university later on. So important centers of higher education, indeed, that many of them still exist today as the oldest universities in the world. Among them are Al-Zaytuna in Tunisia, Al-Azhar in Egypt, and Al-Qarawiyyin in Fez, Morocco.

The scholars of Asia, Africa, and Europe held the universities of Granada, Seville and Cordoba in the highest level. In the ninth century, in department of theology at Cordoba, alone, four thousand students were enrolled, and the total number of students of the University reached almost eleven thousand. In addition, on the eve of the British occupation, in Al-Azhar, were already 7600 students and 230 professors.

In the early Islamic era, the mosque was used for teaching of the Islamic sciences and literary arts. After the mid ninth century, the legal courses became more important. Scientific

subjects were also delivered, and included astronomy and engineering at Al-Azhar, medicine at Al-Azhar and the mosque of Ibn Tulun in Egypt and at the Qarawiyyin.

Islam contributed Europe and subsequently the rest of the world, with its system of education, including universality and its methods of teaching and granting diplomas.

The influence also came in the form of the many translated books of the Islamic scholars, which formed the core of European education in their first universities (Montpellier, Bologna, Paris, Oxford...), which all were founded in the twelfth-thirteenth centuries. [1]

"Jamia" means co-existence of a mosque and a school, even when they are in separate buildings.

The "Ulama" were the most enlightened thinkers of their time and saved the Islamic culture from deterioration in different ways. The 'Ulama sought for knowledge "even though it were in China!"

Islamic Civilizations' Impact upon Europe

The Western writers have often used the word Arabs or Muhammadans for Muslims, and "the Arabic civilization" for Islamic Civilization. In other instances, the words Saracen and Moor are also used for the Muslims (Arabs and non-Arabs) from various parts of Europe, Africa, Arabia and Asia. During 800-1500 C.E., all scientific works were written in Arabic. It is only after colonization of Muslim lands that this practice became less prevalent and in many instances was eliminated.

During the Middle Ages, the Islamic World had a very significant impact upon Europe, which in turn cleared the way for the "Renaissance and the "Scientific Revolution". In the

Medieval age, Islam and Muslims influenced Europe different ways.

Cities like Baghdad, Damascus, Cairo, and Cordoba were the centers of civilization.

These cities were flourishing, and Muslim scientists made tremendous progress in applied, as well as, theoretical Science and Technology. In Europe, however, the situation was much different. Europe was in the Dark Age.

Islamic contributions to science were rapidly translated and transferred from Spain to the rest of Europe. Ibn Haitham's works on Optics (in which he deals with 50 Optical questions put to Muslim scholars by the Franks), was translated widely. The Muslims discovered the principle of Pendulum, which was used to measure time. Many of the principles of Isaac Newton were derived from former Islamic scientific contributions. In the field of chemistry, numerous Islamic works were translated into Latin. One of the fields of study in this area was alchemy. The Muslims by exploring various elements developed a good understanding of the matter. Jabir Ibn-Hayyan (Geber) was the leading chemist in the Muslim world; some scholars link the introduction of the 'scientific method' back to him. A great number of terms used in chemistry such as alcohol, alembic, alkali and elixir are of Islamic origin.

Medicine was a key science developed by the Muslims. Rhazes is one of the famous physists and writers of the Islamic history. Every major city had a hospital; the hospital at Cairo had over 8000 beds, with separate wards for fevers, ophthalmic, dysentery and surgical cases. He discovered the origin of smallpox, and showed that one get it just once in one's life, thus showing the existence of the immune system and how it worked. Muslim doctors were also aware of the

contagious qualities of diseases. Hundreds of medical works were translated into the Latin language.

All of this knowledge, transferred from the Muslims to the Europeans, was the vital raw material for the scientific revolution. Muslims not only passed on Greek classical works but also introduced new scientific theories, without which the European Renaissance could not have occurred. Though many of the Islamic contributions were unacknowledged, they played an integral role in the European transformation.

While historians have written many books on the high level training and education of the Muslims, compared to the Europeans during the dark ages, only few have thought to make connection between their sciences and the scientific development that was to occur later in Europe. The dependence of the latter on the former, however, has been immense. The scientific revolution that took place in Europe in the 17th century could not have occurred without the help of the Muslims.

The maelstrom brought upon Europe by the intellectual tradition taken from the Muslim world had far-reaching consequences on European life. Education spread throughout Europe, with universities arising in the major cities, the authority of science grew exponentially. Even the powerful church of Rome lost its power as it tried to challenge rationality and scientific realities with superstitions and the fading doctrine of papal authority. [2]

The crusades, in terms of human losses, were one of the most lopsided military campaigns in history, with the exception of the savage massacres of Muslim civilians by the christian armies. However, the crusades, initially being a crushing defeat for the Christian world, would introduce them to the enormity of the gap between them and the Muslims.

At the same time, European scholars were taught by the Muslims in Spain. The translated Greek works introduced the Europeans to an indigenous intellectual tradition that they did not know. It helped a new self-confidence among the scholars of Europe. The European scholars were doubtful between their intellectual loyalty and the strong hatred of their teachers present in their culture. Karen Armstrong explains:

"The Arabs, in particular, were a light to the Christian West, and yet this debt has rarely been fully acknowledged. As soon as the great translation works were completed, scholars in Europe began to shrug off this complicating and schizophrenic relationship with Islam and became very vague indeed, about whom the Arabs really were... There is an unhealthy repression and doublethink about people who are at the same time guides, heroes, and deadly enemies. This is very clear in the scholarship about Islam". [3]

Another factor that plays alongside the long-standing hatred against Islam in Europe is the phenomenon known as Orientalism. Edward Saeid first articulated this concept in his landmark book *Orientalism*, which now should be read by anyone studying Middle Eastern culture or history. Orientalism is the result of the elaboration of the imaginary distinction between East and West: geographically, culturally, morally, and intellectually. The result of Orientalism are claims that go along the lines of " 'We' are like this, but 'they', for unexplainable reasons, are fundamentally different, and in due course, inferior." This in turn serves as justification for "us" to rule "them", to exploit "them", to guide "them" to our enlightened ways. Academic Orientalism gave rise to arrogant, seemingly humanistic ideals, who drove imperialism, whose effects are felt very painfully in the Muslim world. [4]

While the "occidental-oriental" dichotomy of recent centuries identifies the World of Islam as "separate" and "Eastern", that world, is inextricably linked with the West. In general, however, the "Westerners - Europeans - have great difficulty in considering the possibility that they are seriously indebted to the Arab [Islamic] world, or that the Arabs [Muslims] were central to the making of medieval Europe" [5]

"No historical student of the culture of the Western Europe can imagine the intellectual values of the later Middle Ages unless he possesses a vivid awareness of Islam looming in the background." [6]

"The Arabs have left intellectual impression on Europe, and the Christendom will have to confess; He has indelibly written it on the heavens, as anyone may see who reads the names of the stars on a common celestial globe." [7]

"Because Europe was reacting against Islam it belittled the influence of Saracens [Muslims] and exaggerated its dependence on the Greek and Roman heritage. So today an important task for us is to correct this false emphasis and to acknowledge fully our debt to the Arab and Islamic world" [8]

"One of the hallmarks of civilized man is knowledge of the past - [including] the past of others with whom one's own culture has had repeated and fruitful contact; or the past of any group that has contributed to the ascent of man. The Arabs fit profoundly into both of the latter two categories. Nevertheless, in the West the Arabs are not well known. Victims of ignorance as well as misinformation, they and their culture have often been stigmatized." [9]

"Too often science in Arabia has been seen as nothing more than a holding operation. The area has been viewed as a giant storehouse for previously discovered scientific results, keeping them until they could be passed on for use in the West.

However, this is, of course, a travesty of the truth. Certainly, the Arabs did inherit Greek science - and some Indian and Chinese science too, for that matter - and later passed it on to the West. But this is far from being all they did" [10]

An eminent mid-20th century scholar, George Sarton (Harvard University), traces the "roots" of Western intellectual development to the Arab tradition, which was "the outstanding stream, and remained until 14th century, one of the largest streams of medieval thought." Further, "The Arabs were standing on the shoulders of their Greek forerunners, just as the Americans are standing on the shoulders of their European ones. There is nothing wrong in that." Then Sarton criticizes those who say, "The Arabs simply translated Greek writings, they were industrious imitators..." This is not absolutely untrue, but is such a small part of the truth, that when it is allowed to stand alone, it is worse than a lie" [11]

We can list some of the medieval European scholars who were influenced directly or indirectly by the writings of Islamic scholars like Adelard of Bath, Peter Abelard, Robert Grosseteste, Alexander of Hales, Albertus Magnus, St. Thomas Aquinas, St. Bonaventura, Duns Scotus, Roger Bacon, Marsilius of Padua, Richard of Middleton, Nicholas Oresme, Joannes Buridanus, Siger of Brabant, John Peckham, Henry of Gant, Williams of Occham, Walter Burley, William of Auvergne, Dante Alighieri, Blaise Pascal, and numerous others.

The well-known early 12th century Englishman, Adelard of Bath, often proudly acknowledged his debt to the Muslims - "trained (as he says) by Muslim scientists....I was taught by my Arab masters to be led only by reason, whereas you were taught to follow the halter of the captured image of ancient authority (i.e., authority of the Church)." [12]

50. *Safinah*

George Sarton pays tribute to Muslim scientists in the 'Introduction to the History of Science,' "It will suffice here to evoke a few glorious names without contemporary equivalents in the West: Jabir ibn Hayyan, al-Kindi, al-Khwarizmi, al-Fargani, al-Razi, Thabit ibn Qurra, al-Battani, Hunain ibn Ishaq, al-Farabi, Ibrahim ibn Sinan, al-Masudi, al-Tabari, Abul Wafa, 'Ali ibn Abbas, Abul Qasim, Ibn al-Jazzar, al-Biruni, Ibn Sina, Ibn Yunus, al-Kashi, Ibn al-Haitham, 'Ali Ibn 'Isa al-Ghazali, al-zarqab, Omar Khayyam. A magnificent array of names which it would not be difficult to extend. If anyone tells you that the Middle Ages were scientifically sterile, just quote these men to him, all of whom flourished within a short period, 750 to 1100 A.D."

Robert Briffault states in the 'Making of Humanity', "It was under the influence of the Arabs and Moorish revival of culture and not in the 15th century, that a real renaissance took place. Spain, not Italy, was the cradle of the rebirth of Europe. After steadily sinking lower and lower into barbarism, it had reached the darkest depths of ignorance and degradation when cities of the Saracen world, Baghdad, Cairo, Cordova, and Toledo, were growing centers of civilization and intellectual activity. It was there that the new life arose which was to grow into new phase of human evolution. From the time when the influence of their culture made itself felt, began the stirring of new life.

"It was under their successors at Oxford School (that is, successors to the Muslims of Spain) that Roger Bacon learned Arabic and the Arabic Sciences. Neither Roger Bacon nor later namesake has any title to be credited with having introduced the experimental method. Roger Bacon was no more than one of apostles of Muslim Science and Method to the Europe; and he never wearied of declaring that knowledge of the Arabic

and Arabic Sciences was for his contemporaries the only way to true knowledge. Discussion as to who was the originator of the experimental method....are part of the colossal misinterpretation of the origins of the European civilization. The experimental method of the Arabs was by Bacon's time widespread and eagerly cultivated throughout Europe.

"Science is the most momentous contribution of Arab civilization to the modern world; but its fruits were slow in ripening. Not until long after Moorish culture had sunk back into darkness did the giant, which it had given birth to, rise in his might. It was not science only, which brought Europe back to life. Manifold influence from the civilization of Islam communicated its first glow to the European life.

"Although there is not a single aspect of European growth in which the decisive influence of Islamic Culture is not traceable, nowhere is it so clear and momentous as in the genesis of that power which constitutes the permanent distinctive force of the modern world, and the supreme source of its victory, natural science and the scientific spirit.

"The debt of our science to that of the Arabs does not consist in startling discoveries or revolutionary theories, science owes a great deal more to Arab culture, it owes its existence. The Astronomy and Mathematics of the Greeks were a foreign importation never thoroughly acclimatized in Greek culture. The Greeks systematized, generalized and theorized, but the patient ways of investigation, the accumulation of positive knowledge, the minute method of science, detailed and prolonged observation and experimental inquiry were altogether alien to the Greek temperament. Only in Hellenistic Alexandria were approaches to scientific work conducted in the ancient classical world. What we call science arose in Europe because of new spirit of enquiry, of new

methods of experiment, observation, measurement, of the development of mathematics, in a form unknown to the Greeks. The Arabs introduced that spirit and those methods into the European world.

"It is highly probable without the Arabs, modern European civilization would never have arisen at all; it is absolutely certain that but for them, it would not have assumed that character which has enabled it to transcend all previous phases of evolution." [13]

Arnold and Guillaume in "Legacy of Islam" mention the success of Muslims in science and medicine, "Looking back we may say that Islamic medicine and science reflected the light of the Hellenic sun, when its day had fled, and that they shone like a moon, illuminating the darkest night of the European middle Ages; that some bright stars lent their own light, and that moon and stars faded at the dawn of a new day - the Renaissance. Since they had their share in the direction and introduction of that great movement, it may reasonably be claimed that they are still with us." [14]

The Muslims made numerous advances in many fields, especially in physics. They received the physics texts of the Greeks, then translated, corrected, and expanded them greatly. The basis of the study of optics can be attributed directly to the Muslims. Al-Hasan bin Al-Haythem is considered the founder of this field. He and Al-Beirouni also logically came to the conclusion, despite Aristotle, that the speed of light is constant and that light is composed of extremely small particles moving at extremely high speeds, which is the basis of the quantum nature of light, an endlessly celebrated tribute to the 20th century science [15]

The Muslims made monumental strides in the practice and study of medicine. Ibn Sina's text, the "Canon of Medicine" was used as a text in Europe for centuries, and its popularity dwarfed the books of Galen and Hippocrates. Physicians like Abul Qasim al-Zahrawi, Ibn Sina, and Ali Abbas, wrote texts on surgery that would form the foundations of the Western Surgery [16]

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