

Harmonious and Mutual Relations between Muslim and European Civilizations: An Introduction of the Intellectual Sharing During the Middle Ages

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Abstract

Considering carefully the history of ideas, the relationship between Muslim world and Europe (West) is not one of 'clash of civilizations', but of ongoing communication and intellectual sharing as the communication between Islamic and Western civilizations has continued throughout the history (especially in the medieval period). In this paper, an attempt has been made to reveal and recount briefly the impact of Muslim scholars/philosophers of medieval period to the 'European thought and culture'; an assessment of the scope and extent of the Islamic Law and Philosophy with special focus on the relationship between religion and human reason, has been also made, emphasizing the harmonious relationship between Islamic and Western civilizations. It argues that the medieval period provides examples and evidences – both of cultural diffusion from Islam to Europe as well as of tolerance – revealing that the relationship between civilizations is not one of clash or domination, but rather of mutual and of co existence.

Introduction

With the accession of Abbasid caliphate in the beginning of second half of 8th century CE (750 CE), the Islamic Empire opened, as the history reveals, a new era in the domain of science and literature. It is a fact – which no one can deny – that by the beginning of the Abbasid age the many sided cultural influence produced the early phase of the real scientific age of Islamic culture. During this period, that is, during medieval period the contribution to various fields/ branches of knowledge – Medicine, Philosophy, Chemistry, Astronomy, Mathematics, History, Geography, Law, Theology, Philology, etc. by the Muslim scholars were great and impressive. A galaxy of brilliant scientists, philosopheres and scholars emerged during this

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age, making valuable contribution to the culture not only of Islam but of the whole world; directed their minds to every branch of human study and revolutionized thinking, feeling and action of man by the might of their pen.

A galaxy of Muslim scholars made valuable contributions to various branches of knowledge; their legacy is vast and cannot be recounted in these limited pages, so here it has been made suffice to few prominent personalities, viz, Al-Kindi, Ibn Sina, Ibn Rushd and Al Ghazzali as well as to few Arabic (Art) writings – like *Alf Laila wa Laila*, *Kalilah wa Dimnah*, *Sindbad*, *Ali Baba*, *Ruba'iyat* of 'Umar al Khayyam, etc – of the same period which have not only contributed to the European thought and culture but have influenced many great personalities of Europe. (West) as well; providing example and evidence both of cultural diffusion from Islam to Europe as well as of tolerance that the relationship between civilizations is not one of clash or domination, but rather of mutual relationships, co existence, interdependence and brotherhood.

Prominent Muslim Philosophers of Medieval Period

Muslim philosophers, in fact, translated works of Plato, Aristotle and others but they were people of “immense erudition and versatility”¹ as well who carried on original thinking and research in various branches of knowledge. They were able to develop their “own system of thought” in various spheres of knowledge of the time.²

Muslim philosophers restored the work of Aristotle and made use of it. They made his work more commendable work of all. The Abbasid Caliph Al Mamun (r. 813-833) selected al Kindi for the work of translating the works of Aristotle and other Greek writings into Arabic. Similarly, Ibn Rushd “wrote commentaries of varying Porphyry.”³ And in the words of Majid Fakhry: “His [Ibn Rushd's] writing on Aristotle's works resulted in the commentaries of varying length (small, intermediate, and large), which included Physics, the Metaphysics, *de Anima de Caclo* and *Analytica Posteriora*”.⁴

All Kindi, al Farabi, Ibn Sina (Avicenna), Abu Ma'shar al Falaki (Albumazar), Ibn al Haytham (Alhazen), al Ghazali, Ibn Bajja (Avenpace) and Ibn Rushd (Averroes) and the like of these celebrated philosophers had built the unbreakable link between nations and

between civilizations. But the Muslim scholars who contributed to the Western literature in various branches of knowledge are Al Kindi, Ibn Sina (Avicenna), Ibn Rushd (Averroes) and al Ghazali making themselves “masters of their time”.⁵ They paved the way for the release of reason from its strict confinement by pointing out that God does not create anything in vain. Holy Qur’an declares: “We created not the heavens and the earth and all that is between them for a (mere) play”.⁶

While fully accepting the word of Allah (i.e. the Holy Qur’an), those philosophers taught also that, in the Qur’an, there always was room for human reason in understanding the word of Allah. The Qur’an declares that everything in this world has purpose, and that reason was created to be used:

“Verily, in the creation of heavens and the earth and in the alternation of the night and the day, ..., and the (water) rain which Allah sends down from the sky and makes the earth alive therewith after its death, and the moving (living) creatures of all kinds that He has scattered therein... are indeed Aayat (signs, proofs and evidences) for people of understanding.”⁷

1. Ab Yusuf Yaq’ub ibn Ishaq al-Kindi (801-873 CE), commonly known as al Kindi, is unanimously hailed as the first Arab Muslim philosopher whose writings on philosophy, astronomy, mathematics, politics and medicine, contributed widely to the European thought and culture. “His works on Aristotle’s *Novum Organon* were utilized by Roger Bacon and his contemporaries included Albertus Magnus, Thomas Aquinas”.⁸

Al Kindi wrote hundreds of books and many Europeans are content to place him with the first class philosophers, as Syed Ameer Ali comments that his fame as a prolific philosopher is confirmed by the quality of 270 books under his name. Many European scholars including ‘Munk’ and ‘Garden’ are content to place al Kindi with the first class philosophers, namely among the twelve geniuses of the first order who had appeared in the world up to the 16th century.⁹

2. Ali al-Husayn ibn Abdullah Ibn Sina (980-1037 CE) - commonly known as Ibn Sina and referred a ‘*Avicenna*’ in the

western literature - was another one of the pioneers and most influential philosophers and scientists of his time. An *encyclopedic* philosopher of universal learning, Ibn Sina “surpassed all his predecessors, even the great Aristotle and al Farabi, in the fluency and the thoroughness of his style”.¹⁰

Many western scholars including A. Maurer Augustine, one of the popular authorities on the medieval philosophy, Federick Charles Copleston and Parviz Morewedge provide remarks appreciating the greatness of Ibn Sina and regard him as the greatest Muslim philosopher of the Eastern group. For example, A. Maurer Augustine made these remarks: “For all that, his [Ibn Sina’s] philosophy is a highly personal achievement, ranking among the greatest in the history of philosophy”.¹¹

Similarly, F. Copleston in his evaluation of Muslim philosophers emphasized that “the greatest Muslim philosopher of the eastern group is without a doubt Avicenna or Ibn Sina, the real creator of a scholastic system in the Islamic world”.¹²

Ibn Sina’s *Qanon fi al-Tibb (Cannon of Medicine)*, *Kitab Shifa (the Book of Healing)*, and *Kitab al-Najat (the Book of Salvation)* are among the great Encyclopedias of his philosophy which influenced the medieval European universities for centuries. The following passage from Parviz Morewedge’s book *The Metaphysics of Avicenna (Ibn Sina)* reveals his greatness and unfolds his influence on medieval Europe:

His penetrating intellect constructed the most authoritative example of the medieval philosophical system. . . . Brilliantly developing, organizing, and expounding the Islamic sciences and philosophy, Ibn Sina crystallized them in standard forms. . . . His influence on medieval Europe was no less significant. Eighty seven translations of his *Cannon of Medicine* were made in Europe (including partial translations and some in Hebrew). They constituted the basis of medieval syllabi and construction in the West until the seventeenth century. His philosophy had an even more lasting influence, not only through his *Shifa` [Healing]*, which served as a test

book on philosophy in medieval times, but particularly through St Thomas Aquinas who was deeply affected by Ibn Sina's works, as amply demonstrated in his *de Ente et Essentia*.¹³

Thus, Ibn Sina was an intelligent giant whose philosophy combined Greek and Islamic thought but was unique in many respects. His ideas left a strong impact on future Eastern and Western thought.

3. Abu-al-Walid Muhammad ibn Ahmad Ibn Ahmad Muhammad ibn Rushd (1126-1198 CE) – commonly known as Ibn Rushd and referred as 'Averroes' in the Western literature – was another celebrated philosopher of Medieval era who developed his philosophy in Cordova, Spain. His works are voluminous and on various fields of knowledge: Jurisprudence, Medicine, Philosophy, Astronomy, Physics and Grammar are just a few to mention as example. He wrote commentaries on all works of Aristotle, Plato's *Republic* and others. He is, without any doubt one of the 'greatest medieval philosophers' to exploit philosophy to full, "prior to St Thomas Aquinas" (1225-1274 CE) who was greatly influenced by him.¹⁴

Many great personalities of medieval Europe translated the works of Ibn Rushd thereby showing his impact, influence and his contribution. "By the end of 12th century, the most of his works were translated into Latin, some by Gerard of Cremona (1114 -1187 CE), Robert Grosseteste (d.1253 CE) and thus entered the mainstream of European thought and culture, and the impact of his works was long to be felt".¹⁵ Thus, it is the commentaries of Ibn Rushd that led to his influence on Europe.

4. Abu Hamid Muhammad ibn Muhammad al-Ghazzali (1058-1111CE)– an Islamic theologian, jurist, philosopher, cosmologist, psychologist and Sufi mystic, who remains one of the most celebrated scholars in the history of Sunni Islamic thought – with his clarity of thought and force of argument was able to create a balance between religion and reason; and contributed in diverse fields of knowledge. His famous books include *Tuhafat al Falasifa* (The Incoherence of the Philosophers),

Ihya al 'Ulum al Din (The Revival of the Sciences of Religion), *The Beginning of Guidance, Deliverance from Error*, *'al Munqidh* (the Saviour) – which has been compared with St Augustine's *Confessions*;¹⁶ a summary of astronomy and his autobiography.

Al Ghazzali's various works were translated into European languages and thus, entered the medieval European culture and thought. His theological doctrines "penetrated Europe, influenced European scholasticism" and several of his arguments seem to have been adopted by Archbishop Raymund I (1126-1151 CE) and by St Thomas Aquinas (1225-1294 CE) in his discussion of authority and reason.¹⁷

Muslim Thought and the Age of Reason

Consequently, the direct connection between Muslim thought and the age of reason can be rightfully traced. The age of reason in Europe was certainly not isolated from the contribution of Muslim philosophers and their contribution to European thought and philosophy. It is difficult to consider that the age of reason in Europe could have emerged/developed from vacuum.

Muslim philosophers were also people of science and were much concerned with the relationship between the Creator and the creation; the universe, life and humanity. The influence of Muslim philosophers on the age of reason becomes clear by the following passage:

The first original European writing in metaphysics as in many aspects of science came from the translators. In particular, Dominic Gundisalvi wrote works partly based on the Arabic sources.... In dealing with the concept of God as the unmoved Mover he brought theology into relation with physics, as had been done, for example in Avicenna's *Kitab ash Shifa* (known in Latin as *Sufficientia*) and in the summary of Avicennian [Ibn Sina] views (*Maqasid alFalasifa*) produced by alghazel [al Ghazzali] this thinking of theology with physics and metaphysics led eventually to a new type of theological writing in Latin which reached to its heights in the philosophy of Aquinas.¹⁸

Roger Bacon (1221-1294 CE), St Thomas Aquinas (1225-1294 CE) and Robert Grosseteste (d.1253 CE) present a perfect picture of philosophers whose works are influenced mainly by Islamic philosophy, its subjects, aim and the language in which this philosophy was written. They learned much from al-Farabi's logical and political treatise and borrowed much of Ibn Sina's ontological scheme. Aquinas *Summa Theologica* and Bacon's *Opus Maius* bear the influence and the impact of Islamic philosophy upon them.¹⁹

Roger Bacon, greatly praised in modern times, was a man of universal learning; with great interest in mathematics and science which was mixed up with the art of chemistry or 'al chemy'.²⁰

Roger Bacon's 'theory of ignorance' was basically developed from Muslim and Christian sources. The word 'Ignorance' and its derivations are mentioned in the Qur'an as well as in the Old Testament. 'Ignorance' (*jahl*) and its derivations are mentioned in the Qur'an, 2: 273; 4: 17; 6: 35; 7: 199; 11: 46, 47; 12: 33; 39: 64 as well as in the Arabic version of Old Testament. In a chapter entitled 'Ecclesiastics', the word '*jahalah*' is used explicitly in 5: 2; 7: 26; 10: 1, 5, 14 and '*jahalan*' in the 2:9).

In his discussion, Bacon quoted heavily from Muslims including the writings of Ibn Sina and Ibn Rushd as well as from Socrates, Aristotle, Boethus, Seneca, St Jerome, Josephus, etc. Bacon appreciated the philosophy of Avicenna and regards him as "the leader and prince of philosophy".²¹

Bacon referred to al Kindi, al Farabi, Ibn al Haytham, Ibn Sina and Ibn Rushd and other Muslim philosophers who wrote on philosophy, mathematics, geography, etc. and appreciated them as B. Russel put it as:

"When Bacon comes to treat the rainbow, he quotes Avicenna with great admiration. Every now and then he says something that has a flavor of orthodoxy, such as that the only perfect wisdom is in the Scriptures, as explained by canon law a philosophy. But he sounds more sincere when he says that there is no objection to getting knowledge from the Heathen; in addition to Avicenna [Ibn Sina] and Averroes [Ibn Rushd], he

quotes alfarabi [al-Farabi] very often, and albumazar [Abu Ma'shar a Falaki] and others from time to time".²²

There is strong evidence that both John Locke (1632-1704 CE) and Jean Jacques Rousseau's (1712-1778 CE) thinking, especially their theories of sovereignty could well have been influenced by Islamic thinking on the relationship between subjects and the state.²³ The political philosophy of both Thomas Hobbes (1588-1679 CE) and Locke relies heavily upon the conception of natural law that had been transferred to them from the Muslim philosophers by Aquinas, Grotius, and the like of these thinkers.²⁴

Dante (Dante Alighieri May/June c. 1265 – September 14, 1321 CE, an Italian poet of the Middle Ages) and Descartes (René Descartes, 31 March 1596 – 11 February 1650 CE, a French philosopher, mathematician, physicist, and writer) – both these philosophers and their works were known to Locke – were inspired by the writings of Islamic thought, especially Ibn Sina, Ibn Rushd, and al Ghazzali's thought. So, it is illogical to imagine that Locke was not stimulated by Islamic thought and that his philosophy owes, at least, some inspiration from Islamic philosophy and law. As to Ibn Sina, for instance, "Dante placed him between Hippocrates and Galen; and Scaliges maintained that he was Galen's equal in medicine, but much his superior in philosophy".²⁵

Similarly, as with Locke, so was with Rousseau; he was influenced by Islamic thought and that was clearly seen after he had attained his intellectual maturity. His thought on sovereignty declares his influence by Islamic thought.

Rousseau's '*Social Contract*' shows that his ideas are merely a reflection of Islamic influence on him. For example, the Islamic idea that the Muslim community, through the consensus, determines the law in cases of doubts in corresponding to Rousseau's idea of general will distinguishing between the just and unjust. Furthermore, while referring to the government established by Prophet Muhammad in *Social Contract* he wrote: "Mohmet [Prophet Muhammad] had very sound opinions, taking care to give unity to his political system, and for as long as the form of his government endured under the caliphs who succeeded him, the government was undivided and, to that extent, good".²⁶

As with Islam, Rousseau was clearly against the separation of the political institution of a nation from its moral code. In the context of this theme, Rousseau referred to the Prophet of Islam ‘the child of Ishmael’ and Islamic Law which established a nation on the basis of a harmonious relationship between the moral code and the political institution of the nation – the nation has ruled half of the world for ten centuries. In Rousseau’s words:

But it is not for every man to make the God speak, or to gain credence if he pretends to be an interpreter of the divine word. The lawgiver’s great soul is the true miracle which must vindicate his mission. Any man can carve tablets of stone, or bribe an oracle, claim a secret intercourse with some divinity, train a bird to whisper in his ear, or discover some other vulgar means of imposing himself on the people.

... The Law of the Hebrews, which still lives, and that of the child of Ishmael which has ruled half the world for ten centuries, still proclaim[s] today the greatness of the men who first enunciated them; and even though proud philosophy and the blind spirit of faction may regard them as nothing but lucky impostors, the true statesman sees, and admires in their institutions, the hand of that great and powerful genius which lies behind all lasting things.²⁷

Similarly, the impact of Islamic thought could be clearly recognized in the writings of Baron de Montesquieu (18 January 1689–10 February 1755) – generally referred to as simply Montesquieu, was a French social commentator and political thinker who lived during the Enlightenment. Montesquieu’s *Persian Letters* of 1721 were usually considered as forerunners of his political treatise *The Spirit of Laws* (1748) which had a profound impact on despotism. In his letters about Persia, Montesquieu tried to provide a sociological analysis, but in imaginative terms. His method reflects his influence by *Kalilah wa Dimnah* (Kalilah and Dimnah), and *Alf Lilah wa Lilah* (A Thousand and One Nights). To voice his view, Montesquieu devised two Persian persons ‘Rica’ and ‘Uzbek’ who purport to visit Paris to explore European customs, the nature of sociopolitical institutions and the relationship between them in the period between 1710 and

1720. A social approach had previously been established by Muslim philosophers, especially, Ibn Khaldun (732–808/1332–1406) who is also well known in Western literature by his magnum opus *al-Muqaddimah* (i.e. *Introduction to History*).

It is an attempt to investigate whether historical sources are credible, asks what the source relates, and whether it is the sort of given accounts that happen in human affairs. This enquiry led Ibn Khaldun to write a lengthier treatise on the processes of social and political changes. Thus, Ibn Khaldun's work antedated Montesquieu's views on matters such as the influence of environment on social institutions. Montesquieu's observation of Islamic thought goes to the extent that his Letters 10 and 18 also made references to the Qur'an, and stated his views through his devised Muslim person.²⁸

The influence of Islamic law and thought on Montesquieu was imprinted on the pages of his mind as well as on the pages of his *Persian Letters* and *The Spirit of Laws*. Montesquieu's principle upon which he based *The Spirit of Laws* confirm the influence of Islamic law on his mind. As with Islamic thought Montesquieu begins his treatise *The Spirit of Laws* with these principles:

Laws, taken in the broadest meaning, are the necessary relations deriving from the nature of things; and in this sense, all beings have their laws: the divinity has its laws; the material world has its laws, the intelligences superior to man have their laws, the beasts have their laws, and man has his laws. Those who have said that a blind fate has produced all the effects that we see in the world have said a great absurdity; for what greater absurdity is there than a blind fate that could have produced intelligent beings? There is, then, a primitive reason; and laws are both the relations that exist between it and the different beings, and the relations of these various beings to each other. God is related to the universe, as creator and preserver; the laws according to which he created are those according to which he preserves; he acts according to these rules because he knows them; he knows them because he made them; he made them because they are related to his wisdom and his power.²⁹

The words and language are but a reflection of Islamic view on the legal status of matters and the relationship between creator and creation; the universe, life and human kind. His reference to “the Qur`an, Islamic thought and law, confirms that he had spilled out his best knowledge and experience of Islamic laws and mores”.³⁰

Contribution and Influence of Arabic (Art) writings on Europe

Art – that employs human reason demonstrate the natural relationship between reason and ritual – is equally inclined to reflect the harmony between nations and between civilizations. The contribution of Muslim intelligentsia to medieval European culture and thought extends also to art and architecture.

As art is the inspiration of humanity in time and place, so the art of medieval period also reflects the intellectual and social diversities of the place and space. In the 12th century CE some “fresh features derived from Muslim civilization entered Europe through the designs of French churches”.³¹ The essential features of the different ranks of human society and the essence of the arts and sciences, all are captured and preserved in art. Thus, art did bridge the gap between East and the West; between Islam and the two halves of the Roman Empire. Art is still carrying this sacred duty towards the world today. As Friedrich Heer put it:

Muslim architectural styles and techniques of building appear in southern France, Italy, Sicily, while a twelfth-century book of the Gospels made in Brunswick, far away in the North, is remarkable for its faithful reproduction of Suras from the Koran [holy Qur`an] in the Kufite Script.³²

This example will remain irrefutable evidence of cultural diffusion from Islam to Europe and of tolerance that the relationship between civilizations is not one of clash or domination, but rather it is mutual relationships, co-existence, interdependence and brotherhood.

Speaking of tolerance and reconciliation – through the art of writing – Muslim poetry and novels played a remarkable role in cultural communication. As noted by *Encyclopedia Britannica*, tales such as *Aladin*, or *Kalilah wa Dimnah* influenced many European

folk-tales among which was the story of Patty and her Milk-Pail: La Perrette in Lafontaine, the basis of the proverb, 'Do not count your chickens before they are hatched', and many of the popular beast-tales such as *Roman de Renart* (Reynard the Fox), whose hero is a fox, symbolizing cunning man.³³

Similar to that is *Alf Lilah wa Lilah* (A Thousand and One Nights) which influenced Montesquieu;³⁴ *Ali Baba, Sindbad*, and the *Quatrains (Ruba'iyat)* of Umar al-Khayyam, or the well-known Andalusian Poetry '*Al-Muwashshahat*' are just a few examples of the Muslim intellectual output which greatly contributed to medieval and modern European culture and thought.

Much learning has been devoted to the investigation of the distribution of these tales throughout European folk-literature. *Alf Lilah wa Lilah* had a profound impact on the European literature, enriching its imagery and language. In the words of J.W. Draper (1811-1882), it greatly widened the scope of its European literature and thus, enriched its imagery and language, promoting Europe's yearning for the exotic and stimulating amongst its intellectuals.³⁵

Arabic philosophy and poetry had a profound impact on Europe. The legacy is vast and cannot, in any way, be fully recognized in the limited space; sufficient to mention names (of few prominent persons) and their works influenced by the Arabic poetry and philosophy were, namely: William Shakespeare (1564-1616 CE), who himself confirmed the influence of Arabic poetry and philosophy on his well-known pieces such as *Moors* and *Othello*, from the play of same name and the Prince of Morocco in the *Merchant of Venice*. The Renaissance English poet Christopher Marlowe (1564-1593 CE) too was influenced by Arabic philosophy and poetry and it be seen in his *Tamerlane The Great* (1587); Edward White's *A Brief Rehearsal of the Bloody Battle of Barbary* (1594), George Peel's play *The Battle of Alcazar* and Victor Hugo's *Les Orientales*; these also have a profound influence on Shakespeare's *Titus Andronicus* of 1594. The eminent English historian Frances Yates (1899-1981) in her study of Shakespeare's play *Love's Labour's Lost*, which she had published in 1936 and republished in 1997 under the title *Love's Labour's Lost: Critical Essays*, pointed out "the connection between the book

[*Optics*] by ‘*Hasan ibn Hasan or Alhazen*’ [Ibn al-Haytham]” and the theme of Shakespeare’s play. In the Introduction of his translation “The Optics of Ibn al-Haytham”, Sabra pointed out that Ernst Gombrich had made a special study of certain aspects of the *Optics*, he had written in *Art and Illusion* that “Alhazen taught the medieval West the distinction between sense, knowledge, and inference, all of which come into play in perception”, and his constant questioning, and expert answers to questions, were a source of stimulation and a valuable guide.³⁶

Arabic poetry is the crowning literary achievement of the Muslims and arguably one of their most enduring legacies to the Western world. This world of Arabic poetry has long been overlooked for the most part and has been given only a cursory enquiry at best; however, it offers important insights into the Arabic legacy and heritage, and can provide a fuller understanding of its culture and its many contributions. The contribution to European thought of this type of humanities is not less than that of philosophy, or Geometry, Mathematics, Medicine or Alchemy. Contribution of these writings to the European thought and culture is not confined to the medieval period but continued to our times as these writings have been reproduced in many forms including novels, stories, serials for Television and movies to be screened on the small and large screens worldwide.³⁷

With regard to the ‘intellectual status of Muslims’, John William Draper (d.1882 CE) – Professor of History at the University of New York – summarized, in the following passages, the contribution of Muslims (to various fields of knowledge):

The Saracens [Muslims] embraced every topic that can amuse or edify the mind. In later times, it was their boast that they had produced more poets than all other nations combined. In science their great merit consists in this that they cultivated it—they perceived that...its only sure progress is by the practical interrogation of nature.

The essential characteristics of their method are experiment and observation....The Saracens also gave to Trigonometry its modern form, substituting sines [trigonometric function] - they elevated it into a separate science.... In the experimental sciences, they originated

chemistry; they discovered some of its most important reagents – sulphuric acid, nitric acid, alcohol. They applied that science in the practice of medicine, being the first to publish pharmacopoeias or dispensatories, and to include in them mineral preparations. In mechanics, they had determined the laws of falling bodies, had ideas, by no means indistinct, of the nature of gravity; they were familiar with the theory of the mechanical powers. In hydrostatics they constructed the first tables of the specific gravities of bodies, and wrote treatises on the flotation and sinking of bodies in water. In optics, they corrected the Greek misconception, that a ray proceeds from the eye, and touches the object seen, introducing the hypothesis that the ray passes from the object to the eye. They understood the phenomena of the reflection and refraction of light.

Alhazen [Ibn al-Hatham] made the great discovery of the curvilinear path of a ray of light through the atmosphere, and proved that we see the sun and moon before they have risen, and after they have set. The effects of this scientific activity are plainly perceived in the great improvements that took place in many of the industrial arts. Agriculture shows it in better methods of irrigation, the skilful employment of manures, the raising of improved breeds of cattle, the enactment of wise codes of rural laws, the introduction of the culture of rice, and that of sugar and coffee. The manufactures ...of the industries of silk, cotton, wool; in the fabrication of Cordova [still called in Europe *muslin*] and morocco leather, and paper; in mining, casting, and various metallurgic operations; in the making of Toledo blades. Passionate lovers of poetry and music, they dedicated much of their leisure time to those elegant pursuits. They taught Europe the game of chess; they gave it its taste for works of fiction-romances and novels. In the grave domains of literature they took delight: they had many admirable compositions on such subjects as the instability of human greatness; the consequence of irreligion; the reverse of fortune; duration, and end of the world. Sometimes, not without surprise, we meet with

ideas which we flatter ourselves have originated in our own times.

Thus our modern doctrines of evolution and development were taught in their schools. In fact, they carried them much farther than we are disposed to do, extending them even to inorganic or mineral things. ...³⁸

Translation of Various Works by Europeans

Muslim philosophers have influenced countless generations of scholars in various fields of knowledge becomes also clear by the translations (of their works) made by many great scholars like Adelard (1075-1160 CE), Gerard of Cremona (1114-1187 CE) and others.

Adelard (of Bath) was an early twelfth century great Arabist, an “English scholastic philosopher and interpreter of Arabic scientific knowledge,”³⁹ who travelled widely to Salerno (Naples), Sicily, Cilicia (Anatolia/Turkey), Syria, Jerusalem, Spain, etc. He mastered Arabic language and translated a number of Arabic books. Adelard made Latin translations of Euclid’s *Elements* from Arabic sources (3 Arabic translations were made in middle ages) which were for centuries the chief geometry text books in the West. As noted by *Encyclopedia Britannica*: “Euclid was first made known in the West through Latin translations of these Arabic versions”, and the “first extent translation was made about 1120 [CE] by Adelard of Bath, who obtained a copy of an Arabic version from Spain”.⁴⁰

He also translated al- Khwarizmi’s tables which became the first astronomical tables in the world. Al Khwarizmi (780-850 CE) also wrote a multivolume opus *Kitab al Mukhtasar fi Hisab al Jabr wa Muqabbala* (Compendious Book of Calculation by Completion and Balancing) which became simply, ‘*Algebra*’, in Latin. Some of this work was also “translated and entered European literature through Adelard and Robert Grosseteste, and through the Italian Fibonacci Leonardo da Pisa (1170-1240 CE)”.⁴¹

Similarly, Gerard of Cremona (1114-1187 CE) – another pioneer and prolific Arabist and translator of his time – translated more than seventy influential works in the sciences that introduced ‘the advanced’ Muslim world to an “intellectually impoverished Europe

during the Middle ages”. His translations were ‘word for word’ and provided the ‘classical foundations’ for the work of such “thinkers as Roger Bacon, Albertus Magnus, Thomas Aquinas and Copernicus”.⁴²

Besides Mathematics, Medicine, Astronomy, Astrology, Gerard translated al-Kindi’s *De Somno et Visione* which contributed greatly to the science of Psychology. These works were “used as the text books in the newly established universities in Europe”.⁴³

This shows that Muslim philosophers have influenced generations of scholars in various fields of knowledge. Both the scholastics and the scholars of the renaissance period owed a great debt to Muslim thought. It is true that without Muslim philosophy the European philosophy, including the English philosophy, law and science would not have developed. As W. Montgomery Watt put it:

When one becomes aware of the full extent of Arab experimenting, Arab thinking and Arab writing, one sees that without the Arabs European science and philosophy would not have developed when they did. The Arabs were no mere transmitters of Greek thought, but genuine bearers, who both kept alive the disciplines they had been taught and extended their range. When about 1100 Europeans became seriously interested in the science and philosophy of their Saracen enemies, these disciplines were at their zenith; and the Europeans had to learn all they could from the Arabs before they themselves could further advance.⁴⁴

Thus, the age of reason in Europe was the result of European cultivation of Islamic philosophy. Arabic thought provided European thought with materials and brought within its purview a whole new world of metaphysics. The whole range of subsequent European philosophy was deeply indebted to the Arabic writers.

Conclusion

Considering the above discussion, one might conclude that the communication between Islamic and Western civilizations (which is one of the most pressing issues in present times), there have been strong connections between Islam and the West in regard to the world of thought, philosophic and rational speculation, and that the link between Islam and the West is unbreakable. The exchange dating

back to the ancient times did exist and it was renewed during the middle ages. Ideas and opinions cannot be imprisoned in limited geographical boundaries, and their movement cannot be restricted to geographical or political paradigms. Communication between Islamic and Western civilizations continued throughout history. What is there then to stop such a peaceful and productive connection from existing today; what is there then to change the natural course of such a harmonious relationship between these civilizations?

When the history of ideas is carefully considered, the relationship between the Muslim world and that of Christian Europe was not one of a clash of civilizations, but of ongoing communication and intellectual sharing. From the above discussion it can be also drawn out that medieval Islamic philosophy was instrumental in the revival of philosophizing in Europe in the middle ages. Muslim philosophers, no doubt, adapted some of the Platonic, Aristotelian and other ideas but they also developed an original philosophical culture of their own, which had a considerable impact on the subsequent course of Western philosophy. The medieval period also provides examples and evidences – both of cultural diffusion from Islam to Europe as well as of tolerance – that unfold and reveal that the relationship between civilizations is not one of clash or domination, but rather of mutual relationships, co existence, interdependence and brotherhood.

References and Notes

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