

Shumaila Firdos *
Yu. Wenjie **
Abdul Basit Mujahid ***

The influence of Greek Classics and Arabs on Western Civilization in medieval period

Abstract

In the earlier of medieval Ages, a period that spanned a thousand years, in the prehistoric world, the locus of Greco-Roman civilization was the Mediterranean sea; the European Civilization and development is based on Mediterranean, the heartland of medieval civilization gradually shifted to the North, to regions of Europe that Greek-o-Roman had barely penetrated through Arabian culture. During the middle ages, a common European civilization evolved integration Christian Greek o Roman tradition. Christian scholars played a decisive role in the transmission of Greek science to the Arabs either as translators or as commentators and authors monographs based on Greek Work. The Arabs that almost necessitate its acquisition with Islam, the Christian faith had long history with Arabia in the sixth centuries before Islam emerged to dominate the ethnic cultural determinants of Arabs existence, though not entirely to annex them. The total monopoly of its original territory, which Islam was unable to enforce within the peninsula of Arabia proper has never obtained in the rest of the East.

Key Words: Mediterranean, Arabs, Europe, Latin, Trade, Culture,

The Mediterranean

In any consideration of Arab relations with medieval Europe the Key fact is that only the Mediterranean area was common ground. Here we will find a justification for carrying this study only as late as the Turkish conquest of the Lavent. It is less the European 'Middle ages' that are significant than the start of Ottoman rule over the Arabs. Both for European and for Arabs the continuing conflicts between Europe and Muslims or between Western Christendom and Islam, was the different when the grand signore became the protagonist of the play. After that, Northern Europeans and Non-Arab Muslims played a much larger part than

* Shumaila Firdos PhD Research Scholar, History College, Nanjing University, 163 Avenue, Xianlin, Nanjing, 210046, P.R. China Sfirdos111@outlook.com

** Yu. Wenjie, (Corresponding Author) Professor of History College, Nanjing University, 163 Avenue, Xianlin, Nanjing, 210046, P.R. China njuywj@163.com

*** Dr Abdul Basit Mujahid, Assistant Professor, Allama Iqbal Open University Islamabad.

previously in the conflict.¹ Many, indeed, had long been involved, at least during the crusading age; Godfrey of Bouillon and Louis IX of France are Christian examples and Salah u Din among the Muslims. Nevertheless, the Mediterranean was the whole of the arena.² Islam made no direct impact in any medieval period on Northern Europe, where the Arabs were a distant bogey, not present danger. There was no considerable European penetration beyond the coastal regions of Africa and Asia until after the Ottoman conquests and the virtual disappearance of Arab governments. Within the Mediterranean area, the frontiers shifted to and fro; only Greece and the Balkan Peninsula were undisputed by the two religions, until the ottoman invasions, Mediterranean trade has always reached out to the Atlantic, to the Red Sea and the Indian Ocean, to North-West Europe; and there have been land and river routes, through Russia to Scandinavia, into Nubia and across the Sudanic belt of Africa, or across the Syrian desert and the Iranian Plateau, even into China, these routes were peripheral as long as the centre was the Mediterranean.³

It was obviously the centre of the Romans, as *mare nostrum*; though in Roman days it was disputed with the Catheginians, and even with Greeks and with pirates. It may seem as though it was united in Roman hands for a relatively short time only. But the still the Mediterranean had been a channel of communication for long centuries before the Arab conquest; and certainly it was the centre of the areas inhabited by Europeans and by the Arabs.⁴ Pirenne believed that the northward shift in power, which was marked by the imperial coronation of Charlemagne, was caused by the Arab disruption, for European use of the Mediterranean channel of commerce. Others have seen different reasons for the northward shift of power; and it was paralleled by an eastward shift in the Arab World, to Baghdad and then, in consequence, Khorasan. No final consensus has yet determined the extent to which European Sea trade suffered under the Merovinian economy have been exaggerated, and to which, exaggerated or not, they may be imputed to Arab control of the Mediterranean or to the weakening by Byzantine control.⁵

The steady expansion of Arab Empire under the first few generations of Muslims made it the heir of most of the Hellenistic and Sassanian world, controlling much of western central Asia (particularly Iran, Iraq and Syria) and North Africa, with in particular Egypt, Arabs control the machinery itself was largely and for long unchanged. They used Christian clerks. At first they felt no need foreign literary skills or knowledge; they immediately and extensively employed the arts of those they have conquered. Third expansion to the North-west checked by the Byzantine defence. Nowhere did Arab power in the seventh century of the Christian era extend to what is now European soil. A rapid Survey of the eight century shows a great change, and a clear foreshadowing of many subsequent developments. Politically and militarily this was a century of development and crisis in and

around Europe. The Berbers had been converted to Islam at the end of the proceeding century, and in 711 C. E. the Arabs and Berbers entered in Spain and quickly overcame and subjected the Visigoths. In 717 C.E. the Arabs raised the siege of Constantinople. 732 C.E. is the date of the famous defeat of the Arabs by Charles Martel, it did happened after the dates that there was no serious northward prosecution of *Jihad* or holy war.⁶ There were many raids, and some temporary Arab colonization, but the northern climate never attracted the Arabs seriously.⁷ The emperor Leo III died in 741, and it was great time for Berber revolt. In 750 C.E.⁸ the Umayyed dynasty was overthrown in the east; the Abbissids established their power at Baghdad, a new city which developed during the following decade, and Arab power came increasingly under Persian and Turkish influence. The Umayyed amirate of Cardova (Caliphate only from the 10th century) was founded in 756 C.E.; it was later in the century that independent government in North Africa developed. In the meantime the son of Charles Martel and father of Charles the great deposed Childeric III, the last Merovingian reign. Within a year or two he had intervned in Italy to establish the temporal power of the papacy, and to defeat the Lombard kingdom, and that, in turn, had only just taken Ravenna from the rule of the Eastern Emperor.⁹

This period of settlement, in Europe, in North Africa and western Asia, is the time of the first great impact of the Arabs upon the Latin Mediterranean. It is the period of retreat from the central Mediterranean by Byzantium. There was never again a unified government in the Arab world; the future lay separate, but often powerful, Arab states in Spain, North Africa and Egypt and ultimately Syria too. At that time, the Italian peninsula was at war, was divided, and had long been subject the invasion; and now, to the attacks of Lombards, Arabs and Byzantines, was added the persistant intervention of the Frankish Monarchs, Europe would yet suffer other attacks than those of the Arabs; Magyar invasions and Viking raids still lay in the unknown future. The frontiers of Greek, Arabic and Latin cultures in the Mediterranean areas would shift backwards and forwards, but the main areas were determined in the eight century; the formation of Latin Europe and that of Arabic speaking North Africa coincided. Can the Arabs be said to have reoriented European development at this date? We can leave the economic arguments to the specialists, at any rate, it seems clear that the monetary system depended on the sources of precious matels which lay on the periphery of the Caliphate, in Sudan and in Central Asia, and so were passed into Europe through Arab trade. The confrontation with the areas under the Arabs control effected Europe decisively. The Shift of political power to what is now northern France had already come about, not as a result of Arab domination, but when the Salian Frank defeated the Visigoths, the Burgundies and the other Germanic tribes in Gaul, process completed long before the birth of the Prophet.¹⁰ Technological historians tell us that the eight century was the decisive time of the Northern and Western Europe,

but developments were independent of the Arab conquest. The widespread adoption of the stirrup in Europe has been dated to the period immediately following the defeat of the Arabs by Charles Martel. It has been suggested that this happened after , not because of , the battle; the increasing use of cavalry, deriving from the power of impact which the new device conferred, and which turned mounted infantry into cavalry, was at least roughly coeval among the Arabs and among the Franks. Probably it originated transmitted to the West through the Mediterranean.¹¹

Trade through Mediterranean:

In the eight century, the Europe was on the verge of economic development which had little immediate effect on Mediterranean trade, though it was a part of a process ultimately led to European expansion. The greater productivity of the North made itself felt slowly. In the eight century trade with the Arabs meant exports of furs, slaves, timber and metals, all of which had long been the staple of trade from the land mass to the inland sea; slaves ass always and everywhere, were the product of war. Much of the material exported originated in Scandinavia; it passed by two routes, through France and Spain, or through Russia and Byzantium. Although later centuries would of course sea increased trade, it was at this time that the foundations of Venice wee laid, and its trade established. The Arab civilization was dominant, but there was already the promise of the rapid development of the great wealth of northern Europe.

Culture:

The centers of political power had in any case receded inland, north and east, to the Franks, the Danes, and the Normans, to the Germans, always apt to interfere in Italy, and to their enemies the slaves, who would drain strength away from Byzantium; and finally to Baghdad: all the future rulers over the Arab world excepting Spain and North Africa, would come from Iraq or through Iraq from central Asia. In this general perspective the Mediterranean loses its unique importance, but not all its importance, and not quickly. It can be relies that the terms of gradually developing and changing cultures, not of abrupt transitions, and not of any absolute demarcation between Arabs and Europeans.¹² The analysis of the historians showed that the decisive factors in cultural development at this time were the acceptance of either Christianity or Islam by the peoples who came to inhabit the former Roman and Hellenistic worlds, nothing has been said to shake this traditional opinion. It cannot be assume that the Christian and the Islamic cultures were necessarily different from each other. The cultural element in a religion is that which references of outlook, manners, customs and interests make in the practice of the basic doctrine; Islam knows cultural differences, but there have doubtless been greater differences within Christendom, both from place to

place, and from time to time. At any one time or place the cultural element, may be very large. The differences between the two religions or fewer and smaller than the points they hold in common; in the course of time much greater differences have accrued from the way the cultures understood and practiced the two religion.. It will be wrong if it is assumed that there were as many cultural differences between eight-century Christians and the early Muslims as we are accustomed to suppose. The concentration with the two areas, where the language of the religion and literature was Arabic or Latin; and the third area is the Greek affected the other two; and the cultural differences and similarities, and for the way in which new examples of either develop.¹³

Islam and Christendom in Eight Century:

In Gual, by the eight century, the process of conversion to Christianity was well advanced among the Germanic peoples who had conquered the old Roman province, though it was not completed till after the conversions to the Arabs to Islam. The conversions of the Arabs to Islam and that of the English to Christianity happened at the same time. When the Augustine was sent to England; in the last year it was coincided with the first conversions of the Northumbrains and the East Angels. The two processes are in no way comparable in the importance to the history of the world. Birinus began to convert the West Saxons in the year that Ummar Ibn-al-Khatab took Demascus; the first siege of Constantinople and the early expansion of the of the Arabs in north Africa took place at about the same time as Theodor of Tarsus consecrated in Rome, travelled to England and reached his see of Canterbury. It was hardly fanciful to say that while the Arabian Peninsula reached out to seize the Mediterranean was reaching to link itself to the offshore island of the North. The conversion of the English was a slower process than the rise of Islam, but the spread of Christianity in England was roughly contemporary with the Arab and the Islamic conquests; leaving out the scale of these events and their importance. Here is a question raising that is it possible to compare the history of effects of these contemporary versions?.

The differences are naturally what will strike first. After the scale, which need not necessarily imply a difference of quality, the most obvious difference is that Islam was carried by the Arabs to ancient, articulate, literary and even religious civilizations are cultures, Christianity was taken to an illiterate, though not unsophisticated, society, as it prompt use of literacy would show, and one certainly not without ideas of its own; still it was a society that must inevitably be the recipient, not the donor, of intellectual development. There can be no greater technological loan than literacy. According to the standards, the Latin Mediterranean literary culture of the day was limited in worth, a decayed remnant of the classical inheritance, whereas the Greek-Speaking, Syriac and *Pehlvi* worlds, which Islam absorbed contained all that was most advanced or cultured, or

even progressive, within an area of direct influence that excludes China and India.¹⁴In both religions the revelations was above all written, but the Quran was the writing of all writings, because the writing of God.; The Arabs brought a new language to the classical world, whereas the Latin Church was carrying the ancient language of the West, and the essential skill of writing it, to a new nation.¹⁵

The Islamic theologians always set their faces against popular beliefs in saints, relics and miracles, but the Germanic peoples, including the Franks, the Visigoths and the Anglo Saxons, were exceptionally attached to the cult of relics, even secondary relics, as when the ground into which drained the water which had washed the bones of St. Oswald had the power to expel devils from the bodies of the possessed. The Ummayed caliphs expecting Umer Bin Abdul Aziz, are often thought of as a secular and almost irreligious tribal aristocracy, patrons not only of a literature which continued the love poetry and stire of pre-Islamic Arabia, but of paintings and carvings at Mushatta and Qusayr Amra and of the mosaics at the great mosque at Dimascus and at the Dome of the rock, which represent the ancient secular cultures of Syria, Byzantium and Persia.¹⁶

The several concepts between Muslims and Christians were different from each other.¹⁷ It was dogmatic, liturgical and moral bases resemblance of two religions. Islam taught then, as now, one God and the duty of exterminate polytheist beliefs; worship by prayers and have many other duties, Christianity likewise opposed polytheism and was satisfied with nothing short of its destruction. In England the new religion was introduced from above as much one in the case as in the other, and of course there was no forcible conversion of Jews and Christians and under Islam.¹⁸ The occidental Christians in Spain were very preservation in a subordinate position was actively resented, but oriental Christians flourished for many centuries after the Arab conquests, and of course survive today. European too, made some effort to accommodate themselves to non Christians who lived among them, but they employed means which modern liberalism would describe as a persecution. In the Sixth century A.D., there can be seen many differences between Jews and Christians. For Latins, Muslims prosecuted by virtue of ruling at all, and their rule was forever forcible, by virtue of having come into being by conquest. To a visitor from Mars the most obvious difference might well have been the tolerance by Muslims, not only of the True ‘peoples of the Book’, but also of the Zoroastrians and even the pagan ‘Sabaeans’ of the Herren. Yet this distinction between the two religious areas was not greater than the different circumstances of Western Europe and Western Asia.

The main Characteristics institution of Christendom was the monastery, and that time there was nothing in Islam even comparable. Yet the life of the Western monks bore a close resemblance to that of the Islamic community.¹⁹ St. Gregory the great was the Prophet’s contemporary, he advised St. Augustine of Canterbury

that, although the intensions must be the decisive factor, “the man who has cleansed himself with water after the intercourse with his wife is allowed to approach the mystery of Holy Communication”.²⁰ Beside there were many similarities between Islam and Christianity. Christians in later ages have criticized Islam as excessively juridical; it would hardly have been possible for the Christian of the eight century or for long after to do so.

The Christian and the Muslim world was close also in their inheritance. Neither the populations of Europe nor those of what is now, the Arab world ere suddenly freed of their inherited ideas. Levison printed a missionary sermon about European superstition, dating from the eight century. In the first century of Hijra asceticism began to get a hold on Muslims, and the doctrine of *Zuhd* developed the idea of abstention of sin from into that of abstention from all created pleasures. This was the doctrine of the Elite; but so in effect was Latin monasticism the practice of the Elite. Actually the area of Europe across Western and central Asia was divided in this period. It is more apt to suppose an active series of civilization in the early eight century, extended from Byzantium to Persia. The Arab centers in Damascus, Kufa and Fustat were closely linked together among a number of disparate cultures grouped in a rough similarly over the old empire of Alexander, and extended westward. The European and Arab Sematic and Iranian grouping exhibited a great diversity within a common pattern, and many interwoven strands met together in the Mediterranean. North and West Europe, the Franks and the Anglo Saxons, constituted a

Arabic and Latin (Eight and Ninth Centuries)

The contrast is greater when we consider, not the life of community in the general, but the articulate literate culture of the Arabic and Latin worlds. The point of departure was different. The *Etymologies* of Isidore of Seville, the greatest doctor of the Visigothic church, define the Western literary inheritance of the seventh and eight centuries at its best. They were compiled at about the Hijra. Much of Latin culture which the *Etymologies* epitomize, the Arabs would never come to share. In time there would be shared grounds in Greek philosophy and science, which Arabic would acquire in something the same way as Latin had done in the Hellenistic age, and which Latin would later recover from Arabic. There would always remain a vast area, especially in the humanities, where the Arab and the Latin worlds would never meet.²¹

It was natural that the first reactions of the Christians cultures to the Arabic should have been uncertain. Just as John Damascene thought of the Arabs as a passing phenomenon, so perhaps the Spanish Christians as this date supposed them also. One Minor figure, a continuator of the history of Isidor of Seville, whose *Epitome imperatorum* ends just before the arrival of the first Umayyad, Abdul Rehaman, in

Spain; his book, subtitled *Arabum Ephemerides*, is a curious example of hostility and indifference. It is in the form of annals, dated by the Spanish era, by the regnal year (Roman or Arab), and the Hijra year as *Arabum*. In the Umayyad period, Islamic culture was dominated by the Arabs close to their roots in Arabia and non-Arabs began to look for self expansion in the unorthodox sects, just as non Greek Christians had adopted heresies unacceptable to the Emperor in constantinople. In Syria and Iraq the Christian cultures long continued unaffected.²² The Islamic culture was existed side by side in isolation; it was only gradually that Arabic culture began to take account of the culture that had existed before Islam and remained at its midst. In spite of the remoteness of the ruling minority of Arabs at this date from the preconceptions of the cultures that had proceeded them, their concerns are easily intelligible to the modern European mind; though their religious belief maybe alien, their preoccupation with government and its relation to ideology is within our own immediate experience. The famous book *On the Nature of Thing* by Bade is an encyclopedia of the scientific knowledge is more educational rather than polemic, in his many scriptural commentaries he use Greek and different Latin versions, and collected the opinion of fathers with edition of his own. His historical writings were his most original work, especially his *Ecclesiastical History of the English*, it was the least esteemed by his contemporaries, although his knowledge was less than the great Arabic writers on science, whom he antedates, he simply ad access to less valuable material.²³

Alcuin he was survived jus seventy years in ninth century, held a key position in transmission of the higher Latin culture of England to Europe, when it experienced its great Latin revival in the reign of Charlemagne. Alcuin carried to Europe the characteristic interest in grammar, history and theology. His liturgical interests, which he passed on to his many famous students, have no obvious Muslim parallel. He was active in controversy which condemned the Spanish bishops, Elipandus of Toledo and Felix of Urgel, for their adoptionist heresy. In spite of living Muslim rule, the Spanish hierarchy supported the heresy at synods which were held in Europe and attended by Spanish representative, including Felix. Communication between the Spaniards, the Emperors, the Pope was uninhabited by the religious barrier. It has been conjectured that adoptionism was thought by the Spanish bishops as likely to be more acceptable than Orthodox Catholic doctrine to their Muslim rulers, and Alcuin himself seems to hint at this; infact it is very likely that the Arab authorities would distinguish between different forms of Trinitarian belief.²⁴

All the Carolingian writers of the ninth century cared deeply for the Latin languages. Amalarius of Metz, Rabanus Maurus, Paschasius and some others were clerical in their interests, both monastic and courtly. The theological controversies of the day were pre destination, and about the sacrament of the altar, liturgy and ritual were preoccupation, but canon law, the scriptures and the lives of the saints

were the chief interests. Erigena was the only original thinker in Latin of the age; he and his other contemporaries were concerned with the predestination controversy were dealing essentially with the same problem as Muslim theologians with the power of God. But Arabs and Latin approached the problem quite differently, and there is no sign or possibility of mutual influence. Three writers, each in his own language outstanding, follow each other: St John Demascene, who died in the middle of the eight century, Erigena, born sixty years later, and Al-Ashari, whose lifetime just overlapped Erigena's. They belong to the same nationality and have common culture. The eighth and ninth centuries were a creative period in the development of the Roman canon. The eighth and ninth centuries were also the creative period of the great Muslim jurists, the founders of the major schools of religious law. These four fields, grammar, prosody, religious law and predestination, were common interests to Arabs and Europeans, but the linguistic and religious barriers make them all nothing more than parallelisms. There was and could be no actual link.

The first century of Abbasid rule is the classical period of the absorption of the conquered cultures into Arabic.²⁵ This coincided roughly with the Carolingian Renaissance. While the surviving Latin culture purified itself, but made little advance into new territory, Arabic widened its range to the Hellenized culture of Syria, to the Iranian culture which had Hellenic influences of its own, and to some extent to India sources. It is curious that when, much later, Europe came to translate large number of Arabic texts, it did so largely from the range of subjects now chosen for translation into Arabic. Mostly this was scientific, with exceptions such as the fables of *Kalila wa Dimna*—exactly the exception later to be made by the Latins. The Arabs did not translate the poetry or the drama of the ancient Greece, as later the Latins would not translate the classical poetry of the Arabs. At this time the translations included the *Sirr al-asrar Secreta (for secretum)* which would be ultimately be equally popular in the West, and some Indian works; the principal heritage of the ancient world usually in Hellenistic form, was translated into Arabic in the field of mathematics, astronomy, natural science, geography and above all medicine. Of original writers, the astronomer, Al-Farghani, the encyclopaedist, Al-Kindi and the Great medical writer, Al-Razi, belong to the eight century. But other great names of the original thinkers of the classic age of Islam, for example, Al Biruni, Al-Farabi, Ibn al-Haytham, Al-Ghazali, Avicenna were yet to come. The names, both of the translators into Arabic, and of the great Arab writers themselves, unknown to contemporary Europe, became well known in the twelfth century.²⁶

The two areas were alike at this time in submitting to a similar process. In both cases several different nation had to learn a new religion, and still more difficult, a new language.²⁷ In the one case those nations were 'barbarian', Germans, Franks, and Anglo-Saxons; in the other, already long civilized, Iranian, Semites,

Egyptians. In either case there were exceptions, the remnants of the former Romans in the Latin Christian World, the Bebers and other new nations in the Arabic. The differences gave all the immediate advantages to the Arabic-Speaking area, which took in both Iranian and Hellenistic cultures. The rest of the Greek speaking area remained under Byzantium. Europe inherited only the Latin part of the ancient world, and in conditions of maximum difficulty. Intellectually both sides were dominated by a small minority that consisted of the best men and was moved by the best intensions, so far as such a thing can ever be true. On neither side was the majority more self-interested or venal than on the other. It is true that ordinary men are not usually conscious of how much they have in common with strangers they do not know, and there seems to have been little sensitivity on either side towards the others. Yet with similar interests, and starting from conditions and with characteristics not very dissimilar, the two societies have gradually diverged. How far did this process go, during the course of conventional medieval period? It seems that the difference, less of attitude at the moment of separation than of language and social and religious organization taking effect with the passage of time can lead societies, almost accidentally, in different directions.²⁸

The Arabs in Spain in Eleventh and Twelfth Centuries:

No one could question that the biggest impact of the Arabs on medieval Europe was in Spain, or that through Spain the rest of the Europe received its most accurate impression of the Arabs. No one could question that it was in Spain more than anywhere that for so long the two cultures developed in parallel. There were indeed four lines in parallel, Europeans under European rule, Arabs under Arab rule, and the two converses, the Mozarabs and the Modejares. Spain was the chief source of Knowledge of Arabic philosophy and science and Islam. For some centuries, the Impact of Arabs on Europeans in Spain was the history of Spain, and yet we cannot say that it accounted for the whole Arab impress on Europe.²⁹

Europe was more aware of the East, although less passed between the two cultures there at the educated level. There was always traffic to the East, pilgrim and mercantile as well as military. Crusading hysteria affected the whole European attitude to Arab. And most perhaps at the less conscious and less articulate level. Crusade was a matter of emotion and imagination which the clergy merely rationalized. From the East came the threat of cataclysmic horrors, in turn the ‘Saracens’, the Saljuk Turks, the Mangols and the Ottoman Turks.³⁰ In Spain the emotions were pitched in a lower key, although there were pilgrims and there was a theological campaign. The recovery of European fighting moral in Spain and Sicily in the eleventh century preceded the true crusading impulse, and it always contributed to it more than it owed. Spain was not Jerusalem, and for an obvious religious reason, had less hold on the imagination, but it also seemed less dangerous to Europe, where only the Berber invasions, Almoravid and Almohad,

aroused universal interest. For the most part, the reconquest was to steady for European fears to focus on the South-West corner of the land-mass. This may even have helped Spain to become the passage through which so much cultural development passed. There were two main themes of which Spain is the chief home, the transmission of the philosophic and scientific literature, and the formation of the ideological polemical against Islam.³¹ Here this study would explore that how Spaniards and their other Frankish allies thought about their Arabic speaking neighbors, enemies, and often allies.³²

Technology Development:

Remote provincial example of this loosely associated group of cultures.³³ It is plausibly argued that stirrup stimulated all the technology of heavily armed knights, and thus the social structure of feudalism which supported these expensive fighting units. If so it did not have precisely the same result among the Arabs. The use of heavy ploughshare has also been dated to about this period, although it's full effectiveness depended on the subsequent development of the horse-collar, the harness and the horse-shoe, and the adoption in many places of three field crop rotation. This new agriculture would ultimately divide Christian Europe of the north and the west from the whole Mediterranean area, whether Christian or Muslim. The horse-collar made it feasible to exploit equine energy, but the Mediterranean rural economy, dictated by the quality of the land, could not bear the expense of the horse, a machine more efficient but more costly, those who cannot afford a costly technology will do better with what they can afford a costly technology will do better with what they can afford. It has been said that the

In medieval period, the Arab Islamic world was at its highest cultural peak, providing information, thought and ideas to the Western world by Andalusia, Sicily and the Crusader kingdom in Levant. These included Latin translations of the Greek Classics and of Arabic texts in science, Arts, Astronomy, mathematics and medicines. The Arab Islamic World also influenced by the other aspects of medieval European culture, partly by original innovations made during the Islamic golden age, including various fields such as the arts, agriculture, alchemy, music and pottery. The other contributions included technological and scientific innovations such as paper etc.

Transmission Routs from Greek and Arab world to Europe:

The whole Europe and the Islamic lands had multiple points of contact during the medieval period. The main points of transmission of Islamic learning and knowledge to Europe lay in Sicily and in Spain, particularly in Toledo.³⁴ In Sicily, following the Islamic conquest of the island in 965 and its reconquest by the Normans- Arab-Byzantine culture developed, exemplified by rulers such as King

Roger II, who had Islamic defense force, poets and scientist in his court.³⁵ The Crusades also intensified exchanges between Europe and the Levant with the Italian Maritime republics taking a major role in these exchanges. In the Levant, in such cities as Antioch, Arab and Latin cultures intermixed intensively.³⁶

In the middle ages 11th-12th centuries, many Christian scholars travelled to Muslim lands to learn sciences. The Leonardo Fibonacci (1170-1250 C.E)³⁷ Adelard of Bath (1080-1152 C.E)³⁸ and the Constantine the African(1017-1087 C.E) are the famous person who travelled towards the Arab world. From the eleventh to fourteenth centuries, a number of European students attended Muslim Universities and centers of higher learning to study Philosophy, Mathematics, astronomy, Cosmography and other subjects.³⁹ Beside the major impact of the Greeks and the Arabs on Western Philosophy, theology, and on religious thought, subsequently these impacts played an important role in Western Civilization in later medieval period.

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³⁵ Eugene, A. Myers, *Arabic Thought and the Western World*, Frederick Ungar Publishing Co, New York, 1964, p. 112.

³⁶ Ibid...

³⁷ He was a medieval Italian Mathematician, who wrote *Liber Abaci* (1202, *Book of the Abacus*), the first European work on Indian and Arabian Mathematics. (Frances Carney Gias, *Leonardo Pisano, Encyclopedia Britannica*).

³⁸ He was the twelfth century a natural philosopher, he is known both of his original works and translating many important Arabic and scientific works of Astrology, Astronomy, Philosophy, and mathematics into Latin from Latin versions, which were introduced to Western Europe. He is known as the one of the first introduce the Arabic numeral system of Europe. He stands at the convergence of three intellectual schools: the traditional learning of French schools, the Greek culture of Southern Italy, and the Arabic science of the East. (Haskins, Charles H. (1911). "*Adelard of Bath*". *The English Historical Review. Oxford Journals*. XXVI (CIII): 491–498. [10.1093/ehr/XXVI.CIII.491](https://doi.org/10.1093/ehr/XXVI.CIII.491). Retrieved 30 November 2010.)

³⁹ Ramzi Rouighi, The Berbers of the Arabs, *Studia Islamica* ,Vol. 106, No. 1 (2011), pp. 49-76

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