

The Arab Contribution to Music of the Western World

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Release Date: March 2004
Publication ID: 4052

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THE ARAB CONTRIBUTION TO MUSIC OF THE WESTERN WORLD

Background

In dealing with the subject of music in Islamic civilisation one cannot avoid falling into various arguments about the Islamic views on this art. Views on the subject have been widely debated between scholars and theologians. With the absence of any Quranic verses explicitly forbidding or permitting music, and the continuous dispute about the authenticity of the few relevant Prophet's hadeeths, the disagreement between opinions continues even to present time. Dr. Yusuf Al-Qardawi, for example, in his book *Al-Halaal wal Haraam fil Islam*, permitted music (under some conditions), saying in regard to the existing hadeeths on music:

"As for what has been mentioned by way of prophetic traditions (relating to the subject of music), all of these have been assessed to have some point or another of weakness according to the fuqahaa (scholars) of hadeeth and its scholars".

In the opinion of some academics, including some Muslims, a number of Islamic rituals have some musical relevance. The first of these is the call of prayer by the *mu'ethin*, the caller to prayer. Scholars stress that the choice of the right *mu'ethin* is to be based on his musical voice and its emotional impact¹. The second musical act is in reading the Quran where the musical voice gained popularity, especially with the development of *'ilm al-qir'aa*, "science of the recitation". The prevalence of readers such as Abdel Bassit Abdel Samad, Khalil Al-Hussary, and Al-Manshawii, are good examples of the perfection of voice, pronunciation, and tune. The chanting is evident in acts such as *Talbiya*² in pilgrimage "*Hajj*" and *Tasbeeh*³ of Eid prayers. The religious use of music including chanting among the Sufis is also well established and documented.

However, Al-Albani accepts the authenticity of at least one hadeeth which forbids music. This was narrated by Al-Boukhari who states that the Prophet (pbuh) having said:

"There will be (at some future time) people from my Ummah (community of Muslims) who will seek to make lawful: fornication, the wearing of silk, wine-drinking and the use of musical instruments (ma'azif). Some people will stay at the side of the mountain and when their shepherd comes in the evening to ask them for his needs, they will say, 'Return to us tomorrow' Then Allah will destroy them during the night by causing the mountain to fall upon them, while He changes others into apes and swine. They will remain in such a state until the Day of Resurrection".

It is left for the reader to search and take the appropriate position regarding this issue. The aim here is solely to highlight the contribution of Muslims to the development of music as a factual truth in the same manner and approach followed in other subjects dealt with in Muslim heritage. The author is neither encouraging nor criticising various opinions and reserves his own judgement on the issue.

Music in the Muslim Civilisation.

Arabs always cherished and respected good language skills, making it one of man's prerogatives of perfection and qualities. This high esteem for man's culture was the driving force behind their striving to achieve a good quality of speech (*Fasaha*) and chivalry (*Furussiya*). Consequently, the elaboration of a complex behavioural order based on a sophisticated system of manners was paralleled with a considerable development of arts and literature. Before Islam (*Jahiliya*), poetry (*Mu'allaqat*) and music had long been Arab traditions. In addition to the pursuit of chivalry, Arabs of pre-Islam spent their free time listening either to poetry or music. These two were interconnected; the poetry composition could not be successful if it did not follow a musical pattern in its verses while the music mode (*nagham*) or song (*ghina'*) is dependent on the type and form of poetry. Therefore, musical rhythm pervaded poetry adding a new dimension extending beyond *Fasaha*. Historical records, especially "*Kitab al-Aghani*" (10th century) of Al-Isfahani (897-967), showed the presence, during the early years of the Muslim Caliphate, of a number of musicians including Sa'ib Khathir (d.683), Tuwais (d.c.710), Ibn Mijjah (d.c.705-714). The spread of Islam over Arabia, Persia, Turkey and India, regions known to have possessed music traditions, brought this art into the Muslim Caliphate in its early days, reaching its apogee under the Abbassids. Muslims also translated a number of Greek musical treatises⁴, especially under the Caliph Al-Ma'mun, as part of the Bait Al-Hikma project of acquiring knowledge. The translation work included treatise of Aristoxenos, Aristotle (384-322 A.C.), Euclid, Ptolemy (90-128), and Nikomachos of Gerasa (Jordan, fl.c.100 A.C.). This inherited musical knowledge was refined and adapted to Islam's rules, as much of it was essentially secular or incorporated pagan practices⁵. Under the Abbasids, the courts of Caliphs sponsored regular poets; most of the Caliphs were themselves poets and men of literature. It was under their rule that music gained greater respect due to the works of the famous Ishaq Al-Mausili (767-850) who revived the Arabian musical tradition.

During the early times of Islam, music was considered a branch of philosophy and mathematics. In addition to his philosophical and mathematical brilliance, Al-Kindi (800-877) was the first great theoretician of music. He suggested a detailed fretting for the 'ud, and discussed the cosmological connotations of music. In using the alphabetical annotation for one eighth he surpassed the achievement of the Greek musicians. Al-Kindi was also the first to realise the therapeutic value of music. It was revealed that he tried to cure a quadriplegic boy with musical therapy⁶. He left fifteen treatises, but only five survived on music, in one of which the word music "*musiq'*" was used for the first time, in a book title.

Al-Kindi's precedent was followed by his successors who dealt with music as a branch of mathematics, or a philosophical discipline. Al-Farabi (870-950) was the next prominent scholar in the chronology. His life at the court of Saif al-Dawla Al-Hamdaní of Aleppo, also known for his love for poetry⁷ and music, gave him an opportunity to develop both his musical skills and theory. His definition of the power of music shows his deep understanding:

"the man and the animal, under the impulsion of their instincts, emit sounds that express their emotions, as they can be the one of joy or fear. The human voice expresses greater variety - sadness, tenderness, rage -. These sounds, in the diversity of its notes, cause in the person that

listens to them, such shades of feelings or passions, raising to him, controlling to him or tranquillising to him⁸".

It is thought that when Al-Farabí played the 'ud he would make his audience burst into laughter or tears, or fall asleep depending on the mood of his tune. These same sources suggest that he was the inventor of two instruments; the *rabab* and *qanun*. Al-Farabi also wrote five books on music, one of which, *Kitabu al-Musiqa to al-Kabir* "the Great Book of Music", is his master oeuvre on the theory of music in Islam⁹. In this work, he presented various systems of pitch, including one diatonic tuning to which certain microtones, or "neutral" intervals, were added. The influence of Al-Farabi continued to be felt up to the sixteenth century¹⁰. *Kitab al-Musiqi* of Al-Farabi was translated by Ibn Aqnin (1160-1226) into Hebrew, while the Latin translation was made under the titles *De Scientiis* and the *De Ortu Scientiarum*.

In addition to these great theorists of music one cannot ignore the works of Ibn Sina (Avicena) whose works, especially *al-Shifā* ("the treatment") and *al-Najat* ("the Salvation"), contained lengthy chapters on music. He treated the Greek theory of music and provided detailed descriptions of instruments (used then). Ikhwan Al-Safaa' (the brothers of Purity), with their sufi and mystical approach, took music into a new dimension. Music became a means of contemplation helping both body and soul to invoke the remembrance and worship of Allah (God). This view is highly advocated and developed by Abu Hamid Al-Ghazali (Algazel; 1058-1111) who argued for the power of music in intensifying the religious feeling and reaching the mystical experience. He distinguished between the sensual perception of music and the spiritual one. His thesis was:

"it is not possible to enter the human heart without passing by the antechamber of the ears. The musical, measured subjects, emphasise what there is in the heart and reveal their beauties and defects¹¹".

Al-Ghazali devoted large sections of his books; *Ihiā ' Ulum Al-Din* (The revival of religious sciences) and, *Kitab adab al-samā ua al-uae'dh*, to the good use of musical rhythms and songs in the spiritual life. In the former work, made at the beginning of twelfth century, he considers music to be a means for reaching the mystical union with God. These meanings were further developed by the famous Jalal Uddin Al-Rumi (1207-1273) and those who came after him. One must emphasise that these types of rhythm are those known as "*Mada'ih*", consisting mainly of vocal tunes invoking the love of the Almighty God (Subhanu Wa Ta'la) and his Prophet Mohammed (peace be upon him).

One must also mention Safiuddin al- Armawi (1216-1297) who based the intervals of the melodic modes used at his time upon a detailed systematic scale that incorporated small subdivisions within the Pythagorian scale. This consists of using the first ten letters of the Arabic alphabet to denote the positions of fingers on the strings. To denote the scale of sound level he added the tenth letter to the above letters¹².

Although Framer¹³ short-listed a total of 28 major scholars who wrote about music, their real number exceeded this figure¹⁴. This rich production resulted in widespread popularity of music described by Ribera¹⁵ as follows:

"... the pleasure of music had been diffused to such point that it was impossible in any Andalusian city to find a quiet district, street or a corner in which a person could get rid of the omnipresent sounds of musical instruments and songs".

The Muslim Influence on Western Music

The fall of the Roman Empire and the barbarian invasion of Europe caused a widespread cultural decline as wars consumed much of what was left of the Roman intellectualism. Hunger, poverty and disputes dragged European peoples into an unprecedented level of cultural regression. The church assumed the monopoly of education, fighting all ideas coming from outside its sphere under the pretext of combating paganism. Gregorius (Magnus) clearly showed his discontent when he wrote to Desiderius (d.208), Bishop of Vienne in France¹⁶:

"It came to our attention, which we cannot repeat without shame, that your Brotherhood is in the habit of teaching grammar. We took this in such a bad way and we have disapproved of it so strongly, that we have changed what we were previously saying to lament and sadness. The more abominable it is that such a thing may be said of a priest, the more we need to ascertain its truth by rigorous and veritable evidence".

This condemnation of non-Christian intellectual material, which continued until the eleventh century, disapproved of those who overstated the Greek origin of all European intellectual production including Music. Meanwhile, all that might have existed of popular music from Roman times had disappeared or was incorporated in church music, which dominated much of the Dark Ages era. This type of music consisted mainly of what is known as the Gregorian Chant, which was used to captivate and subdue the populations to the will of the church. Europe retained these attitudes until the twelfth century when a sudden awakening took place in major cultural and intellectual aspects including the arts and music. The Islamic origin of this revival has been debated with only a few genuine neutral western academics approving the theory.

The Greek Claim

The objection to any role the Muslims might have played in the birth of musical art in Europe, and the continuous false claim that it was inherited from and preserved by the Greeks, is absurd. It is a well-established fact that Europe lost contact with both the Roman and Greek heritage. The main reason behind this was the general cultural stagnation, caused by the general decline in socio-political forces and the hostility of the church to Greek learning considered pagan, as already stated. Various wars, especially with the Barbarians, destroyed manuscripts and the substitution of the Greek language with the Latin made the few Greek works spared destruction unusable. In this concern Lecky¹⁷ wrote:

"Greek was suffered to become absolutely extinct... The study of the Latin classics was for the most part positively discouraged.... the monks were too inflated with their imaginary knowledge to regard with any respect a Pagan writer."

After the fall of Rome there is not a solitary original work on music by the Greeks known to the musical theorists of Western Europe until centuries after the Arabian contact¹⁸. Furthermore, according to Farmer¹⁹ the Greeks got their music knowledge from Semitic civilisations such as Babylon, Assyria and Phoenicia. There are suggestions that Egyptians, Syrians and Arab musicians were largely employed in Greece and Rome. For Singer²⁰, the Greeks, despite their contribution, did not discover everything; he wrote:

"Intellectual leadership passed about the 8th century to people of Arabic speech and remained with them until the 13th century".

With reference to the role of intellectual state of Europe in starting this sudden revival, we let Buckle²¹ answer these claims:

"From the sixth to the tenth centuries there were not in all Europe more than three or four men who dared to think for themselves....The remaining part of the society was, during these four centuries, sunk in the most degrading ignorance. Under these circumstances, the few who were able to read, confined their studies to works which encouraged and strengthened their superstition, such as the legends of the saints and the homilies of the Fathers."

If it were not for the Muslims, most of the Greek works would not have reached Europe. In fact a number of such Greek works are only available in Arabic, including works on music such as the Problems of Aristotle, Harmonics and Canon of Euclid, Harmonics of Ptolemy. The works on organ construction of Muristus, also called Murtas in Arabic literature, were only obtained from a preserved copy in Arabic²². The European music revival, as we shall see later, had been but under the Muslim influence. Cunningham²³ points out that there was no art in which the Muslims could not have taught the Christians, despite the hostility between them. There was constant political and commercial intercourse. Mosheim²⁴ put the point across saying:

"Truth requires us to say that the Saracens or Arabs, particularly of Spain, were the principal source and fountain of whatever knowledge of medicine, philosophy, astronomy and mathematics, flourished in Europe from the 10th century onwards".

More recently, Guettat (1980) wondered why the influence of Muslim (Andalusian) music was felt in regions far from Spain, such as in the Middle East, and could not be heard in approximate Europe. Is it true that the racial and religious differences succeeded in blocking the ears of the European populations? This may indeed be considered true if we believe in the sudden re-discovery of poetry and music - similar in many aspects to that of Andalusia of the twelfth century - as claimed by many Western academics. Farmer (1970) clearly demonstrated that neither the poetic and literary production nor the church or popular songs could have contributed to this sudden revival. The question of coincidence also seems contrived.

The Contribution of Muslims to the Development of Music

The influence of Muslims on the musical revival of Europe can be detected as early as the period of the Carolingian Empire. Charlemagne tried to emulate and compete with Baghdad and Cordoba. He too invited scholars from abroad to his court and established schools²⁵. This revival was chiefly mastered by three influential scholars; Theodolfus (d.821), Claudius (d.c.839) and Agobardus (d.840), all of whom had contacts with Muslim learning as they were Goths born or educated in Spain or Southern France. In addition to his friendship with the Abbassid Caliph, Harun Al-Rashid, the renowned *Chanson de Geste* revealed that Charlemagne spent seven years in Spain²⁶.

According to some sources²⁷, Pepin and Charlemagne (9th century) expanded, to some extent, the use of church music through the introduction of some Muslim Arabic instruments. Schlesinger²⁸ is certain that these instruments came from Spain or Sicily. She pointed out that the instruments portrayed in the *Evangelarium of St. Medard* (8th century) and the *Lothair, Aureum and Labeo Notker Psalters* (9th & 10th centuries) were all Oriental instruments derived from the Egyptian or older Asiatic civilisation and disseminated in Europe mainly through the Muslims. Notwithstanding, by the eleventh century the flow of Muslim knowledge, including music, reached its apogee. The musical transfer was carried out through three main routes.

Spain and the Southern France Connection:

The social and economic intercourse between Spanish Christians and Muslims and other European Christians resulted in the dissemination of Islamic learning and art throughout Europe. The influence of Muslim music in Spanish and Portuguese music and folklore is self evident and does not need any proof. There is a considerable amount of literature on this issue confirming the deep penetration, which shaped the cultural and artistic life of these two regions under the 800 years of Muslim rule. Perhaps the earliest example of this influence is found in the collection of *Cantigas de Santa Maria*. Composed around 1252 under the orders of Alfonso X el Sabio, king of Castile and Leon, the collection consists of 415 religious songs about the Virgin Mary (May the blessing of Allah be upon her). These songs are the first known literature works, preserved with their original musical notation, in the Galician language. Detailed studies²⁹ on their structure and form have concluded that they were a direct inspiration of Arabic music as 335 of them were *Zajal*³⁰ (**figure 1**). Chase³¹ has found that the melodic patterns in the *Cantigas* closely follow the forms of the French styles *Virelai* and *Rondeau*. Apel³² linked the *virelai* to a Spanish (Andalusian) origin, while Plenckers³³ proved it to be inspired by songs known as *Al-Muwashahat*. Guettat³⁴ found the poetical form of *muwashahat* and *Zajal* in a large number of the *Ballades* and *Rondeau* styles dated from the thirteenth century and coming from the north of France such as "the beautiful Aeliz" in the Robin & Marion play of Adam le Bossu (13th century).

Similar conclusions can be made about the *Cantigas de Amigo*; the *Cancionero de Palacio* and the *Chansonier of the Arsenal*³⁵ (Saint Germain des Pres). In fact, the consensus of Western academics believe that the explanation of the appearance of *Zajal* in the West can only be attributed to the Andalusian *Muwashah*, which, in the view of some experts, itself originated from an ancient Roman poem with a similar

structure. The latter claim has never been substantiated though Arabs have always been renowned for their poetical talents and literary inventions.



Figure 1. Pictorial evidence showing a Muslim Lute player, member of a group of the Cantigas de Santa Maria of Alfonso 10th (1258).

Source: Gabrieli³⁶.



Figure 2: Another Cantigas image showing the players of U'd (Luth) and Rubab.

Source: www.cincosiglos.org/icon.htm

Another area where Muslim influence was clearly felt was in the popular poetry of the Troubadours. These medieval lyric poets, musicians or singers spread mainly in the Languedoc region in the south of France, as well as in the north of Spain and Italy. There is a growing body of evidence that troubadours were influenced by Andalusian poetry and music. The evidence taken from the poetry of Guillaume IX of Poitiers (1071-1127), a renowned provincial troubadour, is quite clear. In his study, Levi-Provencal is said to have found four Arabo-Hispanic verses nearly or completely recopied in Guillaume's manuscript³⁷. The contact

with Christians, in this subject, was established through the many thousands of Muslim prisoners, including women and young girls, who were taken to Normandie, Bourgogne, Provence, Aquitaine and Italy, especially after the fall of Balbastro. According to historic sources, Guillaume VIII, the father of the troubadour Guillaume IX, brought to Poitiers hundreds of Muslim prisoners³⁸. It is likely that Guillaume IX learnt much from some of these prisoners whom his father kept as servants. Pope Alexander II, is also known to have brought to Italy more than a thousand Muslim women³⁹. Trend⁴⁰ admitted that the troubadours derived their sense of form and even the subject matter of their poetry from the Andalusian Muslims.

The troubadours integrated Andalusian themes such as chaste and virtuous love and the idealisation of women into European poetry. Such noble themes could not be found in Western poetry before the Andalusian mode⁴¹. Nelli⁴² admitted that people of tenth century Europe, especially Provence, learnt from the Arabs new kinds of affectionate and compassionate pleasures and love, contrary to the customs of robbing, raping and massacring which swept the rest of Europe in those times. He summed it up when he wrote:

“we owe to the Orient and the Moors of Spain all what is noble in our customs.”

In fact the influence of Andalusian themes and poetry had an even more significant impact, paving the way for changing attitudes and morals which were the fundamental seeds of the Renaissance⁴³. Islam, father of monotheism, which itself prevails in the Christian doctrine, fought the polytheism which had existed before and took clear positions against the changing essence of Christianity, which replaced the sole God with intermediary levels of ranks of saints and clergy. This monotheism was the fundamental spirit of Catharism⁴⁴ and later the free spirit⁴⁵, which spread along southern European territory adjoining the Muslim Caliphate. The majority of the Troubadours, imitating Iberian musicians, believed in Catharism. Maria, Mary, (Peace be upon her) became the true object of the songs and poetry of the Spanish and French Troubadours as well as the Italian "Trovatori". The Cantigas songs provided an excellent example of refined court music, completely detached from the liturgy. Later, they carried a spiritual message of revival, addressing directly the people, in a period of violent political struggles and distrust in the corrupt clergy. This is the period when the Lauds⁴⁶, a composition of songs in praise of God, appeared reaching their apex in the thirteenth century. From this time evidence of the influence of *muwashahat* and *Zajle* has been found, namely in the lauds of the Franciscan Jacopone da Todi (13th century) and in a large number of *frottola* and other Italian songs of the fourteenth and up to sixteenth centuries. Guettat⁴⁷ and more recently Pacholczyk⁴⁸ have demonstrated the influence of the *Nawba*⁴⁹ (also spelt *Nuba*) musical system of Morocco on the Music of the Troubadours and Trouvères. Until recently, the rhythms of the *Nawba*, with their five movements and their semitones continue to influence European composers. We have the example of the Camille Saint Saëns (1835-1921), French composer and co-founder⁵⁰ of the Société Nationale de Musique (1874), who employed North African and Andalusian scenes and themes in many of his compositions, as for example in his opera «Samson and Delilah» (1868) and in «Suite Algerian» (1879).

The Spanish connection played another role by extending Muslim influence to the new world starting with Latin America. The migration of the Moriscos to Latin America transported their Andalusian knowledge and arts, including music, to that continent. Integrating with local traditions and rhythms, Zeriab's music and

melodies gave rise to a number of distinguished Latin American musical styles and dance rhythms such as the Jarabe⁵¹ of Mexico, la Cueca and la Tonada of Chile, El-Gato, El-Escondido, El-Pericon, la Milonga and la Chacarera which spread to Argentina and Uruguay, la Samba and la Baião⁵² in Brazil, la Guajira and la Danzón of Cuba⁵³. Many of these musical styles had a flamenco origin which is renowned for its Arabic connection. According to Blas Infante⁵⁴, *flamenco* originates from the Arabian word ‘fellaḥ-mengu’, a composite word used to describe a group of rural wanderers. The thesis is that when the Moriscos, most of whom were farmers, were expelled from their homes in order to avoid death, persecution or forced deportation, they took refuge among the Gypsies becoming fellahmengu. Posing as Gypsies they managed to return to their cultural practices and ceremonies including the singing. According to Infante, that is how flamenco began to germinate⁵⁵.

Musical Theory

The Muslim influence on musical theory is strongly denied by Western scholars. Even those who accept the Muslims playing some role, reject their deep involvement with the theory, limiting it to instruments only. The first to suggest the contribution of Muslim scholars and artists to musical theory was a French scholar named Laborde. In his book "Essai sur la Musique ancienne et moderne" (1780), pp.8-9, p.22, he attributed the alphabetic notation of musical notes to Muslims. The notation, which consists of the syllables (known as solmisation); **do, re, mi, fa, sol, la and si**, is widely known as Latin, borrowed from the syllables of the Hymn of St. John. The Italian musician, Guido of Arezzo (c.995-1050) is the one who is credited with its invention in 1026. A recent British Channel 4 programme on the history of music claimed that Guido was the inventor of such a system, failing to refer to any Muslim involvement⁵⁶. However Villoteau, (d.1839)⁵⁷ took the position of Laborde, admitting the Muslim influence on the theory of music. From comparing Guido's music scale with that of the Muslims, he found striking resemblances which led him to believe that the former had adopted his theory from the Muslims. He commented⁵⁸:

"according to all appearances it is this latter which served as the model for that of Guido of Arezzo".

Farmer in his monograph provided detailed analysis and critics of such views credibly demonstrating the Muslim origin of the use and invention of the notes. The phonetic similarity with the Arabic alphabet is striking:

| | | | | | | | |
|-----------------|----|----|-----|----|-----|-----|----|
| Arabic Alphabet | Mi | Fa | Sad | La | Sin | Dal | Ra |
| Musical notes | Mi | fa | sol | la | si | Do | re |

The Muslims used notation as early as the ninth century at the time of Al-Ma'mun (d.833) and Ishaq Al-Mausili (d.850). We find it in the works of Al-Kindi (d.874), Yahia Ibn Ali Ibn Yahia (d.912), Al-Farabi (870-950), Ibn Sina (d.1037), Al-Hussain ibn Zaila (d.1048) and many others. We find Dominucus Gundissalinus (d.1151) used Arabic texts for his musical definitions. The Count Souabe Hermanus of Reichenau was particularly interested in the works of Al-Kindi and his musical theory and system of notation. The musical works of both Avicenna and Averoes were also influential on European music (as were their works in medicine) particularly in Provence⁵⁹ and Montpellier⁶⁰. The works of Al-Farabi were influential on European

musical theorists as recent as the eighteenth century, teaching le rapport 5/4 (major tierce) and 6/5 (minor tierce)⁶¹.

But how did Guido know about Muslim work?

Soriano⁶² revealed that Guido had studied in Catalogna. Hunke⁶³ established that these Arabic syllables were found in an eleventh century Latin treatise produced in Monte Cassino, a place which had been occupied by the Muslims a number of times, and was the retiring place of Constantine Africanus, the great Tunisian scholar who migrated from Tunis to Salerno and then to Monte Cassino. The role of Christian scholars who spent some time studying in the land of Islam is also an important factor. It is widely known that music was taught in Andalusian colleges. Ibn Farnes (d.888) was the first to introduce it as an integral part of the department of the *quadrivium*. Zariyab (789-857) was also renowned for his teaching of music in Spain as well as for his establishment of the first conservatory in the world. Evidence shows there at least one scholar who, acquiring a vast knowledge of musical art forms from the Muslims, taught in European circles. Gerbert of Aurillac (later Pope Sylvester II) (d.1003), known for playing a very important part in the renewal of scientific thought in Europe, was also influential in disseminating Muslim musical knowledge, including their musical theory, in Europe. He studied in Andalusia and was nicknamed the Musician⁶⁴. Gerbert also taught the *quadrivium* which consisted of the four subjects in the upper division of the seven liberal arts: arithmetic, astronomy, geometry, and music. Gerbert taught Arabic numerals; evidence of this is found in "*Cita et vera divisio monochordi in diatonico genere*", a work of Bernelius (c 990), his former pupil, which contained the Arabic numerals⁶⁵. This teaching was soon spread abroad by Gerbert's pupils Bernelius, Adalboldus (d.1027) and Fulbertus (d.1028). These numerals are also found in Pseudo-Odo of Cluny (d.942) in a tract entitled "*Regulae Domni Oddonis super abacum*". Odo of Cluny, in discussing the eight tones, referred to Arabic and Jewish names including buq, re, schembs and so on⁶⁶. Meanwhile, Fulbertus is known to have taught in Chartres. Musical knowledge must have taken similar courses.

The contribution of translators and their translations were influential, particularly since the twelfth century. We find Muslim musical ideas, like the rest of subjects, appearing in many works. Ideas such as those of Al-Farabi (Alpharabius) and Ibn Sina (Avicenna) were translated into Latin and borrowed by Vincent de Beauvais (d.1264), Pseudo Aristotle (c.1270), Roger Bacon (d.1280), Walter Odington (c.1280), Jerome of Maravia (13th century) .

Latin translations of *Ihsa' Al-Ulum* of Al-Farabi was influential in Latin compilations and treatises. In the mid ninth century Aurelian of Rome, who is considered to be the first musical theorist with Remi of Auxerre, mentioned a new musical theory of eight tones, although he claimed to have obtained it from Greek sources. Pseudo Hucbald, Pseudo Bernelinus and Notker Labeo (1022) all used phonetic (alphabetic) notation, a method used first by the Muslims, especially Al-Kindi (d.874). Hermann Contract (d.1054) was deeply influenced by Muslim learning. He is credited with a number of scientific works including "De mensura astolabii" and two other treatises on music⁶⁷. In 1242 when the Christians took the Andalusian town of Murcia, a Muslim scholar Muhammed Ibn Ahmed al-Raquiti, famous for his mathematical and musical writings was retained by the Christian King to teach in his schools⁶⁸.

Impact on Instrumental Tablature

The Arabs were the first to give Europe a scientific description of musical instruments. There is common acceptance that Europe did borrow instruments from the Muslims. Engel⁶⁹ says:

"The Arabs, when they came to Europe, in the beginning of the eighth century, were more advanced in the cultivation of music, or at all events in the construction of musical instruments, than were the European nations, thus only can their astounding musical influence be accounted for."

The influence of the Muslim scheme of phonetic notation and instrumental tablature are visible in European Medieval manuscripts of music. Mitjana⁷⁰ found strange resemblances between the Spanish *vihuelistas* (15th century) and the musical notation system found in "Ma'rifat al-naghmat al-thaman⁷¹". The tablature of Adrien Le Roy, used in his books of instructions for the Lute (1557) and the Guiterne (1578), is identical to the Spanish Latin Manuscript in the Capucin convent of Gerona (see below and appendix). Hawkins⁷² (d.1789) wrote:

'With respect to the theory of music, it does not appear to have been at all cultivated in Spain before the time of Salinas, who was born in the year 1513, and it is possible that this science, as in those of geometry and astronomy, in physics and other branches of learning, the Arabians, and those descended from them might be the teachers of the Spaniards.'

The Muslims, before the tenth century, used tablature for the lute represented by letters of the Arabic alphabet, which were later substituted with numbers from 1 to 35 and up to 40. These letters and numbers indicate the position of fingers on the Lute. Farmer⁷³ provided a comparison between the notation of Al-Kindi, "Ma'rifat al-naghmat al-thaman" and that which appeared in the "De harmonica institutione" treatise as follows:

| | | | | | | | | | |
|--|----------|-------|------|------|------|------|------|------|------|
| Al-Kindi (800-877) | Symbols: | Alif. | Ba | Jim. | Dal. | Ha | Wa | Za | Ha |
| | | (A.) | (B.) | (C) | (D.) | (H.) | w | (Z.) | (H.) |
| | | | | | | | (W.) | | |
| | Notes | a | b≠ | b. | c. | cT | d. | e≠ | e. |
| <i>Ma'rifat al-naghmat al-thaman</i> ⁷⁴ | Notes | C. | D. | E. | F. | G. | a. | b. | c. |
| <i>De harmonica institutione</i> Hucbald (c.840–930). | Symbols: | A. | B. | C. | D. | E. | F. | G. | A. |
| | Notes | C. | D. | E. | F. | G. | a. | b. | c. |

This notation became the tempered system for the octave (C, D, E, F, G, A, B, C) as its tonal basis for the manufacture of instruments. Farmer provided evidence showing how a certain Graan Jayme Villanueva⁷⁵ took the idea from an Andalusian manuscript on the art of playing stringed instruments which he found in the Capucin convent of Gerona (see Appendix).

Muslim Influence on the Organum.

The organum is the oldest kind of polyphonic music, consisting of continued parallel movement of voices in fifths or fourths⁷⁶. This system is known in Arabic as *Tarkib*, which appeared in numerous manuscripts including *Kitab Al-Shifa'* of Ibn Sina (d.1037). *Al-Shifa'* describes the organum, or *tarkib* as "one beat which continues upon two strings, the note sought and that which is along with it, upon the Fourth (4/3) or Fifth (3/2), and other than these, as if these two were falling in the one time." Before Ibn Sina, we find Al-Kindi (d.874) devoting a section to a device similar to the lute, known as the Jass. This was described by Al-Khawarizmi in his "Mafatih al-'Ulum" (10th century) as the beating of the strings with first finger and the thumb, or with another sequence consisting of the thumb, first finger and thumb again. The other evidence of the use of the organum in the Muslim world is what was reported by Virgilius Cordubensis, a contemporary of Ibn Sina (11th century), of it being taught at Cordoba schools of music. He also referred to European students studying music there. But critics often suggest that the Muslims were mainly teaching homophony rather than harmony and all their musical invention was in this field. On this evidence Farmer writes⁷⁷: "careful students of musical history can judge for themselves how far the Arab claim is deserving of credence. One thing is certain, and that is that Ibn Sina unmistakably describes the performance of the simultaneous consonance of the fourth, fifth and octave, and the passage does not occur in the theoretical part of his treatise, but in the practical. Further, we have the very important evidence of the Al-Kindi document." The earliest suggestion of the appearance of organum in Europe was in the tenth century⁷⁸.

Muslim musical instruments transmitted to Europe

Language evidence from the names of a wide list of instruments clearly establish their Arabic-Muslim origins. Names such as lute, rebec, guitar and naker are all derived from the Arabic *Al-'ud*, *rabab*, *qitara* and *naqqara* (table 1). Other names shawm and dulcayna were also derived from Arabic *zamr* and *Al-zurna*⁷⁹. Not only these instruments were themselves adopted and used but they also played a fundamental role in the evolution of European music as other "European" instruments were derived from them (table 2). The *Al 'ud* (Lute), for example, was used extensively in Europe before it was transformed into other musical instruments including the guitar and mandolin. The Spanish and Portuguese gaita and the English waygh and bagpipes all derived from the Arabic *ghaita*. The *Qanun* inspired the old English and Irish harps (ninth century) and derived the Austrian (German) Zither⁸⁰. The string musical instruments known under the Fiddle were derived from the Persian *Kamancha* and the Arab *Rabab*⁸¹. European brass wind instruments like the horn and trumpet were all derived from *Al-zurna*. Some suggested that it was influenced by the Byzantine horn, which was brought to Europe in the tenth century; Byzantium was itself instrumentally influenced by the Muslims⁸². The Persian *Santur* (dulcimer), which consists of a wooden box containing between 12 and 18 cords and two mobile rows of bridges, that the interpreter executes striking the cords to both sides of the bridges with light hammers of wood, led to the rise of the keyboard based instruments including the pantaleon⁸³ (1697) and piano (18th century).

How did the Muslim instruments reach European hands? The answer to this question does not require a great deal of guessing. The visiting traders, scholars and pilgrims could easily buy such artefacts and take them home. There is also evidence that at the time of Ibn Rushd (d.1198) there was an industry, which

manufactured musical instruments some of which were exported, most probably to non Muslims, via Muslim, controlled Europe⁸⁴. The touring singers, musicians and poetry tellers, who usually were accompanied by their instruments, visited Christian towns and villages especially in northern Spain, southern France and Italy. The **Rabab**, and other folk instruments, for example often used to accompany poetry recitals. Farmer⁸⁵ acknowledged this significant role as he declared:

"Besides instruments, yet a great deal more that the instruments themselves was borrowed. The roving Arab minstrel was the chief means whereby these oriental instruments became known, and he passed on at the same time a new type of music. He may, indeed, have been the originator of the wandering minstrel class that spread all over Europe".

The influence of Muslim music and poetry on the spread of medieval jongleurs in Spain and south France is well documented⁸⁶.

Table 1. Arabic Musical Instruments and their equivalent in European language.

| Instrument in transliterated Arabic Language | Instrument in European Language |
|--|---------------------------------|
| U'd | Lute |
| Rabab | Rebec |
| Guitara | Guitar |
| Naqqara | Naker |
| A-Duf | Adufe |
| Al-Buq | Albogon |
| Al-Nafir | Anafil |
| Al-Shabbaba | Exabebe |
| Al-Tabl | Atabal |
| Al-Tinbal | Atambal |
| Bandair | Panderete |
| Zulami | Xelami |

Table 2. Some European instruments inspired and derived from Arabic instruments.

| Arabic Musical Instruments | Instruments derived from the Arabic origin |
|----------------------------|--|
| Zamr | Shawm |
| Zurna | Dulcayna, Horn and Trumpet |
| Ghaita | Gaita (Portuguese), Waygh (English), and bagpipes. |
| Juwaq | Joch |
| U'd | Guitar and Mandolin |
| Qanun | Harp and Zither |
| Ribab and Kamancha | Fiddle |
| Santour | Pentaleon and Piano |
| Nay | Flute |

The Turkish Connection

The European contacts with Turkey date back to the times of the Ottoman Caliphate when Islam became closer to Europe than any time before, spreading to a number of East European countries and the Balkans. The Ottomans defeated harassing Europeans in the east and entered Gallipoli in 1354, Constantinople in 1453, Athens in 1456 and by 1478 Serbia and Bosnia were annexed to their dominion. In 1529, they moved up the Danube and reached the gates of Vienna in 1683. A brief look at the map of the location of the Ottoman Caliphate would show that the Ottomans stood astride the crossroads of all the continents and sub-continent: Africa, Asia, India, and Europe, enabling them to control the well established major trade routes and subsequently foster important trade relations with the rest of Europe. Thus, the role of the Turkish route in disseminating various Muslim art themes and motifs, especially music, in Europe was substantial.

The Ottoman Caliphate was renowned for being the first Euro-Asian state to possess a permanent military musical band. The famous *Mehterhane*, military band, was first founded in 1299 based on the tradition inherited from their predecessors the Seljuks. The Seljuk Caliph Keykubat III introduced the use of drums and revels to announce the presentation of a *beylic*⁸⁷. The Janissary⁸⁸ soldiers embraced this *mehter* tradition and incorporated musical band usually comprising between six and nine members accompanied with instruments such as drums, *zurna*, clarinets, triangles, plates (*zil*), kettledrums of war (*kös* and *naqqara*) which were carried with the army on the backs of camels⁸⁹. The Janissary band followed the Caliph in his expeditions, mainly to be introduced in the middle of the battles to stimulate the spirit of the soldiers and at the same time to terrify the enemy with the band's vibrant sounds. Janissary bands were also set up by the viziers and the governors of provinces, symbolising their power and marking their official activities.

From the above, one can assume that European travellers heard the Janissary bands during the ambassadorial receptions when their delegates were received in Istanbul⁹⁰. The introduction of Ottoman-Turkish instruments into Europe was part of the "Turquerie" fashion which spread in Europe⁹¹. However, the real evidence came from the contact made on battlefields⁹². The defeat of the Janissaries at the gates of Vienna in 1683 leaving behind them their musical instruments was an event that led to the rise of European military bands⁹³.

Since the eighteenth century, the use of military bands extended dramatically in Europe. Under Napoleon Bonaparte French military bands were equipped with Ottoman war musical instruments such as *zil* (cymbal) and the kettledrums. He even employed them in the battle following the Ottoman approach at a precise moment before the battle. It is said that the battle of Austerlitz (1805) in which Napoléon was victorious over the combined armies of Austria and Russia, was due in part to the psychological impact of the noise of his fanfares.

Ottoman Janissary music was also influential in the works of a number of famous European composers. Examples of these include the following works; "The pilgrim of The Mecca" and "Ifigenia in Táuride" by Gluck, "March of the Janissaries from "The abduction in the serrallo" and "Patrolled alla Turkish from the Sonata for piano in The greater K. 331") by Mozart, "Zaire", "Goes Turkish" and "Military Symphony" by

Haydn and "Goes Turkish" from "The Ruins of Athens" and the finale of the Ninth Symphony⁹⁴ by Beethoven.

The Sicilian Connection

Italy, after the Lombard invasion in the sixth century, was left in cultural desolation, and the educational reforms of Charlemagne in the ninth century scarcely repaired the damage. After the arrival of the Muslims in Sicily, learning and education reached unprecedented levels that made the island a "source of both Greek and Arabic learning for Western Europe"⁹⁵ between the tenth and twelfth centuries. The dissemination of Muslim knowledge among the rest of Italian cities and Europe as a whole was given a greater impetus by the Norman occupation of Sicily. These Christian rulers allowed the Muslim civilisation to continue to flourish and accepted what they inherited and passed it easily to the rest of Europe especially in areas of their control. Two famous names of these rulers, Roger II (d.1154) and Frederick II (d.1250), are repeatedly referred to as the promoters of Muslim learning and arts in Sicily, Italy and thus Europe. Frederick II established the University of Naples (1224) and under his rule Salerno became an important college. These two institutions collected a large quantity of manuscripts while teaching in them was essentially based on Arabic manuscripts and teachers. Haskins⁹⁶ describes the role of Sicily:

Both historically and geographically Sicily was the natural meeting point of Greek, Arabic, and Latin civilisation, and a natural avenue for the transmission of eastern art and learning to the West... The distinctive element in southern learning lay, however, not on the Latin side, but in its immediate contact with Greek and Arabic scholarship, and the chief meeting-point of these various currents of culture was the royal court at Palermo, direct heir to the civilisation of Saracen Sicily.

Another source of transfer in the Sicilian connection is Constantine Africanus (d.1087). He was born in Carthage at the time of the Zirid dynasty (972-1148). He studied maths, geometry, physics and music, for thirty nine years, in the East. He went to Salerno and remained there until the brother of the Caliph (of Cairo or Baghdad) introduced him to Robert Guiscard, the king of Sicily (1015-85) who made him his secretary. He later retired to the monastery of Monte Cassino. His translation works and his contribution in transmitting Muslim science to Europe through his writings, teachings and pupils are well supported. It appears that his influence was also important in music.

Sicily, in addition to ports of Pisa, Venice and Genoa⁹⁷, each trading entrepots, must have played some roles in the transfer of music ideas and instruments to Italy and the rest of Europe. Previously, we have referred to the incorporation of Northern Italy into the heretical events that took place along the southern areas of Europe. The musical and poetry modes that flourished in Sicily under the Muslims found an echo in southern Italy and so spread northwards. Italian poetry showed this influence as well as that of the Muslim inspired Provincial rhythm. Italian instruments such as liuto, rebecca, tanbura, nacchera, theorba, Joch, canone, and mezzo canone are of Arabic origin. The mystical hymns, composed by the Franciscan monk Jacopone of Todi (1230-1306), numbered 102 hymns, more than half (52) of which were *Zajal*⁹⁸. The famous Dante Alighieri is another example showing the Muslim influence. Historians have demonstrated his borrowing from the story of the ascension of the Prophet Muhammed (PBUH) to the heavens in writing his

drama '*Divine Comedy*'⁹⁹. In the twenty eighth song of Hell, one can see the Muslim influence particularly the works of Risalat -al-Ghufran (Message of forgiveness) of Abu Ala'la Al-Ma'arri (10th century) and Mishkat al-Anwar of Ibn Al-'Arabi. The transmission of these "Andalusian" thoughts to Dante was established through his teacher, Brunetto Latini, who was sent in 1260 as Ambassador of Florence to the court of Alfonso el Sabio (1221-84) in Toledo and Seville¹⁰⁰.

The Eastern Connection

The impact of Crusades is also vitally important. The contact established between European pilgrims, fighters and merchants and the Muslim populations with their ways of life brought to the crusaders a good deal about Muslim ideas, customs, and instruments. Among these we find the design of towers and defensive castles using the round towers rather than the square ones, the use of the oblique entrance and the Barbican system of defence, the use of arrow slits as well as other military instruments. Crusaders also borrowed military musical instruments as well. Farmer¹⁰¹ confirmed that the Christian armies were equipped with no more than trumpets and horns while Muslims bands had *naqqara, tabl, kus, qas'a*¹⁰², *tinbal*¹⁰³, *tabir*, and *balaban*, all of which are instrument belonging to the drum class. They were accompanied by the *zil* (cymbals) and the *juljul* (gong) and the *jaghana* (jingling Johnny) as well as *zamer, surnay, nafir*, and *albuq*. The crusaders borrowed naker, tabel, tabor or tambour, quesse or caisse, tymbala or timbale, balaban, the jingling johnny the sumer or sumber, the dulcayna or doussaine, anafil or anafin and the albugon or albuq.

Conclusions

It appears that Muslims (of the Middle Ages), especially scholars, perceived their role in this world to consist essentially of worshipping Allah alone and assisting their human brothers to overcome the obstacles and difficulties facing them. As servants of God, they bore the task of making life easier, more comfortable and enjoyable to others but within the guidance, the *Halal* way, prescribed to them in their covenant. Thus, it is not surprising to find this dedication extends to music, a subject the lawfulness of which has been and is still being debated. Once more we find Muslims developing another art theme, raising it from the primitive ground of classicism to the high skies of the Renaissance. This paper has outlined the tremendous contribution of Muslims to the theory, notation and measurement of music. Above all, music was subjected, for the first time, to scientific rules explaining and measuring various tunes. These achievements revolutionised the way music was perceived, played and enjoyed in a time when the world, and Europe in particular, had hardly any knowledge or experience of this noble art. The strong evidence presented above has established, beyond doubt, that Muslims can rightfully claim to be the architects of this art. Europe, and the whole world, owes much of its musical culture to the Muslims.

Appendix

The Latin manuscript is dated from 1496-7 quoting a certain Jayme Salva who quotes from an Andalusian Moor:

"Here follows the art of playing the lambutum and other similar instruments, invented by Fulan, a Moor of the Kingdom of Granada.

It is marvellous that the gifts of the Holy Spirit should be poured down on infidels. I say this is for the reason that a certain Fulan by name, Moore of the Kingdom of Granada, worthy of praise in Spain among Spanish guitarists, by the impulse of the spirit of learning, has discovered the art to be given to those who have an inclination for playing the lambutum, guitar, viol and instruments similar to these. And the said Fulan says that after a good guitarist has arranged (fretted) his instrument with skill, he must take care where the semitones are in the instrument itself. Attention must also be paid as to where the semitones are in the song which is to be played on the instrument itself. And he must place a song on an instrument in such a way that the semitones of the song correspond with the semitones of the instrument; otherwise he labours in vain. The said Fulan says further, that every note which may be without a position for any of the fingers in the frets (i.e., the open string H.G.F.) is Alif (A) in their letters, which sounds A in ours. I shall place the alphabet of the Moors themselves in order; but the Moors themselves write from right to left. We Latins with the Greeks, on the contrary, write from left to right. Here follows the alphabet of the Moors....

The first fret after Alif in the instrument itself is a semitone. The second fret answers Alif by a tone. The third fret in the instrument answers Alif with a tone and semitone. The fourth fret ought to correspond to Alif by two tones. The fifth fret answers Alif by two tones with a semitone, and thus they make a *diatessaron*. The sixth fret is distance from Alif by three tones, and thus they make a tritone. The seventh fret answers Alif by three tones with one semitone and they make it a *diapente*. But you, David, do the rest: for I am tired with the weariness of many waters (which prevent me from writing).

All these instructions for playing the lambutum I have from brother Jayme Salva of the order of Preachers, son of Bernoy (or Banoy) of the linen wavers, in the diocesis of Barchin, who, filled with kindness, has explained this to me. May God be your recompense" (quoted from Frank, 1970, pp.99-101).

The above text refers, quite clearly, to a Muslim system that was written long before Jayme Salva the reference of this Latin manuscript, thus long before 1492, the year Granada fell.

Notes

¹ This is a superficial criterion as Mu'thins are often selected according to their religious character and theological knowledge as they are supposed to replace the main imam and his deputy in case of absence.

² The chanting consists of the following: "*I respond to Your call O Allah, I respond to Your call, and I am obedient to Your orders, You have no partner, I respond to Your call All the praises and blessings are for You, All the sovereignty is for You, And You have no partners with you*"

³ "Allah is Great, Allah is Great, Allah is Great, There is no Deity but Allah. Allah is Great, Allah is Great, and praise is due to Him. Allah is the Greatest, and an abundance of praise is due to Him, and glory and praise be to him morning and evening. There is no Deity but Allah, Alone, He was True to His promise, and He granted victory to His Worshipper, and He supported His troops, and He conquered the allied parties of the enemies all by Himself. There is no Deity but Allah, and we worship no one but Him, and we will sincerely follow the religion for Him, even against the wishes of the disbelievers".

⁴ Farmer, H.G. (1970) 'Historical facts for the Arabian Musical Influence', Georg Olms Verlag, Hildesheim, New York, p.10.

⁵ Touma, H. (1977), 'La Musique Arabe', Buchet-Chastel, Paris.

⁶ Jamal El-Din El-Qafti revealed how Al-Kindi helped a patient with musical therapy. He narrated that a son of Al-Kindi's neighbour became dumb. After consulting with most reputable physicians, this rich neighbour lost hope and decided to try Al-Kindi as a last resort. After consulting the boy, Al-Kindi called his music students and ordered them to play for the boy. The boy gradually became relaxed and managed to sit up and talk while music being played. Seeing this improvement, Al-Kindi asked the boy's father to consult his son regarding his business, which he rapidly did and recorded everything. However, as soon as the musicians stopped playing the boy returned to his former state. When the father requested that they should continue playing, Al-Kindi replied: "No, it was an episode in his life. No one can lengthen another person's life. Your son has fulfilled the divine term." In fact, the man's son suffered mental damage, which became so complicated that it caused his death. (see http://www.islamset.com/hip/Abu_Reidah/Abu_Reidah6.html).

⁷ Especially Abu Al-Tayyeb Al-Mutanabbi and his cousin poet Abi Firas Al-Hamadani.

⁸ Al-Farabi (870-950) '*Kitabu al-Musiqa to al-Kabir*', translated to the French by Baron Rodolphe d'Erlanger (1872-1932) and published by P. Geuthner, Paris, 1959.

⁹ Detailed analysis of Al-Farabi's thoughts is provided, in French, in the form of summarised bullet points on the following site: <http://musicologie.free.fr/derm/farabi.html>.

¹⁰ Reisch, G. (1508), '*Margarita Philosophica*' Basil, commented on Al-Farabi "Denique, Alfarabio auctor, per harmonias, gratia contemplationi et divinarum scientiarum, studia non mediocriter juvantur", quoted by Farmer, op.cit, p.38.

¹¹ Al-Ghazali (1972 edition): The revival of religious sciences / a translation of the Arabic work *Ihya' Ulum Al-Din*. Farnham : Sufi Publishing Co., , Part 3, book 8, vol. 2, page. 237; See also MacDonald, B., D. (1901) 'Emotional religion in Islam ace affected by music and singing', Journal of Royal Asiatic Society, London, page. 199).

¹² Al-Mahdi, M.S. (2002) 'Music in Muslim Civilisation', al-furqan Islamic Heritage Foundation, London, p.28.

¹³ Farmer (1970), op.cit., p.27-28.

¹⁴ The list includes: Yunus al-Katib (d.c.760), Al-Khalil (d.791), Ishaq al-Mausili (d.850), Al-Kindi (d.874), Al-Sarakhsi (d.899), Banu Musa (9th century), Ibn Khurdadhbih (9th century), Thabit Ibn Qurra (d.901), Mansur ibn Taha ibn Tahir (c.900), Ubaida ibn Abdallah ibn Tahir (d.c.912), Yhia ibn Ali Yhia (d.912), Mohammed ibn al-Mufaddal (d.920), Qusta ibn Luqa (d.932) Mohammed ibn Zakaria Al-Razi (d.932), Al-Farabi (d.950), Abul Wafa al-Buzjani (d.997), Ikhwan Al-Safa' (10th century), Mohammed ibn Ahmed al-Khawarizmi (10th century), Maslama al-Majriti (d.1007), Ibn Sina (d.1037), Al-Husain ibn Zaila (d.1048), Abul Salt Umayya (d.1134), Ibn Bajja (d.1138), Abul Hakim al-Bahili (d.1154), Mohammed Al-Haddad (d.1165), Abu Nasr ibn Mtaran (d.1191), Ibn Rushd (d.1198), Kakhr al-din al-Razi (d.1209). Additionally, one can add Yahia al-Munajjin al-Baghdadi (856-912) who wrote *Risala fi al-musiqa*, Abu al-Faraj al-Isfahani (897-967) with his book *Kitab al-Aghani* which contained some 21 volumes, Ibn Zaila (d.1048), al-Tusi (1201-1273), Qutb Al-

Din Al-Shirazi (1236-1311) and Abd al-Qadir al-Maraghi, (1353- 1434) who wrote *Jami' al-alhan, Kitab al-Musiqa, Zubdat al-Adwar and Kinz al-alhan fi l'im al- Adwar*, Ibn Zilah al-Isfahani with his book *Al-Kafi fi al-Musiqa*. For more see Aldershot, P. (1979), 'The theory of Music in Arabic writings c.900-1900', Henle, Munich.

¹⁵ Ribera, Julian (1970), 'Music in ancient Arabia and Spain : being La Música de las Cuntigas'. Da Capo, New York .

¹⁶ Stefano Cavallini (1999), 'da Marsiglia a Tunisi, da Tangeri a Limassol', la musica nella cultura del Mediterraneo, Istituto degl'Innocenti di Firenze, Italy.

¹⁷ Lecky, W.E.H. (1869), 'History of European morals from Augustus to Charlemagne', D. Appleton and Company, New York p. 215, quoted by Farmer, 1970, op.cit, p.43.

¹⁸ Farmer, 1970, op.cit.

¹⁹ Ibid., p.121.

²⁰ Singer, C. J. (1925), 'The evolution of Anatomy', Alfred A. Knopf, New York, p.67.

²¹ Buckle, T. H. (1821-1862), 'History of Civilisation in England', J.M. Roberston edit. 1904, Grant Richards, London, p.153.

²² Farmer, 1970.

²³ Cunningham, W. (1913), 'An Essay on Western Civilisation in its economic aspects' , Medieval and Modern Times, Cambridge, vol.2, p.116.

²⁴ Mosheim (1848)' Institutes of ecclesiastical History', translated by Murdock and Reid, p.332

²⁵ Campbell, D. (1926) Arabian Medicine in the Middle Ages', vol.1, 111-12.

²⁶ and claimed that he invaded Arabia.

²⁷ Schlesinger, Kathleen (1910) The Instruments of the Modern Orchestra: Vol. 1 Modern Orchestral Instruments; Vol. 2 The Precursors of the Violin Family, Charles Schribner, New York. p.329, 342,371,374,398, 399,420.

²⁸ Ibid..

²⁹ Ribera, Julian (1970), 'Music in ancient Arabia and Spain : being La Música de las Cuntigas'. Da Capo, New York.

³⁰ Click on these links to hear some samples [Nawba Ramal al-Maya Bughya \(Overture\)](#),: [Nawba Ramal al-Maya Bughya \(Overture\), Instrumental](#) - Alfonso El Sabio 10. [Cantiga 56: Gran dereit](#) - Alfonso El Sabio 2. [Cantiga 100: Santa María strela do Dia](#) - Alfonso El Sabio 11. [Nawba Iraq al-Ajam Mizan Darj-Sana 'Kouli Lmalihti': Nawba Iraq al-Ajam Mizan Darj-Sana 'Kouli Lmalihti', Intrumental](#) - Alfonso El Sabio 3. [Cantiga 406: Benvennas mayo](#) - Alfonso El Sabio.

³¹ Chase, Gilbert (1941), 'The Music of Spain'. W.W Norton and Co, New York.

³² Apel, Willi (1954), 'Rondeaux, Virelais, and Ballades in French 13th-Century Song', Journal of the American Musicological Society, 7, pp. 121-30.

³³ Plenckers, Leo J. (1982), 'Les rapports entre le muwashshah algérien et le virelai du moyen âge', I. A. El-Sheikh, C. A. Van de Koppel e R. Peters (eds.), The Challenge of the Middle East: Middle Eastern Studies at the University of Amsterdam, Amsterdam: University of Amsterdam, pp. 91-111;

³⁴ Guettat, M. (1980), 'La Musique classique du Maghreb', Sindbad, Paris.

³⁵ Ibid, p.159.

³⁶ Gabrieli, F. (1982), ' Mohammed in Europa; 1300 Jahre Greschichte, Kunst, Kultur', List Verlag, Munich, p.52

³⁷ Guettat (1980) op.cit., p.150.

- ³⁸ Hunke, S. (1969), 'Shams al-'Arab Tasta'a 'ala Al-Gharb', 2nd edition, Commercial Office publishing, Beirut.
- ³⁹ *ibid.*
- ⁴⁰ Trend, J.B (1965), 'Music of Spanish History to 1600', Krause Reprint Corp, New York.
- ⁴¹ Chailley, J.; (1969), 'Histoire musicale du Moyen Age', 2nd edition, Presses universitaires de France, Paris.
- ⁴² Nelli, René, (1974) 'L'Erotique des troubadours. Contribution ethno-sociologique à l'étude des origines sociales du sentiment et de l'idée d'amour', published thèse, 11th edition, 2 vols. Privat, Paris.
- ⁴³ Scott S.P. (1904) 'History of the Moorish Empire', 3 volumes, The Lippincot Company, Philadelphia.
- ⁴⁴ Catharism claims to return to the purity of the first Christians rejecting the Church disorders which arouse a spiritual confusion among people. This new sect, spread in 12th century, preached anticlerical evangelism rebelling against Rome's power. Its followers stretched along the southern borders of Europe adjoining the Islamic Caliphate to the South of France, North of Spain and North East of Italy encompassing the provinces of Languedoc, Aquitain, Gasconha, Auvergne, Lemosin, Delfinat, Catalonia and Vals Alpains Italians. Such area received considerable influx of Muslim influence appearing not only in cultural context but also in architecture and arts. The crusade against the Cathars (also known as the Albigeses) preached by pope Innocent III against them lasted from 1209 to 1229.
- ⁴⁵ Spread in Europe in 1300s under the influence of the Muslim sufis. Among its famous members, included Marguerite Porete, burned at the stake in Paris in 1311 and Heinrich Suso (Germany).
- ⁴⁶ The word *Lauds* (i.e. praises) explains the particular character of this office, the end of which is to praise God. All the Canonical Hours have, of course, the same object, but Lauds may be said to have this characteristic *par excellence*. The name is certainly derived from the three last psalms in the office (148, 149, 150), in all of which the word *laudate* is repeated frequently, and to such an extent that originally the word *Lauds* designated not, as it does nowadays, the whole office, but only the end, that is to say, these three psalms with the conclusion. (see <http://www.newadvent.org/cathen/09038a.htm>).
- ⁴⁷ Guettat, (1980), op., cit.pp.145-159.
- ⁴⁸ Pacholczyk, Jozef M. "The Relationship Between the Nawba of Morocco and the Music of the troubadours and Trouvères", in *The World of Music*, 25 (1983), pp. 5-16.
- ⁴⁹ *Nuba* (plural *nubat or nawbat*): a two-part "musical suite" in a single mode or *maqam*. Thirteen *nubat* make up the core of the Tunisian *maluf*. (further definitions of musical instruments and terms can be obtained from the excellent site website: <http://www.turath.org/ProfilesMenu.htm>).
- ⁵⁰ With Massenet and Bizet.
- ⁵¹ Translated as syrup in English which refers to *Sharab* in Arabic.
- ⁵² Baiao music of Brazil which originates from Arab modal melodies about the home land brought by the Portuguese and Spanish colonisers to Latin America, initially popular among the poor but later became popular (http://www.iaje.org/pdf/12003toronto_netto.handout.pdf).
- ⁵³ Evora Tony (1997), 'Origins of the Cuban music', Alliance, Madrid, , p.38.
- ⁵⁴ Blas Infante (1980) "Orígenes de lo flamenco y secreto del cante jondo,, Junta de Andalucía, Seville.
- ⁵⁵ For more on Latin America see our forthcoming articles. Also Lutfi A. A (1964), 'The epic one Arab and its influence in the Spaniard', Santiago of Chile and Francisco F.M. (1971), 'narrative Poetry Arab and epic hispanic', Gredos, Madrid.
- ⁵⁶ Broadcasted Monday, May 12th between 9:30-10:30, Channel 4.
- ⁵⁷ Villoteau, (Description des instruments de musique des orientaux'. P.858-9.).
- ⁵⁸ *ibid.*, pp.858-9.

- ⁵⁹ There was a Provençal translation of surgery written by Al-Zahrawi ('Abd al-Qasim) written long before any Latin treatise.
- ⁶⁰ The famous Latin Arabic school of Medicine of Montpellier was founded by the Muslims teaching principally medicine of Avicenna. Since 1180 it was substituted by Averros medicine.
- ⁶¹ Guettat (1980), op.cit.
- ⁶² Soriano Fuertes Hitoire de la musica Espanola', vol.1, p.152
- ⁶³ Hunke, S. (1969, op.cit.
- ⁶⁴ Ibid., p. 182.
- ⁶⁵ Ibid., p.185.
- ⁶⁶ Ibid., p.31
- ⁶⁷ "De musica lib.1" and "De monochordo lib.1."
- ⁶⁸ Casiri Miguel (1710—1791), 'Bibliotheca Arabico-Hispana Escorialensis', 2 vols., Madrid, 1760-1770, vol.2, pp.81-82 see Framer, 1970, op., cit., note 20, p.38.
- ⁶⁹ Engel, C. (1965), 'Researches into the early history of the violin family', Antiqua, Amsterdam, p.79.
- ⁷⁰ Mitjana, R. (1906), 'Le monde Oriental', p.213, cited by Farmer (1970), op. cit,p.101.
- ⁷¹ When it was written or by whom is unknown. Farmer reckons that it was written by a Moroccan sometime before 1504.
- ⁷² Hawkins, J. A (1853), 'A General History of the Science and Practice of Music', J. Alfred Novello,, London, reprint 1963, Dover Publications, New York, book 9, chapter 83, quoted by Farmer (1970), op.cit. p.267.
- ⁷³ Farmer (1970), op.cit., p.93.
- ⁷⁴ Safiuddin al- Armawi (1216-1297) also used alphabetical notations.
- ⁷⁵ See Graan Jayme Villanueva (1821), 'Viaje literario a las Iglesias de Espana', I; Llorente, Valencia, cited by Farmer (1970), op.cit.
- ⁷⁶ Farmer, 1970, op., cit, p.111, note 17.
- ⁷⁷ Ibid. p.112.
- ⁷⁸ Encycopedia Britannica (1921) vol.20, p.268.
- ⁷⁹ Farmer, 1970, op., cit. p.141.
- ⁸⁰ For pictures visit: <http://www.zithers.com/Photos.html>.
- ⁸¹ Both instruments reached Europe around 10th century. They were also taken to Africa, Asia China and Russia.
- ⁸² One of the evidence present of the influence of Muslims on Byzantine art is a rabab (rebec in Europe) depicted on a casket of Byzantine artist made between the 8th and 9th centuries and is kept in the Carrand collection at Florence.
- ⁸³ Invented by Pantaleon Hebenstreit (1667-1750), this pre-piano instrument consisted of a modification of the santur with 186 strings that were stricken by two sticks to produce the sound.
- ⁸⁴ Farmer, (1970), op., cit., p.155, note 6.
- ⁸⁵ Ibid, p.16.
- ⁸⁶ Fauriel, C.C. ((1846), 'Histoire de la poésie provençale : cours fait à la faculté des lettres de Paris', Tom. 3. J. Labitte, Paris, p.338.
- ⁸⁷ The Ottoman official. See: The Great Ottoman-Turkish Civilisation, edit. Cicek, K. Semih Ofset, Ankara, 2000
- ⁸⁸ From different nationalities, these soldiers formed the elite army, originally protecting the Caliphs but later forming the core of the Ottoman army since the 14th century.
- ⁸⁹ The Great Ottoman-Turkish Civilisation, op., cit., vol.4, p.611.

- ⁹⁰ An example of musical exchange was the visit of the French orchestra sent by Francois 1st in 1543 to play for the Sultan Suleyman (1495-1566), see *The Great Ottoman-Turkish Civilisation*, op., cit., vol.4, p.615.
- ⁹¹ The term was introduced first as "Turquesque" in 1578 when Henri Estienne (French) complained that courtiers have begun to dress "*a la Turquesque*" referring to the element of "Turkishness" in their clothing. However, Moliere (1622-1673) changed the word into "*Turquerie*" which appeared in his book, "L'Avare" (first published in 1666), as he wrote: "Il est turc la Dessus, mais d'une **turquerie** a desesperer tout le monde". See Lihou, J.P. (1977), 'L'avare : texte intégral!', volume 2, Dessain et Tolra, Paris, p.5.
- ⁹² Calisir Ferdun, (1972) 'Turkiye'nin ilk bandosu', K.K.K., bando ve Armoni Muzikasi, Ankara, p.6. cited in *The Great Ottoman-Turkish Civilisation*, op., cit., vol.4, p.620.
- ⁹³ Among other items Europeans seized and later adopted was coffee. Historic sources talk of the seizure of two bags full of coffee beans from the Janissaries which introduced this beverage to Europe. For further information consult our forthcoming article on coffee.
- ⁹⁴ For more information see See Shaw, S (1976), 'History of the Ottoman Empire and Modern Turkey'. Vol. 1 1280-1808, Cambridge University Press and Inalcik, H. (1997), 'The Ottoman Empire. The Classical Age 1300-1600', Orion Books, London.
- ⁹⁵ Hearnshaw, F.J.C. (1967), 'Medieval contributions to modern civilisation', Dawson of Pall Mall (first printed in 1921 by Geroge G. Harrap & Co), London, p.121.
- ⁹⁶ Haskins, C. H.(1915), 'The Normans in European History', Houghton Mifflin Company, New York, p.235,238.
- ⁹⁷ These were the main European centres of imported Muslim goods.
- ⁹⁸ Farmer, op., cit.,.
- ⁹⁹ Asin Palacios (1919) 'la Scatalogia Musulmane en la Divina Comedia', Translated by (1926), Islam and the Devine Comedy', London. Asin Palacios, Miguel, (1871-1944), 'Islam and the 'Divine comedy' ', translated from the Spanish Sunderland, H., 1968, 1st. ed., new impression, Frank Cass, London.
- ¹⁰⁰ Ibid..
- ¹⁰¹ Farmer, op., cit., p.18.
- ¹⁰² Qas'a and naqqara were used mainly in the East.
- ¹⁰³ Tinbal, tabir and balaban were Persian and Turkish instruments.

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