Part 2: Language and Literature

Chapter 55: Architecture

A. The First Three Centuries of Muslim Architecture

Arabia, at the rise of Islam, does not appear to have possessed anything worthy of the name of architecture. Only a small proportion of the population was settled and lived in dwellings which were scarcely more than hovels. Those who lived in mud-brick houses were called *ahl al-madar*, and the Bedouin, form their tents of camel's hair cloth, *ahl al-wabar*.

The sanctuary at Mecca, at the time of Prophet Muhammad, merely consisted of a small roofless enclosure, oblong in shape, formed by four walls a little higher than a man, built of rough stones laid dry. Within this enclosure was the sacred well of Zamzam.

When Prophet Muhammad, as a result of the hostility of the unbelieving Meccans, migrated to Medina, he built a house for himself and his family. It consisted of an enclosure about 100 cubits square of mud-bricks, with a portico on the south side made of palm trunks used as columns to support a roof of palm leaves and mud. Against the outer side of the east wall were built small huts (*hujarat*) for the Prophet's wives, all opening into the courtyard. We have the description of these huts, preserved by ibn Sa'd,[1] on the authority of a man named 'Abd Allah ibn Yazid who saw them just before they were demolished by order of al-Walid. "There were four houses of mud-bricks, with apartments partitioned off by palm branches, and five houses made of palm branches plastered with mud and not divided into rooms. Over the doors were curtains of black hair-cloth. Each curtain measured 3 x 3 cubits. One could reach the roof with the hand." Such was the house of the leader of the community.

The Dome of the Rock of Jerusalem, the oldest existing monument of Muslim architecture, was built by the Caliph 'Abd al-Malik and completed in 72/691. It was an annular building and consisted of a wooden dome, set on a high drum, pierced by 16 windows and resting on four piers and 12 columns, placed in a

circle. This circle of supports are placed in the centre of a large octagon, averaging about 20.59 m a side, formed by eight walls, each pierced by five windows in their upper half. There was a door on each of the four sides of the octagon.

The space between the circle and the octagon being too great to be conveniently spanned by single beams, an intermediate octagon was placed between the two to provide the necessary support for the roof. The two concentric ambulatories thus formed were intended for the performance of the *tawf*. The piers and columns were so planned that, instead of concealing one another, they permit from almost any position, a view of right across the building. A twist of about two and half degrees was given to the central ring of supports, with the result that an observer entering any door can see not only the central column in front of him but also the column on the far side.

The exterior was always panelled with marble for half its height, as it is today, but the upper part was originally covered with glass mosaic (*fusaifisa*) like the inner arcades. This was replaced by the present coating of faience by Sultan Sulaiman in 959/1552. The harmony of its proportions and the richness of its decoration make the Dome of the Rock one of the most beautiful buildings in the world.

The Great Mosque of Damascus

ʻAbd al-Malik died in 86/705 and was succeeded by his son al-Walid, who immediately began the construction of the Great Mosque of Damascus. A curious situation had prevailed here since the conquest. A great sanctuary of a Syrian god existed here, consisting of a *temenos*, or sacred enclosure, measuring 100 m from the north to south and 150 m from the east to the west, set in an outer enclosure over 300 m square. Within the *temenos* was a temple.

In the fourth century Christianity became the State religion and Theodosius (379 – 395 A.D.) converted the temple into a church.[2] After the Arab conquest, the *temenos* was divided between Muslims and Christians. Ibn Shakir says that they both "entered by the same doorway, placed on the south side where is now the great *mihrab*; then the Christians turned to the west towards their church (i.e. the converted temple), and the Muslims to the right to reach their mosque, presumably under the southern colonnade of the *temenos* where is now the *"mihrab* of the Companions of the Prophet."

As for the corner towers, ibn al-Faqih (p. 108) says, "The minarets (*mi'dhanah*) which are in the Damascus Mosque were originally watch towers in the Greek days. . . When al-Walid turned the whole area into a mosque, he left these in their old condition." Masʻudi[3] says, "Then came Christianity and it became a church, then came Islam and it became a mosque. Al-Walid built it solidly and the *sawamiʻ* (the four corner towers) were not changed. They serve for the call to prayers to the present day." This state of affairs lasted until al-Walid, after bargaining with the Christians, demolished everything except the outer walls and the corner towers and built the present mosque.

The mosque had a court (*sahn*), an oblong rectangle, surrounded on three sides by a portico. On the

South side was the sanctuary nearly 136 m in length and a litter over 37 m in depth, formed by three arcades running parallel to the south wall. A broad transept, running from north to south, cut these arcades into two nearly equally halves, each half consisting of 11 arches. Above these arcades was a second tier of small arches, there being two of these small arches to every one of the main arches below. The arched openings were filled with stucco lattices, and must be regarded as windows. The interior was adequately lit, even when the doors of the main arches next to the *sahn* were closed.

The decoration consisted of marble panelling (some parts of the original panelling exist next to the east entrance) above which ran a golden *karmah* or vine-scroll frieze, and above that was glass mosaic (*fusaifisa*) right up to the ceiling. A considerable amount has survived the three fires of 462/1069, 804/1401, and 1311/1893, and may still be seen under the west portico (over 34 m in length and nearly seven metres high), where the famous panorama of the Barada (the river of Damascus) is in full view. When intact the surface of the *fusaifisa* must have been greater than in any building in existence! The Great Mosque of Damascus was rightly regarded by medieval Muslims as one of the Seven Wonders of the World. Al-Walid also enlarged and rebuilt the great Mosque of Medina in 89/708 wherein the concave *mihrab* appeared for the first time.

Another building due to al-Walid was the audience hall and *hammam*, known today as Qusair 'Amrah, in Transjordan. It consists of an audience hall about ten metres square, with two slightly pointed transverse arches supporting three tunnel-vaults. There is a vaulted recess on the side opposite the entrance, with a small vaulted room on either side of it. A door on the east side gives access to the *hammam*, which consists of three small rooms successively covered by a tunnel vault, a cross vault, and a dome. The latter was the *calidarium*, or hot chamber, and under the floor are hypocausts exactly as in a Roman bath.

But the most remarkable of all are the paintings which cover the walls, mostly scenes from daily life, a hunting scene, and figures symbolizing history, poetry, and philosophy with the words in Greek above their heads. The dome of the *calidarium* was painted to represent the vault of heaven, with the Great Bear, the Little Bear, the signs of the Zodiac, etc. But most important of all was the painting of the enemies of Islam defeated by the Umayyads, with their names written above them in Greek and Arabic: Aaisar (the Byzantine Emperor), Rodorik (the Visigothic King of Spain), Chosroes, Negus (the King of Abyssinia), and two more names which have been obliterated.

Painting, contrary to the popular idea, is not forbidden by any passage in the Qur'an, and hostility to it took proper theological form only towards the end of the second/eighth century.[4]

To sum up, the monuments of Umayyad architecture are really magnificent structures of cut stone with arcades resting on marble columns, splendidly decorated internally with marble panelling and mosaic (*fusaifisa*). The mosques are nearly always covered with a gable roof. The minarets were tall, square towers, derived from the church towers of pre-Muslim Syria, and the triple aisled sanctuaries were due to the same influence. Umayyad monuments exhibit a mixture of influences, Syria occupying first place

and Persian second, while Egyptian influence is definitely demonstrable at the end of this period at Mushatta.

Umayyad architecture employed the following devices: the semi-circular, the horse-shoe and the pointed arch, flat arches or lintels with a semi-circular relieving arch above, joggled voussoirs, tunnel-vaults in stone and brick, wooden domes, and stone domes on true spherical-triangle pendentives. The squinch does not appear to have been employed. But we know from the descriptions of early authors that a type of mosque which prevailed in Iraq had walls of bricks (sometimes of mud-bricks) and its flat timber roof rested directly on the columns without the intermediary of arches. Here we have a direct link between the ancient Persian audience-hall (*apadana*) and the flat-roofed portico (*talar*) of more recent Persian palaces.

At about this time the Aqsa Mosque at Jerusalem was partly rebuilt by the Caliph al-Mahdi. Recent research enables us to affirm that it then consisted of a central aisle, 11.50 m wide, with seven aisles to the right and seven to the left, each about 6.15 metres in width, all covered by gable roofs and all *perpendicular* to the *qiblah* wall. There was a great wooden dome at the end of the central aisle. On the north side was a large central door with seven smaller ones right and left, and 11 "unornamented" ones on the eastern side.

This mosque had a great influence on the Great Mosque of Cordova built in 170/786 – 787 by ʻAbd al-Rahman I, the last survivor of the Umayyad family. It was added to on three occasions but this earliest part still exists, as at Jerusalem, the aisles, of which there are 11, all run perpendicular to the back wall, they are all covered by parallel gable roofs, and the central one is wider than the rest. The influence of Syria in Spain at this time is not surprising, for Spain was full of Syrian refugees.

Another building of this period of great importance in the history of architecture is the Cistern of Ramlah in Palestine; it consists of a subterranean excavation eight metres deep divided into six aisles by five arcades of four arches each, all of which are pointed and appear to be struck from two centres, varying from one-seventh to one-fifth in span apart. And there can be no doubt about the date, for on the plaster of the vault is a Kufic inscription of Dhu al-Hijjah 172/May 789. It is, therefore, centuries earlier than the earliest pointed arches in Europe.

The Arabs first set foot on the North African soil as conquerors in 19/640 under the courageous command of ʻAmr ibn al-ʻAs. The whole of Egypt was occupied within less than two years and ibn al-ʻAs made the military camp at al-Fustat, a site south of modern Cairo. Al-Fustat continued to be the capital of Egypt until the Fatimids in 360/969 founded Cairo. ʻAmr constructed a simple mosque at al-Fustat, the first in Africa, in 20 – 21/641 – 642. Enlarged and improved under the Umayyads, this structure, in the course of time, grew into the celebrated mosque of al-Fustat.

The mosque of ʻAmr was first enlarged at the order of Caliph Muʻawiyah in 53/6735 and four minarets were introduced in any Muslim structure.

The next major enlargement of this mosque took place during the reign of Caliph al–Mamun in 212/827 at the hands of ‘Abd Allah ibn Tahir, Governor of Egypt. Since then it has been repaired and rebuilt more than once.

The mosque of ‘Amr is now a big enclosure. The side walls were each pierced by 22 windows lighting the 22 aisles. There were three *mihrubs* and seven arcades in the sanctuary, each arcade consisted on 19 arches on 20 columns. The arcades were all braced with decorated tie–beams.

We must now speak of the great mosque of Susa on the gulf of Gabes which the inscription of its wall tells, was built by Abu al–‘Abbas ibn al–Aghlab in 236/850 – 51. It consists of a perfectly regular rectangle measuring 49.39 m x 57.16 m internally, and irregular annexes to east and west. The *sahn*, measuring roughly 41 m x 22.25 m is surrounded by low arcades of slightly horse–shoe form, resting on squat T–shaped piers. There are 11 arches to the north and south and sit to the east and west. These arches are of horse–shoe form, the maximum span of each being equal to the space between the piers below. The sanctuary consists of 13 aisles, formed by 12 arcades of six arches running from the north to the south, each divided into six bays by other arcades running from the east to the west.

Internally, it is perfectly plain except for a splay–face moulding, immediately above which is a fine inscription frieze in simple undecorated Kufic, the maximum height of the characters being 28 m. The frieze in which they are carved curves forward slightly to compensate for the fore–shortening and thus help the observer at ground level. This is the earliest known example of this treatment which passed into Egypt with the Fatimids and appears in the Mosque of al–Hakim, 380 – 403/990–1013.

The Great Mosque of Samarra was built by the Caliph al–Mutawakkil; the work began in 234/848 – 49 and finished in Ramadan 237/February – March 852. It was the largest mosque ever built, for its outer walls form an immense rectangle of kiln–baked bricks measuring roughly 240 m deep internally by 156 m wide (proportion approximately as 3:2); its area, therefore, is nearly 38,000 metres square. Only the enclosing walls have been preserved. The mosque proper as surrounded by an outer enclosure, or *ziyadah*, on the east, north, and west sides and air photographs show that the great rectangle thus formed stood in a still greater enclosure measuring 376 m x 444 m. The minaret, the famous Malwiyah, stand free at a distance of 27 ½ m from the north wall of the mosque.

There is a socle three metres high on which rests a spiral tower with a ramp about 2.30 m wide, which winds round in a counter–clockwise direction until it has made five complete turns. The rise for each turn is 6.10 m but as the length of each turn is less than the previous one it follows that the slope inevitably becomes steeper and steeper. At the summit of this spiral part is a cylindrical storey, decorated with eight recesses, each set in a shallow frame. The southern niche frames a doorway at which the ramp ends; it opens onto a steep staircase, at first straight then spiral, leading to the top platform, which is 50 metres above the socle. From eight holes to be seen here Herzfeld concluded that there was probably a little pavilion on wooden columns. A few years later, between 246 – 247/860 – 861, another immense mosque was built by the same Caliph at Abu Dulaf to the north of Samarra.

Ten years later, important works were carried out in the Great Mosque of Qairawan by Abu Ibrahim Ahmad, who reduced the width of the central aisles by about 1.20 metres by constructing two new arcades in contact with the old ones. The arches of these arcades are pointed horse-shoe arches instead of sound horse-shoe arches like those with which they are in contact. He also built three free-standing arches and one wall-arch of the same type to carry a fluted dome in front of the *mihrab*. They rise to a height of 9.15 metres and the square thus formed is terminated above the cornice, its top edge being 10.83 meters from the ground. On it rests the octagonal zone of transition, 2.15 metres in height, which is formed by eight semi-circular arches springing from colonnetes resting on little corbels inserted in the cornice just mentioned.

The dome, which is 5.80 metres in diameter, has 24 ribs, each springing from a little corbel, between the ribs are concave segments, 30 cm deep at the base and diminishing to nothing at the apex. The whole composition is charming. Externally, the dome resembles a cantaloupe melon, with 25 convex ribs (corresponding to the 24 concave segments) which taper to nothing at the apex. Abu Ibrahim's work was carried out in 248/862. He also lined the *mihrab* with a series of very beautiful carved marble panels assembled in four tiers of seven panels each, the total height being 2.70 m. He also decorated the face of the *mihrab* and the wall surrounding it with lustre tiles about 21 cm square. The marble panels and the tiles were imported by him from Iraq and the latter constitute the oldest examples of lustre pottery of certain date.

It was during the reign of Ahmad ibn Tulun (254 – 270/868 – 884), the first Muslim sovereign of independent Egypt, which Muslim architecture properly developed in the Nile Valley. He was son of a Turkish slave and was born and brought up in Samarra. He proved to be a great administrator and a great builder. Al-Qata'i, the new quarter of al-Fustat, was adorned as there was a vast ground in front of the palace where polo matches took place. The palace had nine gates and one of them was called Bab al-Salat (Gate of Prayer). He also built a hospital at an expense of 60,000 dinars.

But his greatest work, which still stands, is his famous mosque; it cost him 120,000 dinars.[6] It exhibits strong influence at the Samarra school as ibn Tulkun himself came from Samarra and his architects and craftsmen too were mostly Iraqis.[7] This Iraqi impact is clearly visible in the piers of the mosque and in its ornamental work in wood and stucco.

The mosque of ibn Tulun is built on the outcrop of a rock and impresses the visitor by its great size and the noble simplicity of its plan. It consists of a *sahn* 302 square feet surrounded by *riwaqs*, five aisles deep. There are 13 pointed arches on each side. The sanctuary is formed by five arcades 17 arches each. The arches are surrounded by a continuous band of ornament. Above runs a broad frieze of stucco rosettes each in an octagonal frame.

The varieties of designs some composed of straight lines, others triangular, and still others circular and interlacing, are extra-ordinary. The windows form one of the most beautiful features of the mosque. They are 128 in number. Their pattern is a mesh of equilateral triangles by grouping six of which we can

form hexagons. The minaret, which is built of hive-stone, is almost a copy of the Malwiyah of Samarra. About 1/17th of the Qur'an is inscribed in beautiful Kufic characters on the wooden frieze round the inside of the building just below the flat timbered roof.8

Tulunid Egypt could also boast of a very unusual structure; it was the palace of Ahmad ibn Tulun's son, Khumarawaih (271 – 282/884 – 895). The walls of its golden hall were covered with gold and decorated with bas-reliefs of himself, his wives, and his songstresses.9 These life-size figures were carved in wood.

Under the 'Abbasids the Hellenistic influence of Syria was replaced by the surviving influence of Sassanian Persia, which profoundly modified the art and architecture, and this gave birth to the art of Samarra, the influence of which extended to Egypt under ibn Tulun and even Nishapur and Bahrain. In palace architecture there was a vast difference between one of the Umayyads and that of the 'Abbasids, partly due to the adoption of Persian ideas of royalty which almost deified the king; hence, elaborate throne-rooms, generally domed, for private audience, preceded by a vaulted *liwan* (or four radiating *liwans*) for public audience. The *baits* also were different, following the type of Qasr-i Shirin and not the Syrian type of Mushatta and Qasr al-Tuba.

The scale was immense and axial planning was a marked feature. But all are built of brick and a great part of the basest of materials – mud-brick – hidden by thick coats of stucco. A new type of pointed arch appears – the four centred arch. The earliest existing squinches in Islam date from this period. An important innovation was the introduction of lustre tiles, the earliest examples being those brought to Qairawan from Iraq in 248/862. Bands of inscription were usually made to stand out on a blue background. But the wide-spread influence of the 'Abbasid art did not extend to Spain where the Umayyad art, brought thither by Syrian refugees, was still full of life.

B. Muslim Architecture in Later Centuries

1. Muslim Architecture in North Africa

The Fatimids

When the Fatimids came to power in Egypt in 358/969, they built a new city north of al-Fustat and called it al-Qahirha (Cairo). Since then Cairo has always been the capital of Egypt. The great mosque of al-Azhar was also built almost at the same time (361/972). The original sections of al-Azhar, which still exist, are built in brick and have pointed arches. The minaret is of the heavy square type. The next Fatimid mosque, completed by al-Hakim in 403/1012, follows the al-Azhar plan and has a cupola of brickwork supported on an octagonal drum above the prayer niche. The triumph of stone over brick, initiated by al-Hakim, was not affected until the beginning of the sixth/12th century. The first appearance of corbelled niche is found in the mosque of al-Qamar (519/1125). This pillared mosque displays bold designs and austere Kufic inscriptions.

The grandeur of Fatimid architecture may well be imagined from the testimony of the massive gates of which three are extant in Cairo: Bab Zawilah, Bab al-Nasr, and Bab al-Futuh.[10]

The Mamluks

While the Tulunid and Fatimid architecture in Egypt was inspired by Iraq and Iran respectively, the Mumluk monuments were influenced by the Ayyubi School of Syria. The Mumluks produced some of the most exquisite structures. Made of fine and durable stone, these monuments are distinguished for their strength and solidity. Their simple decorative motif assumes infinite grace.

Mamluk monuments may be roughly divided into three categories: the *madrasah*-mosque monuments, the citadels, and the hospitals, besides other public works like canals and aqueducts. The *madrasah* type was first introduced in Egypt by Sultan Salah al-Din Ayyubi of the Crusade fame. Although none of these institutions exist today, their impact may easily be noticed in the collegiate mosque of Sultan al-Hassan (748 – 63/1347 – 61).

One of the early monuments of the Mamluk period is the Great Mosque of Baibars (658 – 676/1260 – 1277). It was built in 668/1269. Napoleon used it as a fort when he was in Egypt. Al-Malik al-Mansur Saif al-Din Qalawun (678 – 689/1279 – 1290), a great builder, erected a hospital connected with a *madrasah* and a mausoleum with its remarkable arabesque tracery and fine marble mosaic. This hospital, known as al-Maristan al-Mansuri, was completed with the mosque and the attached school in 683/1284. It had special wards for segregating patients of various diseases and contained laboratories, dispensaries, baths, kitchens and store-rooms.[11]

His son and successor al-Nasir (692 – 740/1293 – 1340) surpassed him in the construction of public works. He dug a canal connecting Alexandria with the Nile employing 100, 000 men, built an aqueduct connecting his far-famed citadel al-Qasar al-Ablaq (the place of varied colour) at Cairo with the river, founded 30 mosques at various places in his kingdom, and provided for the public use drinking fountains (*sabils*), baths, and schools. Inside his citadel he built a mosque the material for which was brought from ‘Akka.

Another noteworthy builder among the Mamluks was al-Nasir’s son, Sultan Hassan, whose collegiate mosque is the most splendid example of Mamluk architecture. It consists of a square *sahn* (central court) which is flanked by four *liwans* (halls) forming the four arms of a cross. Perhaps these unique cruciforms were each meant for the four major schools of Muslim theology. Behind the *qiblah* wall of this mosque is the mausoleum of Sultan Hassan which was built in 767/1363. It is surmounted by a large dome made of bricks. The pendentives are in wood. In its general appearance it seems to have been inspired by the Sultaniyyah tomb of Sultan Khuda Bandah (d. 706/1306).

During the Mamluk period the use of brick was abandoned in minaret construction in favour of stone. The cruciform plan of school-mosque structure was perfected. Domes, renowned for their lightness, beauty of outline, and excessively rich decoration, were constructed. Stones of different colours in

alternate courses (*ablaq*) were utilized for striped masonry and decorations. Geometrical arabesques and Kufic letterings were also profusely used.

Although the last hundred years of the Mamluk rule are a period of decline, several impressive monuments of that period have escaped the ravages of time and turmoil. For instance, the mosque and mausoleum of Barquq (785 – 800/383 – 1398), the Mosque of Qa'it Bay (873 – 900/1468 – 1495) and the mosque of al-Ghauri (906 – 922/1500 – 1516). The Mosque of Qa'it Bay consists of a mosque proper, a tomb, a fountain, and a school. It is made of red and white stone and the dome is decorated with a charming network of foliage and rosette. Elaborate arabesque ornamentation does not seem to have affected its traditional vigour and virile elegance.

Qairawin

During the reign of Caliph Mu'awiyah, his famous general, 'Uqbah ibn Nafi' invaded the Magrib (the land west of Egypt) and founded the famous military city of al-Qairawan (49/670) south of Tunis. 'Uqbah built the mosque and his headquarters in the centre and grouped dwellings around them just as it had been done at other military towns of al-Kufah, Basrah, and al-Fustat.[12] The famous mosque of Qairawan, the fourth most sacred Muslim sanctuary in the world, was built several times by the successors of 'Uqbah and finally by the Aghlabid ruler, Ziadat Allah I (202 – 223/817 – 838).

The Qairawan mosque is a big oblong enclosure. The *sahn*, trapezoidal in shape is entirely paved with marble. The arcades on the north side rest on columns, but the others rest on rectangular piers with two friezes with standing columns attached to their front face. The sanctuary, like the Cordova mosque sanctuary, is a hall of columns. It is divided into 17 aisles by 16 arcades. Each of these arcades consists of seven arches. They are all of the round horse-shoe type. The *mihrab* as well as the surrounding structure from top to bottom is constructed of white marble covered with carvings. Part of this decoration consists of inscriptions; the rest forms arabesques of various patterns.

Round the *mihrab* are exquisite columns, also made of marble. There is a fine pair of orange-red marble columns situated in front of the *mihrab* which is actually a recess, horse-shoe in plan. It is lined with a series of marble panels, 28 in number. The semi-dome has a wooden lining covered with a coating to which is applied the painted decoration consisting of vine scrolls forming loops, filled in most cases by a five-lobed vine leaf and a bunch of grapes.

The face of the *mihrab* is decorated with lustre tiles, 139 in number.

At the northern end of the sahn stands the famous minaret in great prominence on a square base. It has three storeys all squarish or rectangular. At the top is a dome. The minaret is made of bricks. This is the oldest minaret on the African soil and is quite different from the spiral *malwiyahs* of the mosques of Samarra and the mosque of ibn Tulun.

In this region of al-Magrhrib is found perhaps the earliest monument of Muslim military architecture. It is

known as Qal'ah Bani Hammad. This citadel was built by Hammad bin Yusuf al-Barbari in the province of Constantine (Algeria) in 370/980. It contains a grand mosque, a reservoir, a palace, and some other constructions that were probably used for administrative purposes. The mosque contains a square minaret in the style of Qairawan but, unlike Qairwan, there are no corridors. The citadel is in ruins now.

2. Muslim Architecture in Spain

Muslim architecture in Spain is considered a great marvel of aesthetic ingenuity. The magnificent mosque and palaces, gardens and citadels, fountains and aqueducts, public baths and private dwellings that 'Abd al-Rahman I (139 – 172/756 – 788) and his successors built at Cordova, Seville, Granada, and other cities of this western most outpost of Islamic culture, were unparalleled in the entire civilized world.

Spain was conquered by the Arab generals of the Umayyad Caliphs between 93/711 and 527/1132. The capital of the Spanish province of the Empire was Cordova. Soon Arab settlements, especially Syrian, sprang up everywhere. It was these Syrians whom the Governors of Cordova employed as artisans and architects for new constructions,[13] and "the city was adorned with numerous beautiful structures."[14] It is, therefore, natural that Muslim architecture in Spain mostly exhibits Syrian features.

But a systematic embellishment of Spanish towns, with exquisite structures, actually started when 'Abd al-Rahman I found the independent Umayyad Kingdom of Spain. This process lasted until the death of ibn Ahmar (d. 671/1272), builder of the famous castle and palace of Alhambra.

During the reign of the Umayyad Caliphs, Cordova grew into the most magnificent city in the West. "The jewel of the world," according to a contemporary Saxon nun,[15] contained 113,000 homes, 21 suburbs, 700 mosques,[16] and 300 public baths.

One of the first projects of 'Abd al-Rahman I was to build an aqueduct for the supply of pure water to the capital. He also built a wall around the city and erected for himself a palace called Munyat al-Rusafah outside Cordova in imitation of the palace built by his grandfather, Caliph Hisham, in northern Syria.

'Abd al-Rahman also laid the foundation of the great mosque of Cordova in 171/786. It was finished in a year at a cost of 80,000 dinars (£40,000).[17] It is the third largest mosque in the world covering an area of 26,500 square yards. It is a vast rectangle, free on all sides. Covered porticoes surround it on every side except the southern where there are 17 arches. The sanctuary is a huge hall of 19 aisles, the roof of which rests on 18 arcades. It could once be entered from the street by 13 doors. The *sahn* is surrounded by porticoes.

The sanctuary of this mosque is a forest of columns. They exhibit great variation of types. Some are smooth, others fluted, and a few even have spiral flutings. The arcades, too, are of a remarkable design.

The mosque underwent several improvements and enlargements at the hands of successive rulers. For instance, 'Abd al-Rahman III built a minaret 73 cubits high "measured to the highest point of the open

dome pavilion. On the summit of this dome are golden and silver apples. Two were of pure gold and one of silver. Below and above each were lilies very beautifully worked out, and at the end of the span was a little golden pomegranate."[18] Similarly, al-Hakam built a dome in front of the *mihrab* and it was decorated in gold mosaic.

Although the architectural pattern of the great mosque, with its aisles running parallel to the back wall, the horse-shoe arches, the parallel gable roofs, and the arcades around the *sahn*, show clear Syrian inspiration, the double tier of arcades are the most original features of the great mosque.

'Abd al-Rahman III (207 – 238/822 – 852) also erected a palatial mansion and called it al-Zahra', naming it after his wife. It stood on one of the spurs of the Sierra Morena overlooking the Guadaliquivir (*Wadi al-Kabir*). It was started in 221/836. Marble was brought from Carthage and Numidia. Columns as well as basins, with golden statures, were imported from Constantinople. It took 10,000 workmen to build it in about 20 years. The palace had 400 rooms and apartments. The eastern hall was adorned with fountains, in which were placed golden statues of animals, set with precious stones. Water flowed through the mouth of these beautiful figures. The audience chamber was an exquisite piece of workmanship in marble and gold studded with jewels.

The seventh/13th century citadel-castle of Alhambra (the Red Palace) built by ibn Ahmar (671/1272) in Granada is another great architectural legacy of the Muslims in Spain. It is situated on a hilly terrace on the remains of an earlier Umayyad citadel. It was enlarged and embellished by his three successors.

"This acropolis of Granada with its exquisite decoration in mosaics, stalactites and inscriptions, was conceived and constructed" on a grand scale and is without dispute "the last word in such workmanship."[19] In the words of Amir Ali, "The towers, citadels, and palaces (at Alhamabra), with their light and elegant architecture, the graceful porticos and colonnades, the domes and ceilings still glowing with tints which have lost none of their original brilliancy, the airy halls, constructed to admit the perfume of the surrounding gardens, the numberless fountains over which the owners had such perfect control, that the water could be made high or low, visible or invisible at pleasure, sometimes allowed to spout in the air, at other times to spread out in fountains, and serene azure sky, the lovely arabesques, paintings and mosaics finished with such care and accuracy as to make even the smallest apartments fascinating, and illuminated in varied shades of gold, pink, light blue and dusky purple.

The lovely dados of porcelain mosaic of various figures and colours, the beautiful Hall of Lions with its cloister of 128 slender and graceful columns, its blue and white pavement, its harmony of scarlet, azure and gold, the arabesques glowing with colour like the pattern on a cashmere shawl, its lovely marble filigree filling in the arches, its beautiful cupolas, its famous alabaster cup in the centre, the enchanting Hall of Music, where the Court sat and listened to the music of the performers in the tribunes above, the beautiful seraglio with its delicate and graceful brass lattice work and exquisite ceilings, the lovely colouring of the stalactites in the larger halls and of the conical lining in the smaller chambers,"[20] made this architectural monument one of the wonders of the world.

There was another royal villa within the walls of Granada. It was called al-Generaliffe (a corruption of Jami'ah al-'Arif). It also was considered a marvel of beauty with fountains, groves, and flowers. The gardens were terraced in the form of an amphitheatre.

The Alcazar (al-Qasr) of Seville is another notable contribution of the Muslims. It was first built by a Toledo architect for the Muwahhid Governor in 596 – 597/1199 – 1200. Of the many Alcazars in Cordova, Toledo, and other Spanish towns, the Seville Alcazar is the most renowned and the only one surviving, This gracefully decorated castle was until recently used as residence by the Spanish rulers. There is another Muwahhid monument in Seville, the Giralda tower, which was originally the minaret of the great mosque. It was erected in 580/1184 and was decorated with cusped arcading.21

3. Muslim Architecture in Iran

History records that the earliest mosque in Iran was Masjid al-Thaur built at Qazwin in 81/700, but the earliest Islamic monument so far discovered in Iran is the mosque known as Tariq Khanah at Damghan, halfway between Teheran and Meshed. It was built between 133/750 and 170/786. According to M. Goddard, "by the harmony of its proportions and masses, it is still one of the most magnificent buildings of Islam." It was constructed on the vault system.

Iranian buildings throughout the Muslim period were known for their exquisite domes. These domes never arose from the Roman pendentive employed by the Byzantines but from the more primitive squinch arch which spanned the angels of the square and were converted into an octagon. The earliest Muslim dome in Persian is that of the Great Mosque at Qum, south of Teheran. It was built by Abu Sa'dain Hussain in 256/878 and was 80 feet high.

Since then three different types of domes have been built in Iran: (1) single domes, (2) true double domes, and (3) an inner dome concealed by a polyhedral tent dome or a conical roof. Single domes were popular during the Saljuq period and were direct descendants of the Sassanian domes. The most conspicuous and representative dome of the second type may be seen over the tomb of Sultan Sanjar at Merv (552/1157) while the most renowned earlier example of the third type is the Gumbad-i Qabus (398/1007).

The Gumbad-i Qabus was built by Shams al-Ma'ali 'Abd al-Hassan Qabus, the ruler of Gurgan and Tabaristan in 397/1006. This mausoleum is actually a cylindrical tower with a conical top. The inside is empty, a continuous void from the ground to the roof where it is domed with a tent like cone. The total height of the tower is a little over 167 feet. It is built of burnt brick. There are two Kufric inscriptions also, one 26 feet three inches above the ground and the other just under the corbel.

These tomb-towers hold an important place in the Saljuq architecture. They are mostly found in Adharbaijan and across the border in Quniyah. Prominent among these are Khalifah Ghazi at Amasia, the tomb-towers at Akhlat and Kaisari.

These tomb towers are dressed in stone. They are usually octagonal in shape with conical roofs. The exterior faces are decorated with arcading cut in high relief on the stones of the structure. Most of the tombs have four windows or portals. The interior is usually plain and the chamber is always covered by an inner dome of cut stone. Built flights of stairs to these chambers are rarely found. They were entered probably by means of a ladder.

The Saljuqs concentrated mainly on the construction of mosques and it was during their reign that the basis for the standard Iranian mosque was firmly laid. Its features were: at the beginning of a longitudinal axis an *ivan* portal leads into an open court, arcades surrounding the court are interrupted by four *ivans*, two on the longitudinal axis and two on the cross axis with prayer halls at the back of the arcades, the major *ivan* opens into a square sanctuary chamber crowned by a dome with a *mihrabi* in the rear wall of the chamber.

The earliest Saljuq mosque containing all these elements is the small Masjid-i Jami' at Zauara, north-east of Ispahan, which was erected in 530/1135.

During the Saljuq period vaults over the square or rectangular bays of the prayer hall of mosques display a considerable variety of types. In the earliest surviving Iranian mosques, the bays were covered by barrel vaults. This resulted in complication of construction at the corner angles and did not offer any opportunity for display of technical skill. The Saljuq builders replaced the barrel vaults by domical type vaults. In order to enhance the decorative quality of vaults, they built groin vaults, cloister vaults, vaults on groin squinches, vaults on triangular false pendentives, domical lantern vaults, saucer domes and flat vaults. Examples of these experiments may be seen in those areas of the Jami' Masjid at Ispahan which are assigned to the Saljuqs.

Surface enrichment of the Muslim architecture in Iran was of three types: brick patterns, plaster, and mosaic faience. Decorative brick-lay appeared in pre-Saljuq work, reached its maximum effectiveness under the Saljuqs, and tended to die out in the eighth/14th century. Stucco was an important feature of decoration even in the earliest Muslim monuments and held its popularity throughout. Faience, first used by the Saljuqs on a large scale, developed considerably during the Il-Khanids and reached its zenith under the Timurids and the Safawids.

A number of Saljuq monuments contain *mihrabs* executed in small cut bricks. Brick end plugs were also utilized for decorative purposes but it was stucco, and to some extent sculpture in stone, that played the most important role in the exterior and interior embellishment during the Saljuq period. The arabesque and monumental inscriptions in Kufic and *nasta'liq* writing became an essential part of decoration. For instance, in Merv there still stand the ruins of the tomb of Sultan Sanjar (511 – 552/1117 – 1157) the last of the great Suljuqs, decorated on the inside with panels of fine arabesque and inscriptions, both Kufic and *naskh* in cut terra-cotta.

One of the most beautiful Kufic inscriptions of the Saljuq period is known from a ruined *madrasah* at

Karghid in Khurasan. It contains the name of Nizam al-Mulk, the Grand Vizier of Sultan Alp Arsalan (455 – 485/1063 – 1092). The Jami' Masjid at Qazwin, built in 509/1116, and the *mihrab* of Imamzadh Karrar at Buzun (528/1134) exhibit the most developed Saljuq style of decoration in stucco and stone. The Jami' Masjid at Ardistan (555/1160) has three *mihrabs* rich in stucco decorations. Here, several systems of arabesque are intervened or placed one above the other, the heavy or baroque arabesque in high relief usually forming the background.

Stucco was used extensively in the Saljuq era not only for the decoration of mosques, but also for that of palaces and houses of nobles. Compositions consisted of hunting scenes and Court scenes. Occasionally, the relief of figures was so high and thick that it approached sculpture. These stucco reliefs were chiefly found in Rayy (Teheran) and Sawa.

Fifteen Saljuq monuments display, on the interior or the exterior, glazed tiles used in the inscriptions of patterns. Mosaic faience developed in Gumbad-i Kabud at Maraghah (593/1196) reached a stage at which strips of glazed tiles were set in a plaster ground to form an elaborate strap-work pattern, splendid calligraphic friezes of lustred faience surmounted dadoes composed of star tiles in golden brown lustre on a white ground, and *mihrabs* were executed in the same material, for instance, the famous *mihrab* of the Maidan Mosque at Kashar (623/1226).[22]

Mention may be made of Malik Shah, a great Saljuq monarch (465 – 485/1072 – 1092) who made Ispahan, his capital, one of the most beautiful cities in Asia. He built the famous Jami' Mosque and for the first time introduced the tapering fluted style of tower in Iran. The finest example of this cylindrical minaret is found in Iran. It is called Mina-a 'Ali and was built by Malik Shah. It is decorated with geometrical patterns and bands of inscriptions on glazed tiles.

Persia suffered the greatest disaster at the hands of Mongol invaders at the beginning of the seventh/13th century. Merv and Nishaput fell to Chingiz Khan in 617/1220, and within 25 years the entire country was not only occupied but cities were completely burnt, buildings were totally razed, and, at places, the entire population was slaughtered like animals with the result that very few buildings erected between the Arab invasion of Iran and the rise of Il-Khan Mongols stand today.

The Mongols ruled over Iran for about 143 years (644 – 791/1246 – 1389). Hulagu, the founder of the Mongol Empire, assumed the title of Il-Khan and made Tabriz his capital.

The first Mongol construction in Iran was an astronomical observatory built at Maraghah, the summer capital of Hulagu Khan, at the instance of his famous minister, Nasir al-Din Tusi, in 678/1279.

But it was Hulagu's successor, Arghun, who revived the great architectural tradition of Iran. He began the construction of Arghuniyyah, a splendid suburb of Tabriz. Work was also undertaken at Sultaniyyah near Qazwin and summer palaces were built at Alatagh, Mansuriyyah, and Lar.

The Golden Age of Il-Khanid architecture was, however, ushered in by Ghazan Khan, who embraced

Islam and came to the throne in 694/1295. Ghazan was not only a great builder but was himself an architect. He designed and built Shenb, a suburb west of Tabriz, in 696/1297. The observatory was crowned with a cupola shaped to his own design.[23] He also built his lofty tomb at Shenb. It was 12-sided in plan and had a crypt at ground level. A great mausoleum was encircled with a golden inscription. Some 14,000 workmen were employed in its construction. Besides, there was a monastery for dervishes, a Shafi'ì and Hanafi college, an academy of philosophy, a residence for the descendants of the Holy Prophet, a hospital, a palace, a library, and a splendid garden kiosk called Ardiliyyah.

The tomb was the focal point of the entire built-up area. It was surrounded by gardens which were encircled by a suburb called Ghazaniyyah. Near each of the gates of this town, which soon rivalled Tabriz, was built a caravanserai, markets, and public baths. The name of the chief architect of Ghazaniyyah was Taj al-Din 'Ali Shah.

Although Ghazaniyyah is a heap of bricks today and Ghazan's famous tomb a crumbling mound of debris, very detailed account of Ghazan's extensive construction comes to us from the works of Rashid al-Din, Wassaf, Hamd Allah Mustaufi, and Shams Kashani.

Ghazan was succeeded by his illustrious brother Olejeitu (705 – 18/1305 – 18) who embraced Islam and assumed the name of Muhammad Khuda Bandah. Olejeitu far surpassed his predecessors in architectural achievements. As a matter of fact, most renowned buildings of the Il-Khanid period belong to his reign.

Soon after he came to the throne, Olejeitu ordered work at Sultaniyyah, a site near Qazwin. Plan for this new capital was prepared by his father Arghun but he died before it could be executed. Olejeitu built a wonderful city at Sultaniyyah. The citadel was 500 *gaz* on a side. It was protected by a wall and 16 towers of cut stone. The principal mosque was ornamented with marble and porcelain. There were a hospital and a college also. Surrounded by 12 smaller palaces was the royal palace, a kind of high pavilion or kiosk. The entire ensemble was set in a marble-paved court.

These palaces have since disappeared but the mausoleum of Sultan Muhammad Olejeitu Khuda Bandah still towers over the surrounding area. According to Goddard, this tomb "is certainly the finest example of known Mongol architecture, one of the most competent and typical products of Persian Muslim building and technically perhaps the most interesting."[24]

The second most famous monument of Il-Khanid period was the mosque in Tabriz of Taj al-Din 'Ali Shah, Olejeitu's minister. Only a very small section of this mosque exists today, but Mustaufi, writing in 736/1335, stated that the main *ivan* of this mosque was a tremendous structure. It was 30.15 metres wide, with side walls 10.40 metres thick. The height up to the vault was 25 metres. The pointed arch of the *mihrab* was supported on two columns of copper and the *mihrab* frame was embellished and pointed with gold and silver. According to ibn Battutah, the open court of the mosque was paved with marble, the walls covered with Kashani (faince decoration) and there was a square pool in the middle with fountains.

Mention must also be made of the largest the most revered shrine of Imam ‘Ali Rida at Meshed and of his sister Fatima at Qum.

During the Mongol rule, two very renowned dynasties flourished in central and southern Iran: the Atabeks and the Muzaffarids. The Atabeks were the autonomous rulers of Ars with Shiraz as their capital and the Muzaffarids controlled the entire region south of Teheran with their capital being Yazd. History records that Shiraz possessed many buildings constructed by the Atabeks but hardly any of structures exists today. The Muzaffarids seem to be more fortunate in the several very famous buildings that owe their existence to these potentates are still extant in Yazd and Kirman.

Like Iranian art in all its forms, Iranian architecture during the Il-Khanid Mongols were decorative, characterized by precision, clarity and lucidity. However, contrary to the Saljuq period, the Il-Khanid construction places a decided emphasis upon verticality. A look at the portal of Jami‘ Masjid at Ispahan and its north side arches, the portal of Khanqah at Natauz, the tomb shrine at Ziarat, the niche of Bayazid’s shrine at Bistam, and Pir-i Bakram portal proves the point. Chambers too become loftier in relation to their horizontal measurements. *Ivans* also become narrower but higher.

The Safawid Emperor, Shah ‘Abbas the Great (995 – 1038/1587 – 1628), was one of the greatest builders Persia has ever had. He was a wonderful town planner. His achievement in this field can be seen at Ispahan, the capital, which he built anew. The scheme included the Great Maidan surrounded by vaulted bazaars, with the portal of his mosque opening in the centre of the south side, the Ala-Qapu palace on the western side, and the avenue, over two miles long, known as the Chahar Bagh.

Shah ‘Abbas also built the Jami‘ Masjid of Ispahan. It has four *ivans* and a domed chamber with a *mihrab* on the *qiblah* side. The south-east *ivan* is flanked by two halls, each with eight dome covered bays and a *mihrab*. The entire building including the main dome is splendidly decorated with enamelled tiles and faience mosaic.

4. Muslim Architecture in Central Asia

The starting point of Muslim architecture in Central Asia is the extant tomb in Bukhara of Sultan Isma‘il (279 – 294/892 – 907), the founder of the Samanid dynasty. It is a cubical structure with a dome. Its decoration is almost entirely of brick work. The spandrils of the central arch bear square-shaped *motifs*. The central hemi-spherical dome is surrounded by four small cupolas on its four corners.

Uskend in eastern Farghanah was another centre of the Samanids where four important monuments – one *minar* and three mausoleums – still stand. The *minar* is a tapering tower gradually diminishing in circumference as it reaches the top. It is cylindrical and fluted and has lost its top. It is the oldest specimen of its kind which later became very popular in Iran and Turkey. The decoration consists of tiles combined in geometrical patterns, the ground between them filled with small stucco leaves.

Merve was another great Muslim cultural centre in this region. The oldest monument in this town is a

mosque built in 131 – 138/748 – 755. It is called the Hamadani Masjid in memory of Haji Yusuf of Hamadan. Still in good condition, it is used for daily prayers.

The capital of Amir Timur (737 – 807/1336 – 1404) was, however, Samarqand and he made it one of the most splendid cities in the east by building palaces, mosques, and shrines there. The style of these Timurid buildings follows Khurasanid tradition although Chinese and Turkish motifs are also visible. They included the famous mosque of Khuwaja Ahmad Uassavi constructed in 800/1397 near Samarqand. The architect of this mosque was a Persian from Ispahan. It is an enormous square structure, a cubic block from which rose two domes, one covering the mosque proper and the other the tomb of the saint. The second dome is melon shaped a characteristic of Timurid monuments. The entrance is flanked by two towers like that of a fortress, a product of Timur's warlike mind.

Timur was greatly attached to Kish, his birth place, where he built a palace which was considered a marvel by contemporary visitors. The description given by Clavijo the Spanish ambassador, sent to the Timurid Court by King Henry III, shows that this place followed the style of ancient palaces at Nimrud and Khursabiad. Its surface was completely covered with enamelled tiles like the Ishtar Gate of Babylon.

But it was Samarqand which received Timur's fullest attention. The most prominent building in the city is the mosque of Bibi Khanum, which Timur built in memory of his wife in 801 – 808/1398 – 1405, with its monumental gateways and the double dome. This mosque is the first known specimen of the classical Jami' Mosque in Turkestan. The second masterpiece of this period is Timur's own mausoleum at Samarqand, known as Gour–i Amir (Amir's grave). It was constructed by Timur himself. It has an immense dome almost completely covered with glittering tiles. Its walls are resplendent with multi–coloured slabs which are transformed by points into beautiful mosaics forming numerous Arabic and Persian inscriptions. To the right and the left arose two circular minarets. Ulugh Beg, who had inherited a passion for buildings form his grandfather, Timur, added to this tomb a series of other buildings. He also built a grandiose portal to the shrine.

Timur's son and successor, Mirza Shah Tukh (807 – 851/1404 – 1447), transferred his seat of government from Samarquand to Herat in Khurasan. He built there a citadel surrounded by a wall with four gates. The Jami' Mosque of Herat, which stood in the midst of the chief market, was the most beautiful in the whole of Khurasan. Shah Rukh's wife, Gauhar Shad Aqa, was also a great builder. She constructed a college at Herat (820 – 840/1417 – 1437). Its architect was Ustad Qawwan al–Din of Shiraz. The original marble slab of this college is still preserved in the Heart museum. It is calligraphed in *thulth* style by the renowned calligraphist Ja'far Jalal of Herat. Besides, Herat could boast of Musallah, the mausoleum of Gauhar shad Aqa and the *madrasah* of Hussain Baiqrah.

5. Muslim Architecture in Turkey

The Muslim architecture in Turkey (Anatolia) was inaugurated by the Saljuqs in the fifth/11th century. During the course of 250 years of their rule, the Suljuqs constructed many monumental buildings at

Siwas, Quniyah, Kaiseri, Erezrum, Divrigi, Karman,and other important towns. These structures include mosques, tombs, mausoleums, palaces, castles, hospitals, caravanserais, market halls, public baths, public fountains, bridges, aqueducts and reservoirs. Quite a few are still extant. The Saljuq architectural traditions were not only maintained by the Ottoman Turks but reached their zenith both in quality and number in the tenth/16th and fifth/11th centuries.

The oldest mosque in Anatolia (fifth/11th century) built by the Turks is supposed to be the Ulu Cami at Siwas.[25] It is a rectangular structure surrounded by a wall. It has a covered portico, an open court, a flat roof with a layer of earth raised upon horizontal wooden rafters and stone pillars.

The richest and most impressive of the Saljuq mosques is the Ulu Cami at Divrigi (626/1229). It has two gateways. The applique *motifs* of the northern gate are suggestive of knitted or woven design. In the middle of the mosque is an octagonal water basin and above it a dome open to the sky. Outside the exterior walls is a ground minaret and inside a hexagonal conical dome.

The Saljuq mausoleums follow the style common in Khurasan and Merv – a high drum and a dome – with this difference that stone is used instead of bricks and the decoration takes the form of relief. These mausoleums are generally polygonal in shape. The polygons are joined by means of triangular surfaces to a square base resting on the ground. The roof consists of a flat dome inside a conical structure outside. They look like a tent in stone. The tomb of Khalifah Ghazi at Amaisia is one of the oldest monuments (541/1146) and the Douer Gumband (675/1276) is the richest one in decoration. It is a dodecagonal structure formed of blind arcades, side by side with geometrical designs we find fan–shaped palmettes and birds and lions in relief. The mausoleum of Khudaband Khatyun at Nigede (712/1312) contains, besides floral and geometrical ornamentation, reliefs representing birds, stags, and other animals with human heads.

No complete Saljuq palace has survived, but history records several such buildings at Alaniya, Siwas, and Quniyah. For the pavilion and main building of the Saljuq palaces in Anatolia, the Khurasan house plan, with a courtyard and four *ivans*, served as a prototype. As a matter of fact, the same plan is followed in subsequent Ottoman palaces also – a number of pavilions (kiosks) and groups of buildings set among a succession of courtyards and gardens with ponds, the entire structure being surrounded by a wall.

There were medical schools also and these were attached to hospitals, for instance, the one at Siwas (614/1217), the largest of all Saljuq hospitals, had a medical college attached to it.

The Saljuq caravanserais, like their *madrasahs*, had strong gateways for security reasons, with the wall decoration concentrated upon them.

The Saljuq baths differ from those of Damascus in having a plan centred on an octagon with four *ivans*, and the washing arrangements without a common pool. The Sultan Hammam at Quniyah gives a good idea of Saljuq baths. There are separate twin buildings for men and women. The first room to be entered

is the disrobing room (*camegah*) with marble floor and a fountain in the middle. From here a passage leads to the tepidarium (*sogu kulul*) for repose and massage. Then comes the hot room (*sic alik*) a domed octagonal hall round which are recesses (*ivans*) containing water basins and private rooms (*khalwah*).

With the downfall of the Saljuqs (654/1256), Anatolia was divided into more than a dozen independent principalities (*beyliks*) which ruled over various parts of the country for about 200 years. They were overcome by the Ottoman Turks.

The Ottoman Turks ruled over Turkey for almost 600 years (699 – 1342/1299 – 1923). During the Bursa period (699 – 907/1299 – 1501),which is also called the foundation period, the old Ulu Cami type of mosques continued to be constructed but the roofing consisted of co-ordinated domes. For instance, the Ulu Cami at Bursa, first capital of the Ottomans (745 – 801/1344 – 1399), had 20 domes and 12 piers all co-ordinated. But mosques with single domes were also built, for instance the "Ala al-Din Mosque at Bursa (726/1326) and the Green Mosque at Iznik (780/1378).

The mosque that set the pattern for the monumental mosques of the tenth/16th century was that of Bayazid II with a second half dome opposite to and in the same axis with the half dome that supported the central dome on the side of the *mihrab*. This principle was accepted by the famous Turkish architect Koca Sinan whose masterpiece is the Sulaimaniyyah Mosque (957 – 964/1550 – 1557). The mosque of Sinan Pasha, Ahmad Pasha, Sokkolu Muhammad Pasha, Mihrimah Khatun,and Rustam Pasha built by Sinan follow the same style. His great masterpiece, Sebiniyyah Mosque (977 – 983/1569 – 1575) at Edirne, however, had only one dome.

In the 11th/17th century, Turkish mosques followed the style of Shehrzadeh Mosque (950 – 955/1543 – 1548) which was also built by Sinan. It has a central dome supported and surrounded by four half domes. This style may be seen in Sultan Ahmad's Mosque (1018 – 1025/1609 – 1616) and the Walid Mosque.

Under the Ottomans, *madrasahs* and hospitals followed the traditional style but the mental hospital of Bayazid II is quite original. It has separate rooms for mental patients and a communal hall of hexagon shape with dome open to the sky for psycho-pathical cases. At one end of the hall, there is a dais for musicians, and the acoustics are excellent.

The Ottoman mausoleums are invariably roofed with a dome. Decoration is restricted to coloured patterns, and facing of glazed tiles is applied inside instead of outside. Nearly all Ottoman Sultans are buried in Istanbul. One of the oldest mausoleums (868/1464) there is that of Mahmud Pasha, the Grand Vizier of Muhammad the Conqueror. It is octagonal in shape with its facade of geometrical patterned tiles inlaid in stones. The tomb of Sultan Sulaiman the Magnificent (974/1556) is a masterpiece of ornamentation. The tombs of Salim II (982/1574) and Murad III (1003/1595) are also the finest specimens of Turkish faience ornamentation. The marble tomb of Sultan Hamid (1203/1789) is a baroque.

Covered market is a special feature of Ottoman rulers. The covered market of Bursa has a colourful interior of stone and brick masonry that of Edirne (821/1418) has six piers and 14 domes. The famous market of 'Ali Pasha at Edirne (977/1569) built by Sinan had in addition six gates. The markets built by Muhammad the Conqueror and Sulaiman the Magnificent at Istanbul are most famous. The former has 15 domes and two rows of four pillars and the latter has 20 domes. These two constructions, with the addition from time to time of streets, comprise the famous covered market of Istanbul. It is really a market city.

It covers an area of 30,700 square metres and includes 65 streets, a square, 300 shops, 1,000 rooms, 18 gates, eight fountains, a school, wells, and 16 caravanserais. At the time of Sultan Muhammad and Sulaiman it was mainly the wood, but after the fire in 1113/1701 it was rebuilt in brick and stone. Architecturally, however, the so-called "Egyptian Market of Istanbul," which was built in 1071/1660, is far superior. The windows at the sides of the high, sloping roofed central portion give light at a lower level to the central passage, which forms a right angle, on either side of which are set the rows of shops, 88 in all, each covered by a dome. It is a singly-storied building except the entrance arcades. The effect of the interior is as impressive as that of a cathedral.

The earliest Ottoman palace was built at Bursa, called Bey Sarai, but no trace of this structure is found now.

The complex structure now called the Topkapi Palace (Seraglio) grew out of the subsequent additions to this palace by the Sultans through the centuries. The famous Topkapi Palace remained the residence of the Ottoman Sultans from the ninth/15th century to the 13th/19th century when they moved to Bosphorus. This palace was the centre of government as well as of culture. No other assemblage of buildings affords such an opportunity as this to study at one place the entire history of the Ottoman Architecture.

It covers 699,000 square metres of area, comprising five groups of apartments totalling 348 rooms, two groups of offices, eight servant quarters, ten mosques, 14 paths, two hospitals, five schools, 12 libraries, 22 fountains, a fish pond and vineyard, one outer and four inner courts, and the whole assemblage is surrounded on the landside by a wall. At a time, food for 5,000 residents of the Palace was cooked at the royal kitchen.

In spite of the fact that the Topkapi Palace was not constructed and designed by any single architect, it still possesses a remarkably homogeneous character. The entire arrangement of the palace, with its non-geometrical sub-divisions and its terrace walls counter-acting the steep slope of the ground, conforms admirably to present day principles of town planning.

It is not possible to give full description of the palace. The third and fourth courts, however, contain the most interesting buildings. The structure in which foreign envoys were received by the Sultan (*Arzodasht*) is a marvel of the ninth/15th century architecture. The library of Sultan Ahmad (1131/1719) is

remarkable for its plan and marble facade. The Baghdad Pavilion (1048/1638) in the fourth court contains four *ivans* and one central dome. Its terraces, facing the Bosphorus and the Golden Horn, are surmounted by a wide caved roof supported on arcades. The walls are faced, both inside and outside, with tiles. The Pavilion of Mustafa Pasha (1116/1704) is in Rococo–Turkish style, made in wood, to serve summer requirements.

Unlike the Il–Khanid monuments of Persia and Central Asia, Turkish architecture on the whole is horizontal, not vertical. The height of Turkish buildings is much less than their length and expansion. According to Behcat Uncal, this horizontal effect gives an impression of comfort and repose. In religious buildings, solid parts pre–dominate over the window openings. On the other hand, in secular buildings, window strips dominate the facade. The Turks avoided total symmetry in their ground plans and facades.

6. Muslim Architecture in Pakistan and India

The Muslim conquest of Indo–Pakistan sub–continent started in 94/712 when Muhammad bin Qasim invaded Sind. Contemporary records show that he constructed a mosque and other buildings at Daibul, but these structures no longer exist. Recently some excavations made in southern Sind led to the discovery of certain traces of ancient monuments. But the experts have not yet come to any final conclusion with regard to the age of these structures. Suggestions have been made that the rectangular foundation excavated at Bhambor is that of the first mosque on the sub–continent built at the time of Muhammad bin Qasim.

Similarly, no Muslim monument built before the middle of the sixth/12th century has so far been discovered although it is known that Multan had been an important centre of Muslim culture prior to Mahmud of Ghaznah's excursions. After Lahore was conquered by Mahmud in 393/1002 a permanent garrison of Afghan soldiers was established there.[26] Later on, Lahore became the capital of Mahmud's successors (492/1098 – 582/1186). It is, therefore, most probable that mosques, palaces, tombs, and other structures built by Muslim rulers of Multan, Lahore, and other small principalities in the Indus Valley between the second/eighth and the sixth/12th centuries suffered at the hands of invaders or were destroyed by the ravages of time. What exists today belongs to a much later period as compared with Iraq, Syria, Iran, Egypt and Spain.

Indo–Islamic architecture, during its history of more than five centuries (545 – 1119/1150 – 1707), however, covers such a vast area and has passed through so many stages and styles that in this brief section only a passing reference can be made to them. Besides the imperial style of Delhi, which served as a model, at least eight very marked provincial styles have been noted by experts. These provincial styles belong the West Punjab (545 – 725/1150 – 1325), Bengal (597 – 957/1200 – 1550), Jaunpur (762 – 885/1360 – 1480), Gujrat (700 – 957/1300 – 1550), Mandu and Malwah (808 – 977/1405 – 1569), the Deccan (748 – 1206/1347 – 1617), Bijapur and Khandesh (828 – 1067/1425 – 1656), and Kashmir (813 – 1112/1410 – 1700). One of these styles the Multan style in West Punjab – is even older than the imperial style of Delhi.

The earliest Muslim monument in the Indo–Pakistan sub–continent happens to be the tomb of Shah Yusuf Gardezi at Multan, built in 547/1152.27 It is a rectangular structure with a flat roof. One of the walls has an oblong portion which is slightly projected to frame the entrance. The walls are completely encased in the most colourful tiles for which Multan has always been famous. These tiles are decorated with geometrical, inscriptional, and floral motifs. The absence of domes, pillars, and arches in this modest building is very significant.

It was at Delhi that the foundations of Muslim architecture were laid on a grand scale. Soon after he made this imperial city his capital in 587/1191, Qutub al–Din Aibak ordered the construction of the famous Quwwat al–Islam Mosque in 592/1196. This is the oldest mosque extant in the Indo–Pakistan sub–continent. It consists of rectangular courtyard (141 ft x 105 ft) surrounded by pillared cloisters. The sanctuary on the western side possessed elaborate series of aisles with shallow domed ceilings. In front of the sanctuary was placed an iron pillar brought from Mathura as a mark of victory.

Three years later, an expansive arched facade was built across the entire front of the sanctuary. Its pointed arches made in red stone are magnificently carved with inscriptions and floral *motifs*. They produced the effect of loftiness and lightness as, following the contemporary north Iranian style; they are vertical in their composition.

Qutub al–Din Aibak laid the foundations of another most remarkable building the same year. It was the Qutub Minar. Although it was constructed at a time when Muslim in India was hardly established, it has never been surpassed in the boldness of its conception, its aesthetic composition, its exquisite execution, and its imposing effect. It is a unique monument in the entire Muslim history. The idea of this fluted and star–shaped tower was certainly borrowed from Ghaznah as well as North Iran, where the ruins of similar towers still exist. But the Qutub Minar has surpassed all such towers. It lies outside the Quwwat al–Islam Mosque and was probably designed on the basis of Samarra mosque or the mosque of ibn Tulun (second/eighth and third/ninth centuries).

It is a five–storeyed building with a domical roof. The storeys diminish in height and dimension as they ascend and are ornamented by four projecting balconies. Between these balconies there are richly sculptured and raised bands containing Arabic inscriptions. The basement contains six such bands. The lowest storey has 24 projecting ribs forming the flutes. They are alternately angular and circular in the first storey, only circular in the second, and angular in the third. Te other two storeys are of plain marble with red stone belts and were added later. Its tapering construction produces the effect of a height greater than the actual which is 238 feet.

A notable contribution of Muslim architecture in India was made by Sultan Shams al–Din Iltutmish (606 – 643/1211 – 1236) who added the famous arched screen in front of the Ajmere mosque built by his predecessor in 597/1200. These arches, seven in number, extending over 200 feet, more nearly approach the four–centred type invariable found in subsequent Muslim buildings. Each arch is surrounded by three lines of writing, the outer Kufic, the other two in Arabic characters separated from

each other by bands of carved arabesque ornament.

Another significant aspect of Muslim architecture in the seventh/13th century is the construction of a large number of tombs. Famous among there are the tombs built by Iltutmish for his son at Sultan Ghari (626/1231) and for himself (633/1235) and the tomb of Sultan Balban (679/1280), in Delhi. The shrines of Shah Baha al-Haq (661/1262), Shah Shams al-Din Tabriz (675/1276) and Shah Rukn-i 'Alam (720/1320) at Multan also belong to the same period. The last named Shrine is one of the most impressive buildings in Pakistan. It is an octagonal structure with sloping walls having tapering turrets at the angles. Erected on an elevated plane, its total height is 115 feet and the dome is 50 feet wide inside. It is made in brick with bands of carved chiselled and parts are inlaid with glazed tiles suggest the Arab-Iranian origin of Multan architecture.

The beginning of the eighth/14th century brought a remarkable change in the imperial style at Delhi. This change was caused by the invasion of Central Asia and Iran by the Mongols. Bringing death and destruction in their wake, the Mongols were responsible for a large scale migration of Turkish and Persian architects, engineers, and artisans to Delhi and it was this group of people who built the famous 'Ala'i Darwazah (705/1305), one of the most exquisite piece of architecture near the Qutub Minar. The 'Ala'i Darwazah (the Gateway of 'Ala al-Din Khalji) occupies a key position in the evolution of Muslim architecture in India. A mere glance at this elegant gate will show that it must have been built by expert architects, having knowledge, vision, and capacity to prepare the design in detail before it was executed. Its style is distinctive and original. The method of its walling, the shape of its arches, the system of support for the dome, and the design of surface decoration all suggest supervision of master builders.

The main arch is a pointed horse shoe. It is rather vertical, the width of its span being much less in proportion to its height. There are bands of inscriptions carved in white marble.

The Tughlaqs who ruled over India from 720/1320 to 816/1413 were great builders. The founder of the Tughlaq dynasty, a soldier who ruled hardly for five years (720 – 725/1320 – 1325), managed to build in this short period a fort, a palace, his own tomb, and the fortified city of Tughlaqabad. This was the first capital city founded by any Muslim monarch in India, although Sultan 'Ala al-Din Khalji, his predecessor, had also earlier planned a similar capital. Tughlaqabad, near Delhi, is now in ruins except for the tomb of the warrior king. It is a unique building as the tomb looks more like an independent fortress than a burial place.

Perhaps the disturbed political conditions, on account of Mongol invasion, demanded the expediency of utilizing every building for defence purposes in times of emergency. This fortress tomb was built on a high plane. It is made in red sandstone and white marble. It has thick sloping outer walls giving the building a pyramidal appearance. Its doorway is literally a death trap for intruders and within the courtyard there is solidly built underground vaults for hoarded wealth. The dome is pointed Tartar in shape – a style followed throughout the Muslim period in India. This pentagon produces the effect of great strength, solidity, and robustness.

The Mongol invaders could not destroy Delhi; this was done by one of her own rulers, Muhammad Tughlaq, who moved his capital to Daulatabad in the south. Delhi became a deserted city and all its trade, art, and industry were completely ruined. Most of the artisans and architects, who could manage to escape from the Royal camp, took refuge in provincial capitals with the result that when the capital was restored by Firuz Taghlaq was no more master builders were to be found in Delhi.

The Royal treasury was also empty and the economic condition of the subjects had become much deteriorated. In spite of the fact that Faruz Taghlaq proved to be one of the greatest builders India has ever produced, his buildings had to be simple and unornamented, producing the effect of austere severity. Gone were the engravings and carvings, the refined decorative *motifs*, and the well finished and properly cut stone pieces of marble and red stone, and the embellishments of the outer and inner surfaces. Instead, walls were made of rubble covered with thick layers of cement. It was the puritanical phase of architectural asceticism.

Firuz Shah Tughlaq built four fortified cities in North India: Firuz Shah Kotlah in Delhi, Jaunpur, Hissar, and Fatehabad. Firuz Shah's fortified citadel in Delhi was situated on the river bank. It was roughly a rectangle with rectangular courtyards, baths, tanks, gardens, palaces, barracks, a huge Jami' mosque for a congregation of 10,000 people, servant quarters, etc. The main architectural principles of palace–fort, followed by the great Mughuls at Agra, Delhi, Allahabad, and other places, had been laid down by Firuz Shah.

Several mosques were built in Delhi by Firuz Tughlaq between 772/1370 and 777/1375, the most famous being the Khirki Mosque. It was built on a *tehkhanah* or sub–structure of arches. It is a unique construction as it is almost a covered mosque like Saljuq mosques in Turkey, a rare phenomenon in India. The portal is for the first time reached by some flights of steps. It is entered through an arch and beamed doorway. The interior consists of cloisters formed by a series of square bays, each one roofed by a cup–shaped dome. There are three rows of such domes, each row having three constellations of nine domes each. Thus, there are in all 81 such domes. Each corner of the rectangles is supported by a tower and a tapering round bastion.

The invasion of Timur in 801/1398 was a major calamity for India. He not only sacked Delhi but took away with him Indian artisans to build the famous Jami' Mosque at Samarqand. Delhi lost its political supremacy. The rule of Sayyid and Lodhi monarchs were confined to the Gangetic basin only. And during the whole of the ninth/15th century and the first quarter of the tenth/16th century Delhi could boast of no architectural achievements. No palaces, no mosques, no forts, and no cities were built, only tombs were erected as memorials to the dead.

However, a significant addition in the construction of domes was made in this period. This was the introduction of double dome in India, although this style of dome–making had been practised in other Muslim countries for centuries. We find this double dome – an inner and an outer shell to raise the height of the dome without disturbing the interior plan – for the first time in the tomb of Sultan Sikandar

Lodhi (924/1518).

Bengal

The Muslim architecture of Bengal is as old as that of imperial Delhi, as Bengal was conquered by one of Qutub al-Din Aibak's generals in 599/1202. It soon became an independent kingdom and remained so until it was annexed by Akbar the Great in 984/1576. The Muslim monarchs of Bengal were men of fine taste and they built scores of mosques, palaces, and other structures at their capitals at Gaur and Pandua bear testimony to their architectural genius but nowhere have climatic and physical conditions caused greater havoc to Muslim monuments than in Bengal. As no stone was available in the vicinity, most of these buildings were constructed in bricks could not withstand the onslaughts of heavy rains, storms, and humidity.

The oldest Muslim monument in Bengal is the multi-domed mosque at the village of Pandua. It was built in the middle of the seventh/13th century. It is the oldest multi-domed mosque in the entire sub-continent. Another very significant structure erected at Pandua is the Adina Mosque (766/1364). It was the focal point of the new capital city built by Sikandar Shah (759 – 791/1358 – 1389). The Adina Mosque, a double storeyed structure constructed on orthodox lines, is the largest and the most impressive building in Bengal. It is as big as the Great mosque at Damascus (705 ft x 285 ft). "To the spectator standing within the expensive quadrangular court of the Adina Mosque, surrounded by its seemingly endless archways, the conception as a whole presents the appearance of the forum of some ancient classical city rather than a self-contained Muslim house of prayer, with the high-vaulted sanctuary on the western side simulating an imperial approach in the form of a majestic triumphal archway."[28]

Around the courtyard is a screen of arches, 88 in number. The roof is covered with 306 domes. The upper storey, probably a Royal Chapel, is supported on a range of arches carried by unusual pillars. These are very short but ponderous piers, abnormally thick, and square above and below. These pillars are unique in their construction and are found nowhere in India. The interior of the sanctuary hall is a superb pointed arch vault, the earliest and the rarest example of its kind in India. The design and execution of the central niche are also most impressive. It is inscribed with delicate arabesque and calligraphic texts.

The Muslim architecture in Bengal was partly conditioned by its climate, for due to excessive rains the surface of the roof had to be curved and covered with a number of small domes. The finest examples of such curved roofs may be seen in Chota Sona Masjid at Gaur (899/1493) and Qadam Rasul. Another characteristic of Bengal monuments is their "drop" arches in which the span is greater than the radius.

Jaunpur

Jaunpur was made a provincial capital by Firuz Toghlaq who built there a fort and laid the foundations of Atala Mosque. Later on, the famous Sharqi monarchs of Jaunpur adorned their city with mosques,

tombs, palaces and other buildings associated with an imperial capital. As a matter of fact, Jaunpur became the cultural capital of Northern India under the Sharqi monarchs. It was called “Shiraz of the East.” Sikander Lodhi, the Sultan of Delhi, completely destroyed this city’s Royal structures when he occupied it in 885/1480; its five mosques alone were spared. The most outstanding characteristic of these stone-built mosques is the pylon formation of their facades. Most famous among these mosques are the Atala Mosque and the Mami‘ Masjid completed in 811/1408 and 875/1470 respectively.

The sky high pylons of these mosques have a unique construction, the like of which is not to be found anywhere in the Muslim world. Their origin is unknown. John Terry, however, suggests that since the early Muslim rulers of Jaunpur were Abyssinians, these pylon-like portals might have been inspired by the pylons of Pharaohic temples in the Nile Valley.29

The Atala Masjid is a very distinctive and majestic building. Although its general arrangements are conventional, its double-storeyed cloisters are very spacious, having 42 feet across and five aisles deep.

Many of the elements found in Jaunpur buildings were derived from the architecture of the Tughlaqs at Delhi, for instance, the recessed arch with its fringe ornamentation, the shape of the arch, and the sloping side of its supports, the beam and brackets supporting the arches, the tapering turrets, the square shafts of the pillars, and the imposing flights of steps leading to the portals, all suggest that artisans trained in the imperial style at Delhi during the eighth/14th century and the beginning of the next were brought to Jaunpur. Jaunpur mosques show a very pleasant innovation in providing especially constructed galleries for religious needs of women. These galleries were covered with beautiful open work screens as seen in the Lal Darwazah Mosque (854/1450).

Although Jaunpur mosques do not display much refinement, they are strong, sincere, and purposeful in their character. They are good examples of bold and forceful workmanship.

Gujrat (700 – 957/1300 – 1500)

Gurjat presents by far the most graceful provincial style in the annals of Indian architecture. The Gujart style of architecture, in the course of 250 years of Muslim rule, passed through three marked stages: the formative and experimental stage well represented by the Jami‘ Masjid at Cambay (725/1325), the middle stage of increased assurance and directional authority, the best and most consummate illustration of which may be found in the Jami‘ Masjid at Ahmedabad, and the final stage when it reached its zenith in the latter half of the ninth/15th century under the patronage of Mahmud Begarha I (863 – 917/1458 – 1511), the typical example being that of the Jami‘ Masjid at Champaner.

In the Cambay mosque, though much was borrowed from the Delhi style of Khalji period and also from the Ajmere mosque, its fine proportions, dignified appearance, and simple design provided a model for subsequent mosques in Gujrat.

The second phase owes its existence to Ahmad Shah, the great builder, who founded the capital city of

Ahmedabad (814/1411). His zeal for building projects was matched by that of his courtiers and successors, so much so that few cities can claim to possess larger numbers and finer specimens of monumental architecture that the capital of the Ahmad Shahi dynasty. Besides, many tombs and other structures, one can count more than 50 mosques of that period in Ahmedabad alone. Ahmad Shah's citadel with its palace is situated on the left bank of the river of Sabarmati. It is a rectangular enclosure occupying a prominent position. Almost in the heart of the town was built the great Jami' Masjid connected with the citadel by a wide avenue. Astride this avenue was erected a stately triumphal gateway call the Tin Darwazah as it posses three arched entrances. The entire conception was a bold attempt at town planning not usually found in provincial towns.

The Jami' Masjid of Ahmedabad is considered the high water mark of mosque design in western India. In its sanctuary have been combined two different facade conventions, the screen of arches on the one hand and the pillared portico on the other. Thus, a subtle contrast between the volume and strength of the wall surface and the depth and lightness of the colonnade has been achieved.

In the reign of Muhammad Shah (846 – 855/1442 – 1451), son and successor of Ahmad Shah, Sarkhaj, a suburb of Ahmedabad, acquired great importance as the burial place of a divine. Here palaces, gardens, pavilions, gateways and a large artificial lake, besides mosques and mausoleums, were erected on a grand scale.

The Gurjat architecture attained its third and final stage during the reign of Mahmud Begarha I. He founded three cities, and adorned them with imposing buildings. Moreover, splendid constructions were added to the glory of Ahnedabad. Most of these were mausoleums, four of which are the Raudahs (tombs) of Sayyid 'Uthman at Usmanpur, of Sheikh Ahmad Khatu at Sarkhel, of Shah 'Alam, and of Mubarak Sayyid near Mahmudabad.

Most famous among the mosques of this period are the mosques of Mian Khan Chishti (861/1456), of Bibi Achut Kuki (877/1472), of Mahfuz Khan (898/1492), and finally Sidi Sayyid which last is a notable departure from the conventional mosque design. It is composed entirely of arcades of arches; eight square piers support these to form the interior over which is laid a flat roof. The walls of the sanctuary are composed largely of perforated stone screens. For the first time, the entire screen has been perforated with "palm and parasite" motif with a wonderful skill and aesthetic taste.

Sultan Mahmud Begarha built a new capital also, at Champaner, 78 miles south–east of Ahmedabad. It was a walled citadel with palaces, a Jami' Mosque, and other usual constructions.

The Deccan

The Muslim architecture of the Deccan was the product of the amalgamation of two separate trends introduced in South India from Delhi and Iran in the eighth/14th century. Another notable feature of the Deccan monuments was the almost complete absence in them of any influence of the then existing South Indian art, in spite of the fact that this territory was so rich in the Chalukyan and Dravidian temple

architecture. It is surprising that, while Muslim architects of North and West India freely borrowed from the local style, their co-religionists in the South preferred not to be in any way obliged to and affected by the styles prevalent in the Deccan.

The Deccan was first conquered by Sultan ‘Ala al-Din Khalji. But the first independent Muslim ruler of South India was a Persian adventurer, ‘Ala al-Din Hassan Bahman Shah. He had served under Sultan Muhammad Tughlaq at Daulatabad. He established the Bahmani dynasty at Gulbargah (748/1347), the fortress of which is considered a most remarkable production of military architecture. Almost carved out of a living rock, this fortress is now in ruins except for its most extra-ordinary Jami‘ Mosque built in 769/1367. It is one of the few Indian mosques entirely covered like the Cordova mosque.

The whole area, including the courtyard, is roofed over by 63 small domes. Light is admitted through the side walls which are pierced by great arches. It was built by Muhammad Rafi‘, a hereditary architect of Qaswin in northern Iran, who must have trained in the Saljuq style of covered mosques found in Turkey. Other monuments of the Bahmani period at Gulbargah include scores of Royal tombs including the famous Haft Gumbad (seven domes).

The most unique construction of the entire history of Indian architecture is the Gulbargah market, 570 feet long and 60 feet wide, adorned with a range of 61 arches on either side supported by pillars and flanked with a block of buildings of a highly ornamental character.30

The Bahmani capital was moved from Gulbargah to Bidar by Ahmad Shah (826 – 840/1422 – 1436). It was adorned with a fortress, palaces, two mosques, and the famous college built in 877/1472 by the great scholar minister Khuwaja Mahmud Gawan. It was a three-storeyed building with loft towers. Its surface is almost wholly covered with glazed tiles of green, yellow, and white colour with floral and inscriptional *motifs* gracefully executed by expert hands.

But the magnificent monument of the ‘Adil Shahi rulers of Bijapur far excel those in other capital cities of the Deccan. In number, too, they are second to none; there are more than 50 mosques, 20 tombs, and nearly the same number of palaces in Bijapur. These were constructed within 100 years after 957/1550. Prominent among these buildings are the Jami‘ Masjid, the most powerfully simple mosque, the Raudah of Ibrahim, one of the most elaborate tombs, the GOL Gumbad, a grandiose structure, and the Mihtar Mahal, the most delicate and the most refined of the all.

The Gol Gumbad, the mausoleum of Muhammad ‘Adil Shah, is considerably larger than the pantheon in Rome, and it has the largest domical roof in existence. This huge dome is based on a circular cornice obtained through interesting arches. This method of constructing intersecting arches, perhaps of Turkish origin, was a favourite device with Bijapur artisans. It was unknown in other parts of India. Besides being of great utility in dome construction, these intersecting arches produce an exceedingly aesthetic effect, those for instance in the sanctuary of the Jami‘ Masjid at Bijapur.

Malwah

The small independent State of Malwah in Central India lasted for about one and a half centuries (804 – 937/1401 – 1530). Its capital, Mandu, was situated on a plateau possessing a very picturesque view. It was adorned by Hoshang Shah (807 – 839/1405 – 1435) and Mahmud Shah I (940 – 974/1436 – 1469) with magnificent palaces, mosques, and other buildings, finest among which was the Jami' Masjid (858/1454). It was a multi-domed building with repeated arcades of arches forming the sanctuary.

Facing the mosque and situated on an elevated plain is the large structural complex called the Ashrafi Mahal (Palace of the Gold Mohar). It was built by Mahmud Shah I. This complex consists of a college, a mausoleum, and a tower of victory.

Two other notable buildings in Mandu are the Hindola Mahal (swinging palace) and the Jahaz Mahal (ship palace). The former was built by Hoshang Shah and is a combination of audience hall and Royal apartments. The latter was built by Mahmud I and is a double-storeyed building extending for some 260 feet along the water-front of two small lakes. It is a colourful structure suggesting gaiety and entertainment.

These and other palaces and mosques of Mandu are all built in red sand-stone. For decorative purposes, the builders used marble and various semi-precious stones such as jasper, agate, and coruclian which were found in the vicinity. Glazed blue and yellow tiles were also employed as panels and borders. It is, therefore, correct to say that Mandu monuments are note-worthy not for their structural qualities but for their decorative properties, in which an aesthetic colour sense takes a prominent position.

The Mughul Period (933 – 1119/1536 – 1707)

The Mughul Emperors of India were descendants of a highly cultured dynasty. Their great ancestor, Timur, had embellished his capital city of Samarqand with exquisite palaces, mosques, mausoleums, and *madrasahs*. Babur, the founder of the Mughul Empire, too, was a scholar-warrior of a remarkably refined taste. In his "Memoirs" he relates that a considerable amount of construction in India was undertaken under his order, although he ruled only for five years. Two mosques attributed to him still exist – one at Panipat in east Punjab and the other at Sambhal, a town east of Delhi. They are, however, built in the traditional style.

The first construction in pure Mughul style, a combination of Persian and Indian style was erected at Delhi in 972/1564 by Emperor Humayun's Queen in memory of her beloved consort. During Humayun's forced sojourn in Iran, she faithfully stood by him for 12 years. She must have acquired a taste for Persian architecture there. When she decided to build Humayun's tomb, she entrusted the task to an Iranian architect, Mirak Mirza Ghiyath. The result was that for the first time a Persian conception was interpreted in Indian architecture.

The introduction of bulbous domes, so common in Iran and Central Asia, and of arched alcoves, a complex of rooms, corridors and a vast garden surrounding the tomb was a significant landmark in Indian architecture. Added to these purely Persian innovations were certain Indian characteristics such as the fanciful kiosks with their elegant cupolas and excellent stone masonry combined with artistic marble work. From these it is obvious that there emerged a new style under the Mongols, the origin of which can be easily traced in Humayun's tomb.

This style was almost perfected by Akbar the Great, who constructed numerous buildings during his long reign. He built four great fortresses: at Agra in 972/1564, at Ajmere in 978/1570, at Allahabad in 991/1583, and at Lahore at almost the same time. According to *A'in-i Akbari*, "there were built upwards of 500 edifices of red stone in the fine styles of Bengal and Gujrat" in Agra fort alone.[31]

The most complete of these buildings is the palace called the Jahangir Mahal in Agra. The palace-fortress of Lahore is unique in this respect that its outer walls are decorated with glazed tiles with sport *motifs* such as elephant combats, games of polo, and hunting episodes. Figure compositions and floral devices also are found in the panels.

The most monumental achievement of Akbar is Fatehpur Sikri, his new capital city, 26 miles west of Agra. It is a complex of palaces, official residences, and religious buildings, so designed and executed as to form one of the most spectacular structural productions in the whole of India. These are all built in red stone. Famous among them is the Diwan-i Khas (private audience hall), the Jami' Masjid with its Buland Darwazah (high gate) and palaces of Queen Jodha Ba'i, Maryam Sultanah, Rajah Birbal and Hawa Mahal.

The Diwan-i Khas is a rectangular hall with unique arrangements. It has a large and circular pillar in the centre, its massive capital supporting a circular platform. From this platform stone bridges radiate along each diagonal of the hall to connect it with hanging galleries. The Emperor used to sit on the central platform and listen to discussions among scholars of different religions.

The most impressive single structure of Fatehpur Sikri is the Buland Darwazah which was built in 979/1571 to commemorate the conquest of the Deccan. It is 134 feet high with a further flight of steps, 42 feet high. Across its front, the gate measures 130 feet. It serves as entrance to the Jami' Masjid containing the tomb of Sheikh Salim Chishti.

Emperor Akbar's son, Jahangir, was not much interested in buildings. The only important construction undertaken during his reign was Akbar's tomb at Sikandarah in 1022/1613. Unlike previous mausoleums, Akbar's tomb has no dome. It seems that a new group of architects were trying to evolve a style different from the one followed by earlier Mughuls. Two more tombs were built in the same style in which the central dome was replaced by a rectangular pavilion. These were the tombs of I'timad al-Daulah built at Agra in 1036/1626 and the tomb of Jahangir built at Lahore. Both were constructed under orders of Queen Nur Jahan. Of these three, the tomb of I'timad al-Daulah is the most delicate and ornate piece of

architecture. It is made of marble with its surface tastefully decorated with precious stones of different colours. This inlaid work is in *pictora dura* style.

The reign of Emperor Shah Jahan (1036 – 1069/1627 – 1658) is the golden age of Mughul architecture. While Akbar's monuments surpassed those of his predecessors in red stone architecture, his illustrious grandson preferred the use of marble on a scale unparalleled in history. His was the age of marble and its architectural style was determined by marble forms with the result that the character of the arches had to be altered into a foliated one, white marble arcades of engrailed arches became a distinguishing feature of Shah Jahan's buildings. The bulbous dome also was constricted at the neck and ornamental elements became curvilinear.

Shah Jahan was almost possessed with a passion for buildings. He started with the Agra Fort wherein he built the marble hall of Diwan–i 'Am as soon as he ascended the throne in 1037/1627. Ten years later, the Diwan–i Khas, a hall also made of marble, was added to it. The double columns of this hall are amongst the most graceful constructions of his reign. From time to time, several other palaces, pavilions, and mosques, e.g. the Khas Mahal, the Shish Mahal, the Muthamman Burj, the Moti Masjid, and the Naginah Masjid, were added to the complex inside the citadel.

In 1048/1638, Shah Jahan decided to transfer his capital to Delhi where he laid the foundations of Shah Jahanabad, a palace–fortress on the right bank of the river Jamuna. The vast, oblong complex is a city within a city. It is a well planned enclosure and a product of the architectural genius of Shah Jahan himself.

The citadel, made of red stone and marble, consists of four groups of buildings arranged symmetrically. The large central quadrangle contains the Diwan–i 'Am, the two square court–yards in the form of ornamental gardens on either side, and the range of marble palaces along the riverside. These palaces include the Rang Mahal and the Diwan–i Khas, two most lavishly ornate buildings considered to be the crowning jewels of Shah Jahan's seraglio.

Since the citadel did not include any mosque, Shah Jahan built the famous Jami' Masjid of Delhi on a site near his palace. It is erected on a lofty plinth and is one of the two largest and most famous mosques in the sub–continent, the other being the Badshahi Masjid of Lahore. Rectangular in shape, the Jami' Masjid has tree entrances, the main and the most imposing entrance faces the east and much resembles Akbar's Buland Darwazah at Fatehpur Sikri. It is made in red stone and marble. The three domes are made of marble with vertical strips of black stone inset at regular intervals.

Several noteworthy buildings were erected by Shah Jahan and his governor at Thattah, the then capital of the province of Sind. Among these are the Jami' Masjid, begun in 1057/1647, and a group of tombs built on the Makli Hill by Mirza 'Isa Khan who governed Sind from 1037/1627 to 1054/1644. The Jami' Masjid is built of bricks decorated with glazed tiles of blue, white, and yellow colours. These tiles were cut in very small sizes, only have an inch wide, thus nearly 100 such tiles have been used within one

square foot producing a mosaic effect. The designs are chiefly geometrical, but the spandrils of the arches often show conventional floral compositions.

Since stone and wood were scarce in Sind, most of the construction was done in bricks and glazed tiles. The architectural style of Sind closely resembles that of contemporary Persia – brick walls arcaded with Tudor type arches, kiosks with cupolas, a "Lodhi" style dome, and the outer surface embellished with glazed tile work.

The greatest masterpiece of Shah Jahan is the Taj Mahal (1042 – 1050/1632 – 1650), built by the Emperor in memory of his beloved Queen at Agra on the bank of the river Jamuna. This exquisite poetry in marble touches the highest pinnacle of Muslim architecture and is unsurpassed in history. Its rhythmic proportion, its atmospheric setting, its feminine delicacy, its animated ornamentation, and its pleasing symmetry make the Taj Mahal one of the great wonders of the world.

While Shah Jahan built in marble and red stone, brick and glazed tile were patronized by the nobility. The finest example of this type of buildings is the famous mosque of Wazir Khan in Lahore. Built on conventional lines, every portion of its structure, both inside and outside, is enriched with a variegated scheme of colours either by means of floral patterns painted in tempera or panels of more conventional designs executed in lustrous glaze.

The Mughuls were very fond of landscape architecture. Nothing pleased them more than ornamental gardens, traces of which are found almost in every city where the Mughuls had lived. The most famous among these are the Shalimar Gardens and the Nishat Bagh of Srinagar and the Shalimar Gardens of Lahore, all three of them built by Shah Jahan. These gardens, like most of the Mughul buildings, are almost always symmetrical and geometrical. But their rectangular terraces, kiosks, balconies, pools, fountains, and cascades present a most pleasant effect and testify to the refined taste of their originators.

The Emperor Aurangzib (1068 – 1119/1657 – 1707) was the last of the great Mughuls. Although too much occupied in political affairs of the state to indulge in constructional work, he has left a famous monument in the Badshahi Masjid of Lahore, the present capital of West Pakistan. Built in red stone and marble, the Badshahi Masjid is one of the two biggest mosques in Indo–Pakistan sub–continent and is an imposing example of strength, solidity and expanse.

With the death of Aurangzib in 1119/1707, the glorious chapter of Muslim architecture in this sub–continent came to an end. The decline of the Moghul Empire was so swift and the political conditions prevailing in Lahore, Delhi, and other important centres of Muslim culture so insecure and unsettled that traces of late 12th/18th century Muslim structures are very rare.

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Chapter 56: Painting

A. Introduction

It is difficult to distinguish Muslim contribution to painting from the history of Muslim painting. An assessment of Muslim contribution to this art would involve a consideration of the changing and growing attitude of Muslims towards painting and a study of the historical background which determined this attitude. Both these considerations are necessary because they imply each other, an understanding of the one without the other is bound to be inadequate and lopsided. Let us first consider the Muslim attitude towards painting.

It seems that Muslim attitude towards painting in the early history of Islam was hostile. This was justifiable because Fine Arts had at that time an uncanny association with pagan beliefs and rituals. Painting was reminiscent of polytheism which Islam had come to fight against and destroy. Islam then needed an extraverted attitude – an attitude in which the soft and feminine qualities of artistic creation and appreciation could find little room. The social consciousness of man at that period of history did not have sufficient insight into subtle differentiation of various aspects of life. Being a facet of pagan polytheism painting was prohibited by Islam in its zeal to breaks idols.

Profound aesthetic possibilities inherent in Islam had to lie dormant to be realized only when was ripe for their realization, i.e. after Islam had succeeded in its mission to make monotheism an effective force in the development of human consciousness and to foster and nourish the scientific impulse so that man could become master of his history and responsible for its vicissitudes. Once this attitude was fairly established in their history, the Muslims began to pay attention to those pagan pursuits which they had neglected before which were now shorn of their polytheistic associations. Painting was no longer the art of making images but the art of breaking images. Through painting one could now cast out the devils of one's heart and thus prepare one's soul for direct encounter with God. There was no longer any question of worshipping the gods one painted, for no longer did they remain the objects of worship for the Muslim mind.[1]

Orientalists have always seen Muslim paintings through coloured spectacles. They enumerated the influence which moulded the character of Muslim art and maintain by deft implication that Muslim art

could be reduced to these influences, that there was nothing original in this art. They do not see that Islam not only absorbed external influences but also modified them to suit its own native genius. Muslim painting was only an aspect of *Muslim* life. It was an expression of the spiritual explorations of sensitive minds. These sensitive minds, rooted in their own culture, had their own peculiar longings and yearnings, aspiration, and conflicts. It was out of these dynamic forces that peculiar idioms and patterns which we call by the name of Muslim Art.

B. Characteristics of Muslim Painting

Muslim painting began under a shadow – the shadow of taboo on pictorial representation of material things. Islam started its career as an iconoclastic missionary religion to the main aim of which to establish a social order based on reason. It propounded laws, made institutions, and fostered organizations that the ideal could come to earth. It not only enunciated values and principles but also tried to demonstrate that they could be realized in this mortal life of ours. In this endeavour, Islam had to suppress the pagan orientation not only of the Arabs but of all the peoples it conquered. Paganism had an uncanny and almost an internal relation with idol–worship, and Fine Arts were the only means by which idols could be raised and formed in such a way that they could, by their beauty and elegance, induce in the beholders a mood of devotion and emotional abandon.

The aesthetic sense among the pagans was the religious sense. Devotion to beauty and worship were identified in the pagan mind. Paganism was the cult of the irrational. It was based on the bond between the primitive man and the forces of nature that he faced in his daily life. Islam came with the message that there is only one God, that He alone is worthy of worship, and that the forces of nature can be subjugated and bent to serve man's will and desire. It was necessary for Islam at that stage to sub–ordinate the aesthetic to the moral and the beautiful to the good. It was, therefore, a historical necessity which led early Muslims to prohibit the art which fostered representation of gods, goddesses, and national heroes as objects of worship. It did not mean that such a prohibition is inherent in Islam.

Muslim painting, therefore, began with a handicap. Without this handicap its individual and unique character is not conceivable. Some of the unique characteristics of Muslim painting are as follows:

1. Muslims loved their Holy Book, the Qur'an. In their attempt to copy it they tried to write it beautifully and gracefully. They developed new forms of writing and created novel movements in calligraphy. The forceful and lyrical language of the Holy Qur'an induced them to write it with passion and warmth to introduce cadence and grace to the form of the written word. Muslim painting is the result of these movements in calligraphy. Thus, we find that Muslim painters emphasize line (*khat*) more than anything else. A powerful and colourful line and a forceful stroke can create a ravishing form, pulsating with charm and fascination. It is the "line" that matters, everything else would take care of itself. Whether it is a straight line or curve, the stroke alone is responsible for the aesthetic forms; it provides the criterion of beauty.

2. Islam implies a serious commitment to history. For Islam, nature is interesting only as a background to human personality and human deeds. Muslim painters are intensely alive members of Muslim society. For them wars and battles, rise and fall of dynasties, destruction and construction of cities are not matters to be observed with a spiritual nonchalance and complacency but events of vital interest. For a Muslim artist, human personality has supreme value. We, therefore, find that it is the human drama, the human action, which occupies the centre of Muslim paintings. Vast spaces, mountains and valleys, storms of wind and rain which characterize Chinese paintings are conspicuous by their absence in Muslim painting. The principal reason for this attitude seems to be the realization that for a painting of nature to be vital and vivacious it has to employ human symbols.

The storms must oppress and plunder, the wind must be caught unawares in a tree, the valley must sing songs, and mountains must radiate human, maternal warmth. One cannot enjoy a landscape painting unless it is perceived animistically, unless it is human in some way. Not that Muslim painters did not paint landscapes, they did sometimes far more effective than the impressionistic painters of France and Holland. What did they eschew, however, was painting a landscape for its own sake. A human being must be there to give actuality to natural scenery. Without human beings nature is dead and insignificant. For Muslim painters a scene of natural beauty is incomplete and incomprehensible with the observer being there in the painting in one form or another. It is a new mode of perception; seeing nature as an inter–play between natural stimuli and the human eye. Western critics of Muslim art do not see this point. They dismiss the entire Muslim painting as sentimental and romantic because it is not interested in nature *per say*.

3. Muslim painters did not introduce perspective in their paintings. Their paintings seem almost all – except those made in the time of Jahangir under the impact of Dutch and Flemish painters – to be lacking in depth. The third dimension and the changes it causes in human perception are ignored by the Muslim painters. Perhaps the reason is that they are interested in distant objects as well as in near objects. An object far away is as much relevant to the central figure as the object in the forefront. Why not bring it forward in imagination, observe it telescopically at it was and paint it in its full magnitude?

One finds a similar spectacle in some of the illustrations of the *Shah Nameh*. There in a single painting several episodes are brought together to make a complete story. The Western critic is baffled, and even when he praises such “erratic” paintings he does so condescendingly. The reason he does not understand this style of painting is that he is alien in spirit of the Muslim conception of time. For a Muslim, time and eternity are only two facet of the same reality, he does not have to create a dichotomy between time and eternity, he does not have to make time illusory in order to satisfy his longing for eternity. A Muslim is expected to try constantly to create eternity out of time. No wonder then that Muslim painting tried to combine all dimensions in a single unity and all phases of time in one whole.

4. Muslim painters did not paint darkness. In their painting all is light and colourful. The resplendent sun seems to cover their canvas and paper. There are no dark shades or black shadows haunting the

painting like ghosts threatening life with primordial dangers. Their painting is a painting of luminous tints and hues and colours. This again reflects a singularly strange attitude, especially to the Western, for he can wallow in darkness.[2] Darkness and fondness for darkness are typically pagan characteristics.

It connotes qualities which emanate from a state of pre-consciousness. You cannot be conscious and remain in darkness. Darkness is a dragon which devours distinctions, discriminations, and differentiations. Darkness also characterizes a condition of stark individualism, when the individual is sundered from society and finds himself in the grip of absolute helplessness. Modern Western sensibility which is completely unconnected with Muslim culture cannot appreciate the absence of darkness. It seeks an external representation of the black despair within. But black individualistic despair was no part of Muslim consciousness.

As we have seen, Islam emphasizes a serious commitment to history. In a growing Muslim society the individual, apart from being an individual, is a social being *par excellence*. Sociality is a *raison d'etre* of an individual. The helplessness of an individual and the resulting spiritual darkness, therefore, is a condition alien to Muslim consciousness. Perhaps, when the Muslim individual is faced with rapid industrialization, he may for a time get into despair and thus enter the realm of darkness in order to emerge again with light. Of course, there were Muslim mystics and they did come at times face to face with the phases of inner darkness, but they were people who never painted.

5. Muslim painting, consciously or unconsciously, employed symbols which represent mystical states. Sometimes endless curves with no beginning or end stand for the state of bewilderment in which nothing outside seems to gratify spiritual longings. At other times *mandala*[3] forms are used to indicate the state of spiritual wholeness which mystics desire to achieve. Western critics do not see these motifs in Muslim art and like to dismiss it as merely decorative and ornamental. Unless one sees Muslim art in its proper historical perspective and imaginatively flows with the stream of Muslim history and ideology, one is not likely to appreciate the significance of this unique idiom.

6. Muslim painting, especially in Iran, was devoted to the expression of a single emotion in one painting. Every detail of the subject was perceived and made use of for an effective rendering of the subtle nuances of that emotion. The trees and flowers were not there to fill a background; they were there to add to the melody flowing from a painting. Most of the Persian miniature paintings are like orchestras in which each object painted contributes to the symphony. This unique characteristic of Muslim painting may have emanated – as Basil Gray suggests – from the mystical and pantheistic tendencies of the Persians, they, perhaps, regarded every object of nature as manifesting God. But a more plausible explanation of this singular quality can, perhaps, be found in the Muslim conception of time.

Muslims regard duration as continuous and eternal, time as discontinuous, universe for them is new at each moment. One continuously hears the sound of *kun ja-yakun*.[4] For a Muslim artist, therefore, simultaneity of eternity is far more significant then succession of events. The emotional meaning of an object is implicitly contained in the total situation. This attitude is hard to grasp for the Occidental mind.

That is why we find that the Western critics of Muslim art, by trying to fit its mode of expression in the pre-conceptions and categories of their own culture, misunderstand and distort the essence of its individuality.

The nearest parallel to this conception is the Chinese conception of synchronicity embodied in their religious classics, such as *I Ching*. Since each moment is an act of God, the Muslim painter sees every temporal and spatial situation as somehow transcending serial time and geometrical space. His peculiar perception gives a painting its particular individuality, the fact that his eager vision selects a peculiar array of objects imparts to its uniqueness. But the fact that this array is the manifestation of the Divine gives it an aura of universality. Both particularity and universality are, thus, combined and synthesized in a single work of art.

7. Muslim paintings – again especially miniatures – are illustrations of literary and religious classics. Several explanations of this peculiar characteristic have been advanced. But the only explanation which is consistent with the general Muslim attitude is that for a Muslim nature is itself in illustration of the Word of God. *Kun fa-yakun* are the words which translate themselves into the sensible world. The world is Logos in matter and motion. Muslim consciousness is rooted in the awareness of a profound inter-relationship between word and fact. Word seems to be the life blood of the universe.

This point will become clearer if we attend to a parallel recently drawn by Dr. W. C. Smith between the Christian "Eucharist" and the memorization of the Qur'an by Muslims. Dr Smith writes, "The Koran, in formal Muslim doctrine pre-existent and uncreated is for the Moslem the one tangible thing within the natural realm that is super-natural, the point where eternal has broken through into time. By Koran one means, of course, not the 'ink and paper' but the content of the Koran, its message, it words, ultimately its meaning. The *hafiz* (freely, the 'memorizer', but, more literally, the 'apprehender') has in some sense appropriated this himself, has interiorized it in a way that could conceivably suggest to a Christian some analogy with what happens when the Christian in the Communion service appropriates God, the super-natural, the embodiment of eternity in time."

This parallel is extremely valuable. For where Christians have to incorporate the body of Christ in order to have communion with the God-head, Muslims have to incorporate the words of the Qur'an so that they would have communion with God. The eternal Word and its meaning are one, they cannot be separated. And it is the Word which gives spiritual sustenance to the believer.

If we look at the artistic illustrations composed by Muslims painters from this point of view, we may appreciate the significance of this tendency better and more adequately. The word for a Muslim has a compelling power of creation: his spirit must fly to eternity on the wings of words. Not only that, these are the only wings which can take him there. Hence, every sensuous experience which inspires a painter to express himself in colour and line, in order to be integrated in his personality, must be capable of verbal expression. The rise and fall of sensuousness must be capable of being regulated by words.[5]

Muslim painting, especially in its early phases, was not an autonomous medium of expression. It was subsidiary to literature. The earliest Muslim paintings were the results of the efforts of painters to illustrate some of the classical books. They derived their content from these books and their form from their need to decorate and make beautiful. The passion to illustrate the written word is not something peculiarly Muslim, it has inspired painters like Delacroix to illustrate Goethe's *Faust* and artists like Michelangelo to point Christian myths and legends on the interior walls of cathedrals and churches. It is significant that the grand old man of painting in Pakistan, 'Abd al–Rahman Chughta'i, won his reputation as a great artist by his illustration of *Diwan–i Ghalib*. When painters, whether of the East or of the West, seek grand visions and cosmic views to colour their artistic endeavours, they illustrate great books. Perhaps the need for these visions is perennial.

Let us now substantiate these points by have a brief a glance at the history of Muslim painting.

C. Historical Background

Muslim painting started its career under the Umayyads, who as rulers and conquerors were mainly without any puritanical disdain for luxury. The palaces they built were expressions of the theme of splendour and richness, which gradually came to dominate all aspects of their lives. One finds the walls of these palaces made beautiful and attractive with paintings inspired by various colourful motifs. About 94/712, the Umayyad Caliph, Walid I, built a desert lodge at Qusair 'Amrah. This romantic palace was decorated by wall paintings representing allegories and various kinds of animals and plants.

The 'Abbasids went further. In their pagan pursuit of imaginative luxury they made the human figure loom large in their paintings. In their paintings girls dance, musicians sings and play on instruments, animals stroll, and birds fly and twitter. These figures are enclosed in circular disks. One finds a resplendent example of this tendency in the palace at Samarra built in the third/ninth century. Side by side with these paining one sees the opposite motif. On wooden boards are painted plants in white, red, yellow, and blue. In these paintings human and animal motifs are absent.

But the early 'Abbasids made their artistic influence felt more in Iran than perhaps anywhere else. Here one sees several palaces decorated with frescoes in diverse styles and various modes of execution. Some of them are only in black and white, while in others all colours are employed to create the desired effect. The black and white paintings portray human movements, while the multi–coloured paintings depict human and diabolical figures, male and female, with and without haloes, heads, busts and dresses. The plaster niches found at Nishapur are made of different designs, but all have the vase or goblet motif; these vases seem to radiate palmettes against a blue background and have a triangular shape reposing on top. Sometimes two magical eyes diffuse a spell over the entire niche. In Egypt, beautiful frescoes were made under the patronage of the Fatimid Caliphs in the fourth/tenth century. They had several themes – geometrical patterns, birds, palmettes moving out of central figures, human beings holding drinking cups in their hands. One also sees the dawn of miniature painting in this period.

D. Book Illustrations

In the seventh/13th century, the ‘Abbasids began to patronize illustrations of classical works of science and mysticism. The impetus probably came from some of the illustrations made by painters in the second/eighth and third/ninth centuries under the influence of Mani, the great Iranian painter. The ‘Abbasids probably employed the Nestorian or Jacobite Christians to illustrate the books they regarded as classics. The main difference in content between the Manichaean illustrations and Muslim illustrations was that the former were mainly representations of religious themes and the latter devoted by and large to making the sciences of the body and the soul sensuously attractive to the human eye. For instance, the Arabic translation of Dioscorides’ *Materia Medica* was illustrated profusely by ‘Abd Allah ibn al-Fadl. Similarly, other books dealing with animals and plants in a scientific manner had their themes illustrated by skillful painters of the time.

The distinctive feature of these illustrations was that they treated of operational themes. They dealt with subjects such as doctors preparing medicines or surgeons doing operations. These illustrations have a very simple style. Rich and powerful colours make the theme throb and pulsate with energy and vivacity, rosettes and palmettes cover and decorate the apparel and garments, but the background is only just indicated, generally with a few conventionalized trees.

One book which was distinguished for its remarkable illustrations was Hariri’s *Maqamat*. Its illustrations were done by a powerful painter of the time, Yahya ibn Mahmud of Wasit, conveniently known as al-Wasiti. This painter copied and illustrated the most important copy of the *Maqamat* in 635/1237. These magnificent paintings deal with everyday life. They show ordinary Muslims travelling in the desert, praying in the mosque, drinking in the tavern, and reading in the library. There realism is enchanting, their conception is bold, their strokes are sure and vital, and the line they imprint is fine and delicate.

In this period, *Kalilah wa-Dimmah*, a Hindu book of stories, which was translated into Arabic by ibn Muqaffa‘, was quite a popular fount of inspiration for the painters who aspired to make their mark as illustrators. One of the manuscripts prepared in 628/1230 show minute observation of details and an excellent realization of the animal motif, but here, as elsewhere, the third dimension is only barely and abstractly indicated. In northern Mesopotamia under the Saljuq Atabegs painting seems to have acquired considerable popularity. Nur al-Din Mahmud, the Urtuq Sultan of Diyar-Bakr, asked al-Jazari, the great inventor, to write a treatise on the work he had done. Several illustrated copies of this book called “Automata” can be seen in the various museums of the world.

In Iran, during this period of history, only wall paintings and ceramics portraying figures and legends in comparatively subdued colours were being made. Turquoise, blue, or white serving as background would shoot forth gold, silver, green, violet, etc.

E. The Mongo School

The Mongols brought with them a deep fondness for the Chinese art. The painters of Mesopotamia, as we have seen, themselves possessed a great sense of realism. This sense was made more acute and sharp by their contact with the Chinese culture and Fine Arts. The Chinese artists had achieved considerable excellence and maturity in painting landscapes. The Muslim artists assimilated in their idiom not only on themes selected by the Chinese painters but also their method of impressionistic painting in black and white. Ibn Bakhtishu''s *Manafi'i al-Hayawan* is the earliest Iranian manuscript of the Mongol times. Several copies of this book were made in different styles, sometimes adopting mild tones and at other times venturing forth in bolder colours.

The most important influence that Mongol painting received in this period was that of a master mind. Rashid al-Din, the man who wrote, among other books, *Jami' al-Tawarikh*, a history of the Mongols, was, above all, a devotee of learning and arts in the pursuit of which he founded a colony of people whose main business was the enrichment of life with knowledge. Several artists, provided with accommodation and amenities of life in that colony, were asked to copy and illustrate books, mainly his own. The miniature painting in all these books – especially those in *Jami' al-Tawarikh* – show a peculiarly sober but fascinating blend of the Iranian and Chinese features of artistic expression. Some of the copies of this book can be assigned to a later period because they suggest developments which occurred only in the beginning of the eighth/14th century.

Quite a few of the painters of this period copied and illustrated *Shah Namehi* of Firdausi. Again, there are several variations of the composite influences of the Chinese and Iranian styles of painting. The realism of these paintings is particularly marked, the expressions are distinctly individualized, and the details are painstakingly portrayed.

F. The Timurid School

Then came Timur. He was the man who left a trail of blood behind whenever he ransacked a country. Nonetheless, he was a great lover of arts. When he conquered a country he would take special care not to kill the artists. He would then take them to Baghdad, where under his patronage they copied and illustrated manuscripts. But true artistic greatness was achieved only under the inspiring benevolence of Shah Rukh (Timur's son) who made Herat his home. Shah Rukh was interested in books and he inspired many artists to calligraphy and decorate the famous and important books of the time.

Khalil, a great painter, who was regarded second only to Mani, was the leading figure in art at Shah Rukh's Court. Shah Rukh's son, Baisunqur Mirza, founded an academy of book arts with a large staff. Among the important painters were Amir Shahi and Ghiyath al-Din. *Shah Nameh* was still the fount of themes for the Court painters, but they also addressed themselves to mystical and romantic subjects – such as those found in Nizami's *Khamseh* and Sa'di's *Gulistan* and *Bustan*. The vivid and lyrical imagery

of those paintings suggest that the painters modified and changed their style to suit the novel subjects they had discovered. At Shiraz, where an independent school flourished at this time, colours were milder and cooler, and the style, though not vastly different, was definitely less skilful than that of the school at Herat.

Another book, *Diwan–i Jami*, was also a popular source of inspiration for the painters of that period. ‘Abd al–Karim of Khwarizm calligraphed and illustrated Maulana Jami’s *Diwan* at the end of the ninth/15th century. In Samarqand a book on astronomy was also illustrated for the library of Ulugh Beg.

G. The Great Behzad

The Iranian historian Khwandamir wrote thus about Behzad in the middle of the tenth/16th century, “He sets before us marvellous forms and rarities of his art, his draughtsmanship, which is like the brush of Mani, has caused the memorials of all the painters of the world to be obliterated, and his fingers endowed with miraculous qualities have wiped out the pictures of all the artists among the sons of Adam. A hair of his brush, through its mastery, has given life to the lifeless form.”

This great painter began his career with Sultan Hussain Mirza at Herat at the end of the ninth/15th century. Later, he came to Tabriz in the early tenth/16th century to work under Shah Isma‘il. It has been said that when a battle was raging against the Turks, Behzad and Shah Mahmud al–Nishapuri were hidden by Shah Nasir in a cave. In 929/1522, Behzad was appointed Director of the Royal Library. The two well–known manuscripts that Behzad illustrated were *Khamseh* and *Bustan*. One sees in these paintings a keen perception of form, a highly sensitive and subtle sense for colour, experimentation with colours to evolve new *Gestalten*, and novel patterns of feeling and awareness. These paintings show that Behzad had an astonishingly strong consciousness of the opposites: of dramatic action and immobility, of blending peace and unrest, of combining generality with individuality. *Zafar Nameh*, a biography of Timur, was also illustrated by Behzad. Besides, he illustrated Maulana Jami’s *Diwan*, and his illustrations show his experimental genius at its best.

The most outstanding student of Behzad was Qasim ‘Ali, who carried on the style and artistic tradition, set by his inimitable master. Qasim ‘Ali, who acquired the experimental spirit of Behzad, became well known as a painter of faces.

One thing that strikes the modern connoisseur of painting is that Behzad, who unfortunately did not outgrow the narrow confines of miniature painting, had an intense awareness of the *mandala*. One has only to look at his masterpiece, “The Dancing Dervishes,” which, apart from its ravishing curves and powerful lines suggesting movement and rhythm, is a beautiful *mandala* figure. The dervishes make a moving and dancing circle which seems to revolve around a centre. The centre is again not bereft of content. It is filled with four dervishes dancing hand in hand.

This painting gives a lie to all those Western critics of Muslim painting who have repeatedly charged

Muslim art, almost *ad nauseam*, with being almost entirely decorative. This painting is one of the illustrations in *Diwan–i Jami*, a Book of poems with a markedly mystical content. Here is a painter who not only illustrates but also absorbs the mystical content in his artistic forms. *Mandala* represents spiritual wholeness. It seems that Behzad was painting his powerful pictures not to produce decorative effects but to answer a spiritual need. It was a response to his spiritual longing, a colourful realm discovered by his spiritual quest, as answer to the prayers of his soul. When one looks at "The Dancing Dervishes," one finds that compared with it the most renowned *mandala* paintings by the mystics of other creeds pale into insignificance. The spell that Behzad's paintings cast on the beholder can radiate only from a whole soul. It is not the work of a mere decorator.

H. The Safawid School

Herat continued to throb with art even when Behzad shifted from there to Tabriz. Behzad's influence was not passing or transitory, it stayed because it continued to move and stir the Muslim soul. Amir Khusrau Dihlawi's *Khamsea* was copied at Balkh and was illustrated by one of Behzad's students. It contained some very significant miniature paintings. The great calligrapher 'Ali al–Hussaini copied and illustrated 'Arif's Go–i *Chaugan* in 930/1523. Similarly, *Diwan–i Hafiz* was illustrated by Shaikhzadeh, a student of Behzad, and Sultan Muhammad who had an individual style. Sultan Muhammad also copied Nizami's *Khameseh* and produced some very outstanding and superb paintings. In his paintings he introduced new colour schemes and new ways of perception.

Sultan Muhammad was a Court painter *par excellence*. He was not only an intimate and close friend of Shah Tehmasp, but also taught him how to paint. He illustrated Nizami's *Khamseh* and Firdausi's *Shah Nameh*. Along with his teacher Mirak, he created a new style of painting. His fingers are more sophisticated and his background is richer in detail and ornament.

Sultan Muhammad also painted some portraits of charming young men and lovely ladies. Some of his portraits are those of Shah Tehmasp himself.

The second half of the tenth/16th century saw the rise to eminence of another painter, Ustad Muhammadi, son and student of Sultan Muhammad. The miniatures painted by this great artist reveal an enchanting style and a sense of composition unprecedented in the history of Muslim painting. He took his subjects from everyday life and imparted an inimitable rhythm to all the details of his figures. Trees, wild and tamed animals, men and women enter his paintings and become immortally and irrepressibly alive.

I. The Bukhara School

In the early tenth/16th century, Bukhara became the centre of hectic creative activity. Mahmud Madhahhib, a student of the famous calligrapher Mir 'Ali, excelled in painting love scenes. He also illustrated Nazami's *Makhzan al–Asrar*. Several other painters painted miniatures in this century and

their work shows the influence of Behzad and his school. But they did not blindly imitate Behzad; they accepted his influence and developed a new style. They experimented with colours and afforded local touch to the figures they made. One painter illustrated Sa'di's *Bustan* and another Muhyi Lari's *Futuh al-Haramain*. One finds these paintings beautiful and decorative, but lacking in the spiritual fire which was characteristic of Behzad's work.

They were bereft of the ardent longings which animate paintings of the Herat school. They are expressions of artistic decay which set in at about this time in Iran and other Muslim countries. The principal reason of this decline seems to be the desire of clinging to the same old form of miniature painting and a refusal to experiment with other media of expression. That is why in Isfahan, under the patronage of Shah 'Abbas, illustrations were made but only of works of much lower calibre than *Shah Nameh* or *Diwan-i Hafiz*. Paintings were made to portray scenes from books like *Chihal Sutun* and *'Ala Kapi*. At this time Rida'-i 'Abbasi were regarded as the most outstanding painter of Iran.

His tinted drawings throb with life and vigour. One finds in them undulating curves flowing with facility into the patterns they weave and mild strokes emphasizing the ends. This was indeed a breath of fresh air. Life itself, rather than books, became the fount of inspiration. This was a great change, but it could not be felt as such because great changes need great artists to sustain them. Unfortunately, neither Rida'-i 'Abbasi nor anyone else had the powerful vision of a Behzad or a Sultan Muhammad. Consequently, the 11th/17th and 12th/18th centuries, people imitated and admired Rida'-i 'Abbasi, but no new movement came into being.

J. The Turkish Painting

The origin and development of Turkish painting is still wrapped in mystery. However, this much we know that in 855/1480 Sultan Muhammad II invited Gentile Bellini to his Court and commissioned him to paint his portrait. In the tenth/16th century Shah Quli and Wali Jan, the Iranian painters, came to Constantinople and became Court painters. These artists selected the houris of paradise as their subject-matter. Shah Quli achieved excellence as a painter of curved leaves and Wali Jan became distinguished for the elegance of his lines. Some Iranian painters illustrated "History of the Ottoman Sultans" and *Sulaiman Nameh*, a book of stories by Firdausi of Brusa. The main distinction of these painters was that they did a good deal of experimental work in colours.

K. The Mughul Painting

Babur, the first Mughul Emperor of India (933 – 937/1526 – 1530) was a philosopher and great lover of nature. It seems that he patronized Fine Arts and brought with the traditions of Behzad and the Bukhara school. Babur's son, Humayun, invited Khuwaja 'Abd al-Samad of Shiraz and Mir Sayyid 'Ali to his Court at Kabul and asked them to illustrate *Amir Hamzah*. The paintings they made of this fantastic story were 1400 in number. Akbar, Humayun's son, was a unique patron of arts. He built a city, Fatehpur Sikri,

where he decorated his palaces with mural paintings and founded an academy of Arts.

This was an institution for the creation and promotion of a native school of painting. Painters of this school were influenced by Behzad and the early Timurid paintings. Nizami's *Haft Paikar* was copied and illustrated by the painters at Akbar's Court in a style which had a peculiar blend of two traditions: Behzad School and the early Timurid School. They show a local touch in so far as the content is concerned, but in the selection of colours and design they were markedly Iranian.

Hindu painters, working under the Mughul influence, illustrated manuscripts dealing with the lives and exploits of Timur, Babur, and Akbar. Their paintings reveal a remarkable mixture of the Hindu, Iranian, and European influences. For the first time in Muslim art one notices the presence of perspective and a clear visualization of the third dimension.

Jahangir (1014 – 1038/1605 – 1628) carried on the tradition of his great ancestors, and he carried it much further. He liked art to be representative of life as it is lived in the present and not a mere illustration of the wisdom of books. Thus, in his time realistic painting of plants and animals were produced in abundance. On his travels he would take his Court painter with him and urge to portray significant historical events in their paintings. Mansur, Murad, and Manohar were distinguished painters of his time. These artists painted rare birds, animals, and flowers in an exquisitely realistic style.

Jahangir and his nobles were also fond of getting their portraits made. The famous portrait painters of this time were Bishandas, Manohar, Muhammad Nadir, and Abu al–Hassan. Abu al–Hassan was Jahangir's favourite: he painted some beautiful miniatures and some very fine portraits of Jahangir. Mughul painters also painted pictures representing nobles and princes conversing with Hindu ascetics and hermits. Shah Jahan, Jahangir's son, was a devotee of portrait painting. Some of his own portraits, made by artists at his Court, show acute observation, elegance and subtlety in execution, and a deep sense of colourfulness. Muhammad Fakhr Allah Khan and Mir Hashim were two of the important painters of his time. Dara Shikoh, Shah Jahan's son, who never ruled, was a great admirer and patron of arts – but after him, that is, in the 12th/18th and 13th/19th centuries, Mughul art suffered a complete decline.

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1. "Prayer, then, whether individual or associative, is an expression of man's inner yearning for a response in the awful silence of the universe. It is a unique process of discovery whereby the searching ego affirms itself in the very moment of self-negation, and thus discovers its own worth and justification as a dynamic factor in the life of the universe." Sir Muhammad Ashraf, Lahore, 1958 p. 92,
2. Thus, Bachofen writing about the characteristics of matriarchal societies regards preference for darkness as an important attribute of such pagan cultures. Bachofen says, "By no means less significant is a second expression of the same fundamental law, that of pre-dominance of night over day born of her maternal womb. In antiquity... preference of night over the day (was) associated with ... a dominant maternal influence. In this instance two hoary customs and usages, councils and court assemblies, that is, the preference for darkness for the exercise of social functions, show that we are not dealing with a philosophic theory of later origin, but an actual mode of life. Added to these observations comes the preference of the sinister aspect of life and death over its bright aspect of creation, the pre-dominance of the dead over the living and of sorrow over joy."
3. 'Images of the goal," says Jung, "are mostly concerned with ideas of the mandala type, that is, the circle and the quaternity. They are the plainest and most characteristic representations of the goal. Such images unite the opposites under the sign of the quaternio, i.e. by combining them in the form of cross, or else they express the idea of wholeness through the circle or sphere."
4. Louis Massignon, "Time in Islamic Thought," Eranos Yearbook, Rhein-Verlang, Zurich, 1951.
5. In a footnote in his paper on Christianity and Islam, Dr. Cantwell Smith writes, "It is the word (Kalam) of God, it is not He nor is it other than He." He further quotes from Al-Nasafi, "We do not say that the verbal expressions (alfaz) and letters are eternal...The (uncreated) Qur'an, the Speech of Allah, does not reside in the hearts, nor in the tongues, nor in the ears, but it is an Eternal idea subsisting in the essence of Allah."
The last line in al-Nasafi's quotations, however, suggests that the Eternal Idea cold be grasped without the Word. But this is a mistaken view of Muslim consciousness. In Muslim consciousness the Word is an integral part of the total meaning of God. That is why a Muslim, however rationalistically oriented he might be, will always admire –covertly or overtly – the heroic fight that Imam Ahmad bin Hanbal put up against the doctrine of al-Qur'an khalq1-Allah , that is, the Qur'an is the creation of God.
One may agree with Dr. Smith when he writes, "By this act (i.e., memorizing) the Moslem is, as it were, taking the gift of God up off the book and paper in which it is enshrined and incorporating it within himself, so that it becomes for him alive and inalienably personal." It is quite true that the spoken word which is incorporated in the personality of the memorizer (hafiz). After all, the Qur'an descended as the spoken word of God.

Chapter 57: Music

"To some people music is like food, to others it is like medicine, and to others like a fan."
Alf Lailah wa Lailah

These prefatory lines, serve as they do to provide a text on the lintel of the doorway to this subject, reminds one how widely dissimilar is the attitude of Islamic peoples towards the art and practice of music

to that of others; music is indeed “like food,” since it often sustains when all else fails. You can scan Greek literature in vain for any such parallel sentiments. Music in its literal connotation was alien to Greek philosophy.

Aristoxenus certainly dealt with it, but his approach, devoid of the slightest hint of philosophic appeal *per se*, was a purely scientific one.[1] It is true that the Pythagoreans had given a foretaste of the Islamic spiritual conception of music, but that was in the dim and distant past of Greece. What is more in keeping with the Greek evaluation of this art is to be found in Athenaeus of Naucratis (fl. 200 A. D.), whose utterances are mere entertaining chatter.[2]

A. The Music in Itself

“This art...is the foraging ground of audition, and the pasturage of the soul, and the spring grass of the heart, and the arena of love, and the comfort of the dejected, and the companionship of the lonely, and the provision of the traveller, because of the important place of the beautiful voice in the heart and its dominating the entire soul.”
Ibn ‘Abdi Rabbihi, *al-‘Iqd al-Farid.*

After reading the prologue to this chapter, one cannot help realizing how vastly different are the sentiments of Islamic peoples from those of the peoples of Greece and Rome on the assessment of music. And by music we mean that art which the noblest minds in Islam believed to be capable of being informed with and ennobled by *thought*, and in turn to adorn and enforce *thought*, and to be thus understood and felt. No better example of that percipience is to be found than one in the utterances of the Ikhwan al-Safa of the fourth/tenth century of Basrah, the home of the learning, who spoke of music as “an art compounded between the corporeal and the spiritual.”[3]

To these transcendental philosophers “all the arts had bodily forms except the art of music, whose substance was a spiritual essence.” With what felicity do the “Brethren” laud that type of music “which softens the heart, brings tears to the eyes, and makes us feel penitent over past misdeeds.” How well they knew the value of those soothing melodies “that lightened the pain of disease and sickness,” and those affecting airs which “comforted the aching hearts and eased the grief of the afflicted in times of calamity.” More practical still was their recognition of those songs “that relieved the toil of heavy work and wearisome undertakings,” as well as that music which gathered “joy, pleasure, and happiness...at weddings and banquets.”[4] Indeed a veritable ocean of literature in praise of music has flowed down to us from the Islamic past, whilst poets have sung the sweetest verses in adulation.[5]

On the other hand, there have been many pious and honourable men among the legists (*fuqaha’*) who have considered music a useless pastime (*lahw*) which sometimes became an urge to commit actions which were unlawful (*haram*) or abhorred (*makruh*). Among those who condemned divine art were some of the most sincere of the Muslims, from ibn Abi al-Dunya (d. 281/894) in his “Censure of Forbidden Pleasures” (*Dhamm al-Malahi*),[6] to Shihab al-Din al-Haithami (d. 973/1565) in his “Restraint of

Impetuous Youth" (*Kaff al-Ra'a'*).[7] Nobody can censure those opponents of music who sincerely believed that it was among the things prohibited (*muharramut*), since even Christian Europe linked "wine, woman, and song" among the "idle pleasures" (*malahi*).

Yet, strictly speaking, the objections of the purists in religion to "listening to music" (*al-sama'*) has no logical *raison d'etre*. Calligraphy cannot be blamed on account of forgers, nor can accountancy be condemned because of defalcators. It would be just as illogical to forbid fruits and viands because of their concomitance with wine and woman as to censure music owing to its proximity to the latter. Music, *per se*, is neither good nor evil, although it may accompany both, yet it cannot be categorized or submitted to predicament.

In spite of all our probing and searching we still do not know the inner causes of emotion. Al-Farabi (d. 339/950) denied that music inspired a passion or soul-state.[8] His guess was that music, whether in the performer or the listener, was itself inspired by a passion or soul-state. Ibn Zailah (d. 440/1048) held much the same view. He says, "When sound (*saut*) is adorned by harmonious and mutually related composition, it stirs the soul of man...Beginning on a low note and ascending to a high note, or *vice versa*, according to a *particular* arrangement and a *known* composition, it becomes related to the sentiments of the soul of man. As one note (*naghmah*), after another changes in the music, one state after another changes in the soul.

One composition will transport the soul from weakness to strength, and another from strength to weakness...Therefore, the composition which is possessed of certain sounds is possessed of certain qualities by which the soul is influenced."[9] All that is manifest to the meanest observer, but no one has yet told us what those "qualities" are. Fakhr al-Din al-Razi (d. 606/1209) states a more "up-to-date" opinion, and this, in substance, is what he has to say, "In the animal world sounds come into existence by reason of grief, pain, or joy. Those sounds, according to these circumstances, are different, being high or low, so, the law of association, those sounds become bound up with the different mental states which prompt them. Thus, when those sounds are renewed, they inevitably call up the related mental states, which may be grief, pain, or joy."[10]

From the purely Islamic point of view, ibn Zailah also raises a point worth mentioning. He says, "Sound produces an influence on the soul in two directions. One is on account of its special composition (i.e. its physical content), the other, on account of its being similar to the soul (i.e. its spiritual content)."[11] A Persian mystic, al-Hujwiri (fifth/11th century), divides those who listen to music into two categories: those who *listen* to the material sound and those who hear the spiritual meaning. That ecstatic maintained that those who *heard* spiritually did not apprehend mere notes (*naghamat*), modes (*maqamat*), or rhythms (*iqa'at*), but music *per se*, insisting that such audition "consists in hearing everything as it is in quality and predicament."[12]

That doctrine takes us to the very core of Sufi teaching in which "listening to music" under such spiritual control conduces to ecstasy, which leads to a revelation of the Divine. Did not Schopenhauer suggest

that the world itself is but music realized, and was not that what the Ikhwan al-Safa had taught a thousand years earlier?

Yet of all the great thinkers of Islam no one has probed to the heart of the problem with such power of persuasion and solicitude of purpose, and reached a conclusion of such profundity as al-Ghazl (d. 505/1111). How penetrating are his words, "Hearts and innermost thoughts are mines of secrets and treasuries of precious stones. Within their confines are jewels which are as sparks contained in iron and steel...And there is no other way of extracting their secrets except by the flint of 'listening to music' (*al-sama'*), because there is no means of reaching the hearts except through the portals of the ears.[13] ...Verily, 'listening to music' is a factual touchstone,... for as soon as the soul of music reaches the heart, it brings out whatever pre-dominates in it."[14] That was also the dominating thought of Abu Sulaiman al-Darani (d. c. 205/820), who averred that "music and singing do not produce in the heart that which is not in it."

As our opening lines from the *Alf Lailah wa Lailah* reveal there is much more in music than its being merely an ancillary to those things which are unlawful and abhorred, and those who base their objection to music on the Holy Qur'an and the Hadith must know that they can be answered by proofs to the contrary from these identical and revered sources.[15] Ibn Khaldun (d. 808/1406), the greatest of the philosopher-historians of Islam, did not touch directly on the question of *al-sama'* in the legal aspect. We do not know his reasons for that apparent neglect, but the fact that he devotes a chapter in his *Prolegomena* to music is sufficient proof of his attitude, which was that of the rational man.

To him, man was a social animal who was good by nature.[16] It follows, therefore, that man should seek to satisfy certain natural desires in his leisure hours, such as the need for healthy relaxation, the wish to acquire knowledge, and the urge to listen to sweet music.[17] All such longings were perfectly reasonable, and since man could discern what was good or evil in those desires, he could, by experience, make such desires always beneficial both socially and spiritually, provided the *intention* in those desires were good. If that were the case, the desires were lawful.[18]

The Sufi and the *darwish* have eloquently defended their attitude in the usage of music in their ceremonials by proofs that are unanswerable by its condemners. Perhaps the most trenchant defence was made by the brother and successor of the great al-Ghazl, who was known as Majd al-Din al-Tusi (d. 520/1126), and this is what he said, "If anyone says that audition is absolutely unlawful, he has declared forbidden in the law that about which no statute has come down, since no statute forbidding audition and dancing has come down in the Book of Allah, or in the usage of Allah's Apostle, or in the words of the Companions (of the Prophet). And he, who declares to be forbidden in the Law anything which is not in it, has invented something against Allah, and he who invents anything against Allah is an infidel by general agreement."[19]

Yet we, in this work, are primarily concerned with the purely secular approach, although it may unavoidably include that which is divine. Not only is the case for secular music unassailable, but the

teaching, acquisition, and practice of it can be proved to be rational since it affords healthy exercise to the body, mind and emotions. It has been said that “men die for want of cheerfulness as plants die for want of light.” And, what can supply that want better than music? Therein is refreshment for the body, cheer for the mind, and relief for the emotions, or, more grandiloquently, the repairing of lost energies, the soothing of chafed sensibilities, and the kindling of finer feelings and aspirations.

Everybody knows, especially in Islam, the wondrous power of the “beautiful voice,”[20] particularly in the reading (*qir'ah*) of the Qur'an and the chanting of the “call to prayer” (*adhan*). They give back musical impressions which not only delight the ear but thrill the soul, because that chanting harmonizes with the divine message.[21] And why should not secular music *per se* do likewise, since there seems to be a natural alliance between radiant music and moral beauty? Surely man's faculties and susceptibilities for the acquisition and enjoyment of music were not bestowed but that they should be a glory to the Giver and a joy to the possessor, for they are as essential to the social and spiritual welfare of man as the influence of the sun and rain is to be the fruitfulness of the mother earth.

“Get way from evil and sing”
(*Ab'id al-sharr wa ghanni*).

Syrian Proverb

B. The Music Lovers

“I like the man who cultivates poetry for self-instruction, not for lucre; and the man who practises music for pleasure, not for gain.”
Ibn Muqlah (d. 238/940)

Since Islam was born among the Arabs and was cradled in the Hijaz, one must give prior consideration to these two important facets. In the “Days of Ignorance” (*al-jahiliyyah*) music was practiced in the whole of Arabia by the matrons of the towns and tribes as well as by professional singing-girls (*qainat*). These not only cheered many a home and encampment, but strengthened the resolve of those in the battle throng, as we read in the *Hamasah*. Their singing (*ghina'*) was based on a simple type of song called the *nasb* which was but an improved form of camel-driver's chant (*huda'*). They accompanied themselves on an instrument of strings (*muwattar*), although more generally it was a harp-like instrument (*mi'zafa*), a percussion wand (*qadib*), or a tambourinte (*mizhar*).[22]

In default of the latter they could adapt the perforated skin sieve (*ghirbal*) for that purpose: this received the approval of the Prophet later.[23] When Islam came upon the world of intellectual darkness, the first male musician to make history was Tuwais (d. c. 88/705). He accompanied himself on a square tambourine (*daff*), and when performing would perambulate along the lines of his audience.[24]

The wide conquests of the Arab armies, notably in Persia and Syria, had sent crowds of captives into the

towns of the Hijaz. Among these were singers and players whose alien types of music captivated the people of Mecca and Medina. The result was that Arab musicians found themselves compelled to master the new kinds of singing and playing. That was only one of the many cultural influences which affected Arabian modes of life, for "when the revelations of the Prophet flashed on the world, a message was delivered which could not be confined to the Hijaz, the cradle of Islam. As a result, the banner of the Prophet was planted eastward at the extremities of Transoxiana, southward by the banks of the Indus, northward to the shores of the Black Sea, and westward on the slopes of the Pyrenees."[25]

As we march through the pages of the history of music we shall see how manifold artistic ingredients contributed to Islamic civilization. Al-Hirah, the capital of the Arab Lakhmids, had already imbibed much of Persian culture including the lute (*'ud*).[26] The Meccans had used a rustic type of pandore (*mi'zaf*) which had a parchment "face" (*wajh*), but as the Persian lute (*barbat*) had a "face" of wood, the Meccan lute was called the *'ud* (wood). The holy cities of the Hijaz resounded with strains of music and song,[27] and the artistic career of the songstress 'Azzat al-Maila' (d. c. 88/705) in the Hijaz attested to that fact.

At her auditions the greatest musicians, poets, litterati, and the most distinguished citizens, including 'Abd Allah ibn Ja'far, a cousin-germain of the Prophet, took part. Even Hassan ibn Thabit, the first poetic extoller of Islam sang her praises.[28] Among the great musicians of the glorious days of the Orthodox Caliphs (*al-rashidun*) were Sa'ib Khathir (d. c. 83/683), Hunain al-Hiri (d. c. 100/718), and Ahmad al-Nasibi, a kinsman of the poet A'sha Hamdam (d. 82/701).[29]

The Umayyad caliphs removed their capital from Medina to Damascus, where their Courts, with the exception of that of 'Umar II (d. 101/720), were thronged with singers and players. Of al-Walid (d. 126/744) it was said that "the cultivation of music spread not only among the leisured class, but with the people also."[30] Those were the flourishing days of the great *virtuosi* whose names adorn the pages of Islamic history, notably ibn Muhriz (d. c. 97/715), ibn Suraij (d. c. 108/726), al-Gharid (d. c. 106/724), and Ma'bad (d. c. 127/743), usually dubbed as "the four great singers."[31] Such was Islam, the territories of which knew no racial boundaries, which those four musicians were foreigners by blood, the first being of Persian origin, the second of Turkish descent, the third and fourth claiming respectively Berber and Negro extraction.[32]

Because of such a large-hearted tolerance of racial differences it is quite explicable why the hybrid and exotic in music became an allurement and fascination. Through Islam the technical nomenclature in music was almost wholly Arabic, and that was still the case when the first Persian treatises on music appeared in the eighth/14th century.[33] Still, the Arabs borrowed the Persian *chang* (harp) which they confusedly called the *sanj* and *jank*. They also adopted the Persian tuning (*taswiyyah*) of the lute, and the frets (*dasatin*) on the neck of the instrument.[34]

When the first of the 'Abbasid Caliphs, al-Mansur (d. 158/755), built that wondrous city of Baghdad, it soon became not only the capital of the vast dominions of the Caliphate, but the cultural centre of Islam. The early 'Abbasid period has well been styled "the Augustan Age of Arabian literature,"[35] although an

even greater encomium could be justly used in respect of music during that era, if we take the golden pages of the "Great Book of Songs" (*Kitab al-Ahani al-Kabir*) as our authority. The first outstanding 'Abbasid minstrel was Hakam al-Wadi (d. c. 180/796), a singer and performer who carried all before him.[36]

Almost as exquisite were the vocal accomplishments of ibn Jami' (d. c. 189/804).[37] He had been taught by the doyen of the Court minstrels, Yahya al-Makki (d. c. 215/830), the fountain head of the old music of the Hijaz. Indeed his "book about the Songs (*Kitab fi al-Aghani*) was a repository of the classical art;[38] his son Ahmad (d. 250/864) issued a revised edition of 3,000 songs[39] Greater still was Ibrahim al-Mausili (d. 189/804) who outshone all others by his versatility. Nine hundred compositions stood to his credit, whilst his training school for singing girls became renowned.[40]

Fulaih ibn Abi al-'Aura' was another favoured singer, being the only one allowed to appear – professionally – without the customary curtain (*sitar*) which screened the musicians from the Caliph. Fulaih, with Ibrahim al-Mausili and ibn Jami', compiled a collection for Harun al-Rashid known as "The Hundred Chosen Songs" (*al-Mi'at al-Saut al-Mukhtarah*).[41] Prince Ibrahim ibn al-Mahdi (d. 224/839)[42] and his step-sister Princess 'Ulayyah (d. 210/825)[43] had both been carefully trained in music at the instance of Caliph Harun, at whose Court music received so munificent a patronage that it set the whole world in wonderment.

Prince Ibrahim possessed a voice with a compass of three octaves, and was considered the "most proficient in mankind" in that art.[44] By that time the impingement of Persian and Khurasanian novelties in music became quite pronounced. Singing girls from Khurasan were "the rage." They performed on a long necked pandore (*tanbur*) which gave an alien scale, whilst the Persian lute produced a scale that was dissonant to the Arabian system, as we shall see in Section C. Prince Ibrahim and his henchmen favoured these exotic ideas, and even applauded the open violation of the recognized patterns in both the melodic and rhythmic modes.

This defiance of the old classical procedure divided the Court minstrels into two camps, viz. the "Romanticists" led by Prince Ibrahim, and the "Classicists" headed by the chief Court minstrel Ishaq al-Mausili (d. 235/850), the most famous of the musicians of the Muslim world.[45] Against those neoteric fancies, Ishaq took a firm stand, and eventually was able to re-establish the old Arabian scale and modes, which seem to have been set down in his "Book of Notes and Rhythm" and his "Great Book of Songs."[46]

After the mid-third/ninth century, the Baghdad Caliphate began its political decline, although music still prospered at its Courts. Al-Mutawakkil (d. 247/861) gave constant encouragement to that art. His son, Abu 'Isa 'Abd Allah, was an accomplished musician and a composer of some 300 songs.[47] Al-Muntasir (d. 248/862) was both a poet and a musician; the words of his songs have been preserved in al-Isfahani who devotes a chapter to him.[48] Another such devotee was al-Mu'tazz (d. 255/869), whose songs have also been saved for us.[49] His son, 'Abd Allah, was a highly gifted musician who penned a

"Comprehensive Book on Singing" (*Kitab al-Jami' fi al-Ghina'*), the first of its kind, although Prince Ibrahim too, had written a "Book on Singing."[50]

Yet if the Court minstrels did not produce *virtuosi* of the same class of old, that defect was overcome by their pens, notably by ibn Tahir al-Khuza'i (d. 300/913) who wrote a "Book about the Modes and the Reasons for the Songs" (*Kitab fi al-Nagham wa 'Ilal al-Aghani*),[51] Qurais al-Jarrahi (d. 326/936) in his "Art of Singing and Stories of the Sinbers" (*Sina'at al- Ghina' wa Akhbar al-Mughanniyyin*), Jahzat al-Barmaki (d. c. 328/938) who published a "Book of Pandorists" (*Kitaqb al-Tanburiyyin*), and the great al-Isfahani who produced "The Propriety of Listening to Music" (*Adab al-Sama'*).[52]

Turning to the west, we see the same high cultural uplift in Muslim Spain as in the home of the Eastern Caliphate. After the Arabs and Berbers had conquered (91/710) the Iberian Peninsula, a vast portion of the land was held by them until the year 479/1086 and during that period, especially under the Umayyad rulers, music and all the arts were cultivated ardently. Singing girls, called *jariyyat*, were in great demand, and schools for their training had been established.[53] Yet those who came from the East were especially favoured, such as the famed lutanist 'Afza' at the Court of 'Abd al-Rahman I (d. 172/788),[54] while al-Hakam I (d. 206/822) was especially proud of 'Uklun and Zarqun.[55]

His chief male minstrels were 'Abbas ibn Nasa'i and Mansur al-Yahudi.[56] Concerts were the "order of the day."[57] At the palace of 'Abd al-Rahman (d. 238/852), there arrived in the year 206/821 the world famous Ziryab, who was treated with unheard-of esteem, for he had been taught by Ibrahim and Ishaq al-Mausili in Baghdad. He was credited with knowing 10,000 (1,000?) songs by heart, and for being the equal of Ptolemy in his knowledge of music. It was he who added a fifth string to the lute, linking it – in the cosmic system – with the soul. The musical system in al-Andalus was that of the Arabian east, the scale being the Pythagorean. Zirab's music school – which had some reputation – was carried on after his death by his descendants, and was still flourishing in the days of the "Party Kings," while traces of it could be found in North Africa in the eighth/14th century.[58]

Under 'Abd al-Rahman III (d. 350/961) we have an anomalous situation of the Court outwardly condemning music – so as to placate the Maliki legists who frowned on music – but inwardly patronizing it, since he encouraged his children not only to dabble in the art, but to rise virtuosity. One of them excelled on the pandore (*tanbur*) and guitar (*kaitarah*),[59] whilst another, Abu al-'Asbagh, said that so long as Allah permitted birds to sing he would do likewise.[60] In the reign of al-Hakam II (d. 366/976) concerts became special events,[61] and under al-Mahdi (d. 400/1009 orchestras of a hundred lutes (*idan*) and as many reed pipes (*zumar*) could be heard in the palace salons.[62] Those were the brilliant days of ibn 'Abdi Rabbihi (d. 328/940) who, in his *al-'Iqd al-Farid*, gave Muslim Spain some idea of the greatness of the music of the Eastern Caliphate. He was a veritable treasure-chest of Andalusian poetry and song.[63]

We know little of Persian music in those early days save what may be gleaned from the *Muruj al-Dhahab* of al-Mas'udi (d. c. 345/956), who quoted ibn Khurdadhbih (d. c. 300/912).[64] As we have seen,

both Persia and Arabia borrowed from each other in matters musical, and we know that Persian as well as Arabian music was being taught at Rayy in the time of Ibrahim al-Mausili.[65] Certainly there were several brilliant writers in music in Baghdad who were of Persian origin, notably al-Sarakhsi (d. 286/899)[66] 'Ubaid Allah ibn 'Abd Allah ibn Tahir (d. 300/913),[67] and Zakariya al-Razi (d. 313/925).[68] A famous singer of the Tahirid period was Ratibah of Nishapur,[69] and so also was the renowned Rudagi – patronized by the Samanid Nasr II (d. c. 331/942) – a lutanist and harpist, as well as a singer and poet.[70]

Most of the contemporary poets, such as al-Mi'mari of Jurjan and al-Daqiqi of Tus, sang in rapturous praise of music.[71] Persian music percolated everywhere, Turkomanian influence also made itself felt. The Caliph's praetorian guards at Baghdad and elsewhere were made up of men of Turkoman race, and they dominated in most things. In such circumstances it can be well understood how Turkomanian music, especially on the instrumental side, was highly appreciated. A lute-like instrument called the *rud* was favoured by them, and an arch-lute the *shahrud*, invented by Khulais ibn al-Ahwas of Samaraqand about 306/918, had already spread to Iraq, Syria, and Egypt.[72]

In Egypt under the Tulunid and Ikhshidid rulers of the third/ninth and the fourth/tenth centuries, Turkoman influence spread by leaps and bounds, and music was enjoyed by all. Ibn Khallikan praises the excellent voice of ibn Tulun when chanting the Qur'an, while his son Khumarawaih actually adorned his palace walls with pictures of his singing girls.[73] The art rose to greater heights under the next rulers. Al-Mas'udi delineated a delightful scene at a palace by the Nile in 330/940 in which the "sounds of music and singing filled the air."[74] Kafur (d. 357/968) was devoted to music and was liberal-handed to its professors.

What was this music of Islam, enthralling sounds of which charmed all ears from Bukhara in the east to Cordova in the west? Obviously, there were linguistic differences and indigenous musical preferences in so vast a region. Yet Islam, because of its universal outlook, had leavened some of those diversities. Basically, the scale of all was the Pythagorean, as we shall learn presently.[75] Yet Arabic technical terminology seems to have had dominion everywhere, as one sees in the term *maqam*. Unmistakably, Baghdad was still the artistic and literary centre, for even Abu Bakr al-Kativ, who served the Samanid Isma'il ibn Ahmad (d. 295/907), saw in Iraq "an ocean of learning and a mine of culture."[76]

If one scans the *nisbahs* of the great men of literature, science, art, and music who sought Baghdad to win fame and fortune, it becomes clear what a magnet the "City of Peace" had become to the world of Islam.[77] To the Arabic-speaking peoples, vocal music was the peerless art. Part of that was due to the beauty of the language, *plus* the allurement of its variegated metres. The outstanding vocal piece was the ode (*qasidah*). Within its folds a singer could decorate the melody of each verse with endless embellishments (*tahasin*). Less classical, but far more popular was the ballad (*qit'ah*). There were also folk songs of the *mawal* type, and we know that even the Caliphs enjoyed the simple songs of the people.[78]

The accompanying instruments were generally the lute, pandore, flute (*qassabah*), or reed pipe (*zamr*), which played the simple melody, whilst the rhythmic accompaniment was furnished by a tambourine or drum. Purely instrumental items were also featured, especially as interludes between vocal items. When these were combined the performance was termed a *naubah*.[79] Although we read occasionally of a hundred or so performers at Court functions, such events were for special display. The ideal in ‘Abbasid days when listening to music was what Europe would term “Chamber music.” Two other instruments, which had independent usage were the psaltery (*qanun*) and the rebec (*rabab*). The former was a special solo instrument, whilst the latter was often used to accompany the chanted verse of poets, which had been its function in pagan days.

Since Arabic was still the language of the “classes” in Persia, one imagines in which much has passed from the immaculate and indefectible in Arabic poetry and song was heard in Iranian lands as late as the fourth/tenth century, notably under the Saffarids and Samanids. The Persians, less intrigued by the lengthy Arabic ode (*qasidah*), produced a pure love song (*ghazal*) and the quatrain (*ruba‘i*), one class of the latter, the *ruba‘iyy taranah*, showing its musical adaptation. The melodic modes in Persia were far more numerous in different tonal structures than those of the Arabs and they retained their older fanciful names such as *‘ushshaq, Isfahan, salmaki*, etc. although most of them had scalar affinities with the Arabian finger modes (*asabi‘*). Their most favoured instruments were the harp (*chang*), pandore (*tanbur*), lute (*barbat*), double chested lute (*rabab*), spiked voil (*kamanchah*), flute (*nay*), and tambourine (*da’irah*).

The Baghdad Caliphate had gone into the protective custody of the Persian Buwaihids (320 – 404/932 – 1015), at whose palaces – as well as at those of the Caliphs – music was subventioned with liberality. In fact, the regime of ’Izz al-Daulah was condemned because of its infatuation for music.[80] ‘Adud al-Daulah was more discreetly interested in the art.[81] However, the power of the Baghdad Caliphate – both politically and culturally – was gradually slipping away, and the centre of Islamic culture passed meanwhile to the Fatimids of Egypt. Here Amir Tamim, the son of al-Mu‘izz (d. 365/975), was absolutely appassioned of music,[82] and no less could be said of al-Zahir (d. 427/1036), who spent fabulous gold on minstrels.[83]

The Persian traveller Nasir-i Khusrau wrote about the splendour of the Fatimid military bands a little later.[84] One of its famous men, al-Sadafi, better known as ibn Yunus (d. 399/1009), wrote a book the title of which sparkles with delight. It was called the “Book of the Unanimities and Felicities in the Praises of the Lute” (*Kitab al-‘Uqud w-al-Su‘ud fi Ausaf al-‘Ud*).[85] Another, great historian, al-Musabbihi (d. 420/1029), compiled a book of “Selected Songs and Their Significance” (*Mukhtar al-Aghani wa Ma‘aniha*).[86] We still discern the Turkomanian pressure on Egypt’s music, due to the crowd of men from the Qirghiz steppes in its army, and that was only one facet of the “new phase of culture” which arose in Egypt in those days.[87]

Although Muslim Spain had “advanced with incredible swiftness to a height of culture that was the envy of Europe,” the break-up of the central government and the rise of the “Party Kings” halted the progress

of the arts for a time. Yet here and there were some hallowed spots of culture. Indeed, a few of these "Party Kings" (*muluk al-tawa'if*) 'made their Courts the homes of poets and minstrels," as al-Maqqari testifies. The last of the 'Abbasid kings of Seville, al-Mu'tamid (d. 484/1091), was not only a distinguished poet, but a singer and a lutanist, as was his son 'Ubaid Allah al-Rashid.[88] The song-poems of ibn Hamdis (d. 527/1132) were the delight of the Sevillians. When the Almoravid Berber hordes from the Maghrib suppressed the "Party Kings," music came to be looked upon as one of the "wiles of Satan," although the older Muslim inhabitants took little heed of such rebukes.

Their successors, the Almohades, under the *fiat* of ibn Tumart (d. 524/1130), made decrees against music more stringent, even to the destruction of instruments. Yet there were many who opposed these fanatical legists, including ibn Quzman (d. 555/1160), the song-writer *par excellence*, who chided with puritans saying, "The *faqih* cries 'Repent'; but how can one be contrite with the air so fragrant, the birds warbling, the flowers perfuming, and music (*ghina*) from a clever reed-piper (*zamir*) and a heavenly voice?" Yet, in spite of fulminations, music and songs were heard on every side.

The newly fashioned *zajal* and *muwashshah* were so easy to set to melodies that the same tune would be adapted to different words, as ibn Quzman tells us, and songs spread like the wind in the matter of months as far afield as Baghdad, as ibn Sa'id al-Maqhribi (d. 685/1286) avers.[89] Among the best known Andalusian composers were Abu al-Hussain al-Hamrah al-Qarnati and Ishaq ibn Sim'an al-Qartabi. The highest in the land were enchanted by the art. Ibn Bajjah (d. 533/1138), according to ibn Khaqan, "spent his life singing and playing," whilst a celebrated physician Yahya ibn 'Abd Allah al-Bahdabah, wrote *zajals* for the accompaniment of wind instruments.[90]

Returning to the hub of Islam, we find that the Saljuq Turks had irrupted into the land, Baghdad having been entered in 447/1055. Their rulers took charge of the Caliphs, and they and their later *atabegs* controlled the world of Islam from the borders of Afghanistan to the frontiers of Greece. All of them were keen lovers of music, and the favoured minstrel of Sanjar (d. 552/1157) was Kamal al-Zaman, whose cognomen indicates his renown.[91] Further east the Ghaznawids and Ghurids were patronizing minstrelsy at their courts. Mahmud of Ghaznah (d. 421/1030) had the poet Farrukhi as his panegyrist, who was also a "skilful performer on the harp" (*chang*).[92]

Among the Ghurids of Afghanistan and Hindustan, especially at the Court of Ghiyath al-Din ibn Sam (d. 599/1200), music was encouraged bountifully.[93] Greater still was the favour shown to the art by 'Ala al-Din Muhammad (d. 617/1220), the Shah of Khwarizm, who gave Fakhr al-Din al-Razi protection.[94] In Baghdad the chief minstrel of the Caliph al-Musta'sim (d. 656/1258) was Safi al-Din 'Abd al-Mu'min (d. 693/1294). His greater fame is an author notably for his "Book on Prosody" (*Fi 'Ulum al-'Arud w-al-Qawafi w-al-Badi'*), but greater still for his two books on the science of music which brought him world renown.[95] In the year 656/1258, the Mughul conqueror Hulagu, invaded the famous city of Baghdad, the centre of the world of Islam, and captured it. Ibn Khaldun avers that 600,000 inhabitants were slaughtered, including the Caliph and his family, and although Safi al-Din was spared because of his

eminence as a musician, scholars and *litterateurs* were massacred as cruelly as libraries, colleges, and palaces were destroyed.

These Mughul barbarians, who had become masters from the borders of Egypt to India, were converted to Islam, and, softened by its culture, they made music one of the delights of their Courts, and the murdered Caliph's minstrel, Safi al-Din, passed into the service of the Mughul vizier Shams al-Din al-Juwaini. Ibn Taghribirdi tells us that Abu Sa'id (d. 736/1335) "cultivated music, played well on the lute, and composed songs," and ibn Battutah (d. 778/1377) describes the royal galley at Baghdad, flanked by boats filled with musicians and singers.[96] By this time Persian, not Arabic, had become the language of art and science in the Middle East, and from Persian works we are able to see what types of instruments were in vogue.

In addition to the older lute and pandore was a new arch-lute (*mughni*) and a rectangular psaltery (*nuzha*), together with a Turkoman viol (*ghishak*), whilst the pandore was more particularly described as a two-stringed (*dutar*) or a three stringed (*sitar*) instrument.[97] It was Egypt alone that offered a stubborn resistance to the Mughuls, and its Mamluk Sultans, like their predecessors, the Ayyubids, favoured music and song. Here the *muwashshah*, had been popularized by ibn Sana' al-Mulk (d. 608/1211) in his *Dar al-Tiraz*, and al-Saruji (d. 693/1294) bettered the instruction as a song-writer, while ibn Mukarram (d. 711/1311) edited a collection of older songs which had wide acceptance.[98]

Al-Nuwairi (d. 732/1332) also devoted much attention to the subject in his *Nihayat al-Arab*.[99] It was the Sultan Qala'un (d. 689/1290) who built the hospital (*maristan*) at Cairo, where "music soothed the wakeful hours to the sufferers."[100] An outstanding feature of the Bahri and Burji Mamluk Sultans was their military bands,[101] which opened the eyes of the Crusaders to the value, both tactically and musically, of martial music.[102]

Sind had been conquered by Muslim armies as far back as the year 92/711, but it was with Ghurids of Afghanistan that modern Pakistan had is real foundation 571/1175 at the hands of Muhammad Ghuri (d. 602/1206). Here, the powerful *fuqaha'* were able to enforce views in condemnation of music upon Iltutmish, the Sultan of Delhi (d.633/1235), who, later, having been impressed by the *sama'* of the Chishti *darwish* fraternity, soon abolished that ban against the art, when the plaintive chanting of its *qawwals* became a distinctive feature throughout the land, as we know from the *Siyar al-Auliya'*. Secular music was openly encouraged by Firuz Shah I (d. 634/1236), and the *Tabaqat-i Nasiri* says that his bounty to musicians led him to be called "a second Hatim."

Under Balban (d. 686/1287) one evening per week was devoted to audition of music. The succeeding Khalji Sultans, the first of whom was Firuz Shah II (d. 696/1295), were all music-lovers. At the Court of the latter were Hamid Rajah, Nasir Khan, and Muhammad Shah Hutki, all noted musicians, although the greatest of them all was Amir Khusrau (d. 725/1325), who was "no less notable as a musician than a poet." He had served at the Courts of the two preceding Sultans. In his *Qiran al-Sa'dain*, he has described the Court music of his time. In the *I'jaz Khusrawi*, he tells of the rivalry between the Khurasan

and Hindustan minstrels at Court. It is said that a fusion between Persian and Indian music was brought about by him, and in the book called *Rag Darpan* many novelties in music are attributed to him.

Music was still to the fore with the Sayyid dynasty, and Mubarak Shah II (d. 837/1433) was deeply attached to the art. On the elevation of the Lodhi Sultans to the throne in 855/1451 there was a change of attitude towards music. Yet Sikandar II (d. 923/1517) employed four exceptional performers on the harp (*chang*), psaltery (*qanun*), pandore (*tanbur*) and gourd-lute (*bin*), only the last named instrument being of indigenous origin. In the extreme north the kings of Kashmir were ruling a famed "land of song" since 735/1334. Among the most cultured of them was Zain al-'Abidin (d. 872/1467), during whose reign music schools were established by Persian and Turanian teachers, which won some celebrity.

In the Deccan, one of the kings of Gulbargah named Taj al-Din Firuz Shah (d. 825/1422) had 700 damsels who were skilled musicians and dancers. His brother, however, was never absent from the *darwish* ceremonials, where the religious chant gave him contentment of a different kind. Both Ahmad Shah I (d. 839/1435) and Ahmad Shah II (d. 862/1457) were captivated by their Court minstrelsy, and the wife of the latter, says Firishtah, was without equal in her musical accomplishments. The singers and dancers of Muhammad Shah II (d. 887/1482) came from Georgia, Circassia, and Albyssinia. So indulgent was his successor Mahmud Shah II (d. 924/1518) in his passion for music that minstrels were attracted to his Court not only from Delhi and Lahore, but also from distant Persia and Khurasan. Truly, Muslim India was in the forefront in music among her sister nations.[103]

Persia was reawakened culturally under the beneficent Muzaffarids. The renowned Shah Shuja' of Shiraz (d. 786/1384) patronized the minstrel Yusuf Shah and the music theorist al-Jurjani (d. 816/1413). The art was particularly conserved by the Jalairid Sultans of Iraq. Hussain (d. 784/1382) actually neglected his realm through his abiding love for music, whilst the greatest living musicians, Ridwan Shah and 'Abd al-Qadir ibn Ghaibi (d. 840/1435), were the chief Court minstrels of Sultan Ahmad (d. 813/1410).[104] When Timur (d. 807/1405) had accomplished his world-wide conquests, most of the above kingdoms passed into the night, and Samarqand became the artistic as well as the political centre of the Timurid Empire.

During the reign of Shah Rukh, (d. 850/1447) the Court minstrelsy rose to perfection, and the *fetes* have been eloquently described by 'Abd al-Razzaq.[105] Yusuf-i Andakani was his favoured minstrel for he "had no equal ... in the seven climes."[106] Miran Shah (d. 810/1408), the brother of Shah Rukh, was also infatuated with music as discoursed by al-Khatib al-Mausili and Ardashir-i Changi. Baisunghur (d. 836/1433), the son of Shah Rukh, was devoted to Amir Shahi (d. 857/1453), possessed of three-fold talents as minstrel, poet, and painter. Under the guidance of the vizier Mir 'Ali Shir (d. 907/1501) the rule of the last of the great Timurid rulers Hussain Mirza Baiqara (d. 911/1506) became the byword of the cultured world of Islam, and the names of his minstrels – Qui-i Muhammad, Shaikhi Nayi and Hussain 'Udi – became a part of history.[107]

In Muslim Spain, in spite of the increasing re-conquests by the Spaniards in the seventh/13th century,

the Moors still held that part of the land known as Granada. Here they were hemmed in from all sides, and in 897/1492, they were forced to capitulate. Then followed the most despicable persecutions and ruthless destruction of Arabic literature which had been treasured for centuries. Moorish music and instruments were declared *anathema*, although that did not prevent the Moors from finding solace from their woes in their music. All that the Spanish priesthood could do was to issue edicts forbidding their congregations to listen to those *mouriscas* and *aravias* of the Moors.[108] In the mid-tenth/16th century, they were not only denied their national costume, language, and customs, but forbidden the *zumrah* and *lailah*, i.e. the musical gatherings.[109]

The whole of the Maghrib – from Morocco to Tunis – had been deeply influenced by the culture of Andalus, and both the Marinid rulers of Morocco and the Hafsid rulers of Tunis had encouraged music at their Courts. Yet more bountiful was the revivification of the art due to the exodus of the Muslim exiles from Spain. The first of these arrived at Tlemcen after the fall of Cordova in 633/1236, followed by another to Tunis at the capture of Seville in 646/1248. Then came refugees to Tetuan after the submission of Granada in 897/1492, which was succeeded by an emigration to Fez from Valencia in 943/1526, and finally the wholesale expulsion of 1018/1609.

These newcomers brought a cultural benefit to the Maghrib, and the Moriscos became the artistic and literary aristocracy of the land. In music, one can actually trace the regional variations in classical Granati or Andalusi art to those immigrants. The Cordovan interpretation belongs to Algiers and Tlemcen, the Sevillan style is that of Tunis, while the Granadan and Valencian modes are to be fund in Fez and Tetuan.[110]

The Ottoman Turks now became a power in the world of Islam to be reckoned with. Having settled originally in Anatolia, they soon extended their power in every direction, and by the year 857/1453 Constantinople and the whole of the Byzantine Empire were in their hands. After defeating the Shah of Persia, they took Kurdistan and Mesopotamia into their hegemony, finally to overrun Syria, Egypt, and Arabia after crushing the Bahri Mamluks in 922/1517. From that date Turkish music began to assert itself gradually in Arabic-speaking lands and beyond, even as far as Tunis and Algiers where Turkish *beys* and *deys* were masters.

From remote times to *ozan* or bard of the Turkish tribes, with *chogur* or *qopuz* in hand – they were lute-like instruments – entertained the people with the *turku* or folk-song. That had not changed, but a new era had dawned since Constantinople had become – by edict only – the pivot of Islam, and it was no wonder that artists, musicians, poets, and literary men should have sought fame and fortune in the new capital, as well as in the *pashaliks* of Cairo, Damascus, Mosul and Baghdad. Instrumental music had ever delighted the Turks, and the overture (*pishrau*) and the decorative "divisions" (*taqasim*), which had been constituent parts of the old Perso-Arabian *naubah*, were in great demand.

The poets sang eloquently of the joy of instrumental music in the ninth/15th century, notably Nizami of Quniayh and Ahmad Pasha, and Sultan Murad II (d. 855/1451) enticed the finest minstrels to his Court.

Nor should we allow the influence of the *maulawiyyah* or Jalaliyyah dervish communities, founded by Jalal al-Din Rumi (d. 672/1273), to escape our notice, since they hymns (*ilahis*) had a great spiritual influence. In the next century, the poets Fighani, Fusuli, and Rewani still continued to rhapsodize on music's spell. The instruments praised were mostly of Arabian or Persian origin, although the Turkish *qopuz* had its share of appreciation.[111] New instruments came on view.

Quduz Farhadi invented the *qaraduzan*, a lute of three strings, and a son of Hamdi Chelebi (d. 915/1509) introduced two new pandores called the *yonqar* and *yaltmah*.[112] During the 11th/17th century music took a prominent part in the general cultural improvement, as we know from a manuscript of Cairo by Mulla Muhammad ibn As'ad, of the time of Sultan Ahmad (d. 1026/1617), which contains the lives of the famous Turkish musicians.[113] Ewliya Chelebi was famed in those days. His teacher was 'Umar Gulshani, who was taught by Ibrahim Gulshani of Cairo (d. 940/1533). The description of the musical life of Constantinople is contained in the "Travels of Ewliya Efendi" (*Siyahat Nameh*); much of it, based as it is on the *Ausaf-i Qustantiniyyah* (Praises of Constantinople) composed in the year 1048/1638, gives precise details of musicians and instruments, guilds and makers, in the great emporium of the Near East.[114]

In that century there arose the poet-minstrels (*saz sha'yrleri*) who were honoured not only in military but also in religious circles. One direct influence from outside came after the capture of Baghdad in 1048/1638 by Murad IV, who took back with him to Constantinople the Court minstrel of the Persian Shah 'Abbas I, named Shah Quli, whose performances on the *shashtar* had pleased him.[115] The late Ra'uf Yekta thought that the advent of Shah Quli "opened a new era in the history of Turkish music."[116]

In the Muslim east the 'Adil Shahs of Bijapur, the first of whom was Yusuf 'Adil Shah (d. 916/1511), were revealing themselves as munificent patrons of musicians. Yusuf 'Adil Shah had a skill in music almost equal to that of a professional and even essayed composition. Isma'il (d. 941/1534) rather favoured Turanian and Persian music at his Court. *Per contra*, Ibrahim I (d. 965/1557) preferred the arts of the Deccan. Ibrahim II (d. 1035/1626) is claimed to have written a work on music called *Nauras* with an introduction penned by Zuhuri, the Persian poet (d. 1027/1618).

The Qutbi Kings of Golkunda were no less enthralled by minstrelsy. Sultan Quli (d. 940/1543) brought Persian customs to his Court – which lasted 40 years – and his military *naubah* sounded at the five hours of prayer. In those days the Gwlior School of Music was the subject of conversation. Its renown was due chiefly to Rajah Man Singh (d. 932/1517), and the most famous of its students was Tan Sin, who had been taught by Muhammad Ghauth. Another of the same circle was Bakhshu, whose *dhurpads* became the repertory of the best minstrels. When Babur (d. 936/1530) became the first of the Mughul Emperors of Hindustan (India), most of the preceding dynasties were absorbed. He had been reared in Courts where music prevailed.[117]

From the statements in the *Babur Nameh* it would seem that the Emperor was even a composer, and it is believed that his compositions once existed.[118] His son Humayun (d. 963/1556) also encouraged

music, and sincerely believed that the Sufi dance was the complete expression of the *hikmat-i ilahi*. At Court, musicians had their special days for audition, and some of them – ‘Abd Allah Qanuni, Muhammad Surna’i, and the vocalists of Hafiz Dost Muhammad Khwafi and Ustad Yusuf Maudud – are registered in the *Akbar Nameh*. The Court of the renowned Akbar (d. 1014/1605), as described in the *A’in-i Akbari* of Abu al-Fadl, shows how important music was both to the policy and the taste of the Emperor.

The musicians were formed into seven groups, 36 of whom are named in Abu al-Fadl’s work. He was catholic in his choice for not only were minstrels selected from famed Kashmir and Gwalior, but the best of them came from Herat and Khurasan, and they were singers, chanters, and instrumentalists. More than half of these had Muslim names. The Emperor is said to have himself composed 200 items of music. Among the art treasures of his day there is one depicting the arrival of Tan Sin at his Court. Abu al-Fadl tells us of the widely spread net that was cast to capture the best of vocal music – the *dhurpad* of Gwalior, the *chind* of the Deccan, the *qual* and *taranah* of Delhi, the *kajri* or *zikri* of Gujrat, the *bangula* of Bengal, and the *chutkalah* of Jaunpur.

Jahangir (d. 1037/1627) followed his father in his love of music, has favoured minstrel being Shauqi, who sang Hindi and Persian songs in way that “cleared the rust from human hearts.” There is a portrait of him in Fox Strangway’s *Music of Hindustan*.[119] Many other musicians of Jahangir’s Court are mentioned in the *Tuzuk-i Jahangiri* and the *Iqbal Nameh*. In the first named work is described the military band of this Emperor. Shah Jahan (d. 1068/1658) made the Court music one of the glories of his reign. It was he who collected the *dhurpads* of the Gwalior composer Bakhashu, which numbered one thousand items. On the wedding of his son, Aurangzib (d. 1119/1707), he expended a small fortune on music alone.

Alas, when Aurangzib ascended the throne he dispensed with his Court minstrelsy, to the dismay of the people at large. Fortunately, Bahadur Shah (d. 1124/1713) reinstated the musicians and raised them to *mansab* ranks. By this time, owing to internecine strife, the great Mughul Empire began its political and cultural decline.

Of the state of music in Persia during the 11th/17th century, we know but little save what the pictorial art reveals, although at the brilliant Court of ‘Abbas I (d. 1038/1629) the older instrumental art still held its own.[120] Four European travellers – Raphael du Mans, Chardin, Poullet, and later Kaempfer – supply many important details. A picture of the Court minstrels of Safi I (d. 1052/1642) – actually portraits – has been preserved.[121] Persia seems to have been less troubled by the objections of the legists to *al-sama‘* than was the case elsewhere. Perhaps they still remembered Hafiz who once said, “When the harp is sounding who cares about the objector?”

Yet there were some Persians, for example, Muhammad ibn Jalal Ridwi (d. 1028/1619) and ‘Abd al-Jalil ibn ‘Abd al-Rahman (d. 1061/1651), who replied at length to the legists.[122] Incidentally, Chardin shows that the Indian *vina* was used in Persia as the *kingira*,[123] and even Mersanne (1046/1636) delineated it in Europe.[124] Strangely enough, it is mentioned by the Arabic writer al-Jahiz (d. 255/869), who writes it – probably a scribal error – as *kinkila*, and it is also specified by al-Jurjani (d. 816/1413).[125] By the

12th/18th century, when Nadir Shah (d. 1160/1747) brought a brief resurgence to Persia's greatness, many had disappeared, although the dulcimer (*santir*) found a place.

Iraq and Mesopotomia, now in the hand of the Turks, favoured only the Turanian art. Baghdad was the centre of this imported culture, and it spread to Hillah and Basrah. To the north, Kurdish tastes prevailed. The most artistic centres were those where the Mamluk pashas had control, and where Georgians and other Caucasians were given preferment, which meant that quite a new Oriental type of music gained ground.[126] Karsten Niebuhr, after visiting Baghdad in that century, gave a fair description of its music. He noted the use of what he called a *base continue* by accompanying instruments, although he seems to have meant a *point d'orgue* or pedal point.[127] He mentions and delineates three types of pandore, and the rectangular and spiked viols.

Syria was little better off, as we know from the books of Alexander and Patrick Russell written the 12th/18th century.[128] They aver that the Allepans were "fond of music," and in their performances the instruments generally were well in tune, and...kept excellent time.

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Chapter 58: Music (continued)

C. The Music Theorists

"There is one and the same principle which, if prevailing in the at tempered particles of the elements, is equipoise of temperament, *if produced in tones in pure and delightfully interval*, if apparent in gesture is grace, if observable in languages in rhetoric and eloquence, if created in the limbs is beauty, if the mental faculties is equity."
Jalal al-Din Dawwani: *Akhlaq-i Jalali*.

In addition to those who conceived music to be "like a fan" on a sultry day were those to whom it was "like medicine," as we have heard in the opening fanfare to this chapter. That was precisely how the Pythogoreans viewed music, and it was from them that the notions of the "theory of numbers," the "harmony of the spheres," and the "doctrines of the ethos (*tathir*)" were handed down to Muslim peoples as methodical systems, although the history of the Semitic and Aryan races in pre-Islamic days teems with those beliefs. In fact, the Greeks derived their theses on those matters from the ancient Semites of Babylonia-Assyria, as shown elsewhere.1

Iamblichus affirms that Pythagoras learned those secrets from the *Chaldaei* of Babylon,2 and books on music and arithmetic by Pythagoras were known in Arabic,3 as were the works of his disciples Iamblichus, Porphyry, Proclus and Nicomeachus.4 Perhaps the first impact came through the pseudo-Aristotelian production known as the "Book of Government" (*Kitab al-Siyasah*), said to have been translated into Arabic, *via* Syriac, by Yuhanna ibn Batriq (d. c. 200/815),5 and this is what we read therein on the influence of music and the harmony of the spheres. Mental diseases are amenable to cure by means of musical instruments which convey to the soul the harmonious sounds which are (ultimately) due to the motions of the spheres in their natural movements.

When those harmonious sounds are interpreted through human agencies, they produce music which is enjoyed by the human soul, because the harmony of the spheres is mirrored in the harmony of man's nature, which is fundamental to life. That work was translated from Arabic into Latin as the *Secretum Secretorum* about the year 530/1135, and won considerable popularity during the European Middle

Ages.[6]

Following Pythagoras, the cosmic order of things was explained under the proposition that “everything is number,” and since mundane music was among the ectypes of numerical proportion, the harmonious order of things covered both melody and rhythm, the various *genres* of which could banish depression, assuage grief, halt passion and cure sickness. The theory of numbers fascinated Muslim peoples because, unlike geometry, which depended on visual appreciation, it was purely mental sciences. The Pythagorean scale in music, which was based on the “theory of numbers,” was known quite early to the Persians and the Arabs, and the Khurasanians even improved on it.

Islam, having no racial boundaries, the special musical characteristics of the Persian, Arab, Syrian, and Turkoman found open acceptance in the capitals and cities of the Caliphate. Because of these national peculiarities it soon became evident that some sort of fixation of method and system was urgent, and this expediency was brought to fruition by an Arab named ibn Misjah (d. c. 97/715) who, having travelled in Syria and Persia and taken lessons from practitioners and theorists, conceived a system of music theory and a method of practice which were adaptable to existing conditions in Arabic-speaking lands. These, we are told, were adopted generally.[7]

Thus were the eight Arabian melodic modes (*asabi‘*) classified in two groups of four each: the first in the course (*majra*) of the *binsir*, i.e. using the major third (408 cents), and the second in the course of *wusta*, i.e. using the minor third (294 cents).[8] At the same time eight rhythmic modes (*iqa‘at*) were formulated, also in two groups of four each, those numbers being in accordance with cosmic theories. All the song books of the period, from Yunus al-Katib (d. c. 148/765) to al-Isfahani (d. 356/967), specify the melodic and rhythmic modes of each song.[9] Meanwhile, a neutral third (355 cents), i.e. an interval half-way between the major and minor third. It was introduced by a certain lutanist named Zalzal (d. 175/791),[10] although a somewhat similar three-quarter tone had existed in the pre-Islamic measured pandore (*tanbur mizani*).[11]

Another wayward interval was the Persian minor third (303 cents) which was sharper than the Pythagorean interval (298 cents),[12] and it was these alien intervals which both al-Isfahani and ibn ‘Abdi Rabbihi blames for the decadence of the pure Arabian music in the third/ninth century. There are many earlier theorists of music, notably Yunus al-Kativ (d. c. 148/765) who wrote a “Book of Melody” (*Kitab al-Naghm*). That was also the title of the book by al-Khalil (d. 175/791), who also compiled a “Book on Rhythm” (*Kitab al-Iqa‘*). He was the “father of prosody”[13] A more important treatise appears to have been the “Book of Melody and Rhythm” by Ishaq al-Mausili (d. 236/850), and that was accomplished, says al-Isfahani, without the author’s knowing an iota of the work of Eucklid.[14] None of these works has come down to us, but we know precisely what al-Mausili’s theoretical principles were from the *Risalah* of his disciple ibn al-Munajjim (d. 300/912).

In the mid-third/ninth century a new world dawned for those interested in that group of the sciences known as the quadrivium, i.e. the *‘ulum riyadiyyah*, which included the theory of music. At “House of

Learning" (*Bait al-Kikmar*) in Baghdad were scholars who had translated the great Greek writers on Music into Arabic, including Aristotle, Aristoxenus, Nicomachus, Euclid, Ptolmy, and probably Aristides Quintillanus.[15] The first to avail himself of the new earning was al-Kindi (d. c. 260/873), and three or four – out of a dozen – of his works on the subject have been preserved. The entire gamut of the science of music is covered by him in his several extant works, two of which have been translated or extracted.[16] He not only appreciated music as a science for mathematicians and joy to auditors, but as a prescription for physicians to administer to the afflicted mind and body.

As de Boer says, al-Kindi applied mathematics to medicine in his theory of compound remedies, like the effect of music on geometrical proportions.[17] Everything within the entire macrocosm was linked together. Each note on a lute was connected with melodic mode (*tariqah*), rhythm, and sentiment. These, in turn, were conjoined with the planets, seasons, elements, humours, colours, and perfumes. In his minute description of the lute – the earliest which we posses – "the four gold things" dominated all else. There are four strings, tunes in fourths, and four frets. The strings from the lowest to the highest were four-ply, three-ply, two-ply and one-ply.[18]

His disciples, the Ikhwan al-Safa (fourth/tenth century), followed him in most things, but made the strings compounded of 64, 48, 36, and 27 strands respectively.[19] They assigned to every melodic and rhythmic mode a specific influence (*tathir*), a doctrine which held sway in Islamic lands up to the 14th/20th century. His most illustrious student was al-Sarakhsi (d. 288/899), but this five books on music have not survived.[20] Thabit ibn Qurrah (d. 288/901) is credited with eight treatises on music, yet not a page has come down to us.[21] Other theorists were Mansur ibn Talhah (d. c. 299/910), a follower of al-Kindi, ibn Tahir al-Khuza'i (d. 300/913), one of the most learned in the philosophy of music,[22] ibn al-Munajjim (d. 300/912) whose "Treatise on Music" (*Risalah fi al-Musiqi*) still exists,[23] Qusta ibn Luqa (d. c. 300/912),[24] and Abu Bakr al-Razi (d. 313/925) who penned a "Book of Summings-up of Music" (*Kitab fi Jumal al-Musiqi*).[25] The fame of all these was swept aside on the emergence of the "Second Master" (i.e. second only to Aristotle) whose name became known in Europe as Alpharabius.

Al-Farabi (Alpharabius) was a Turkoman, although educated in Iraq. Celebrated chiefly as a philosopher, he also takes front rank as a music theorist, being known especially for his "Major Book on Music" (*Kitab al-Musiqi al-Kabir*) which was the greatest contribution to the subject up to his time. He tells us that almost all the Greek works on music had been translated into Arabic. Most of these he studied, although he mentions no one by name, save Themistius. Unlike the latter, who was not a practitioner in music, al-Farabi was an instrumental performer,[26] and whilst most of his theoretical discussion was based on Greek authors, on the practical side he supplied original material not to be found elsewhere, especially in his description of the exiting instruments of music among the Arabs.

Being a good mathematician and physicist, he was fully equipped to deal with speculative theory (*'ilm al-nazari*). Although he indebted to the Greeks, he avoided their errors in that he did not agree that sound is heard in water in less degree than in air, nor that wool when struck produces no sound, as Aristotle

tells us.[27] Neither did al-Farabi repeat the blunder of Nicomachus that Pythagoras discovered the consonances by comparing the weight of the hammers in the blacksmith's shop,[28] a legend repeated by Gaudentius of Boethius.[29] His treatment of the influence (*tathir*) of music leaves the Greeks and al-Kindi far behind, as one would readily expect from a naturalistic philosopher.

Further east was Muhammad ibn Ahmad al-Khwarizmi (d. c. 370/980) who was in the service of the vizier of the Samanid Prince, Nuh II. He compiled an encyclopedic "Keys to the Sciences" (*Mafatih al-'ulum*), one key of which unlocked the door of music.[30] Another scientist, Abu al-Wafa' (d. 388/998), penned a "Compendium on the Science of Rhythm" (*Mukhhtasar fi Fann al-Iqa'*),[31] while in distant Muslim Spain a "Treatise on the Composition of Melodies" (*Risalah fi tallif al-Alhan*) was produced by 'Ali ibn Sa'id al-Andalusi (fourth/tenth century).[32] The contemporary Ikhwan al-Safa has been signalized already, especially in their spiritual approach to music. Yet they were well versed in the science of acoustics. One recalls how the famous German physicist Helmholtz argued that musical tones are distinguished by their force, pitch, and quality, and that the force of a musical tone increases and diminishes with the amplitude of the oscillations of the particles of the sounding body.[33]

Preece and Stroh questioned the definition saying that loudness does not result from amplitude of vibration only, but that it also depends upon the quantity of air in vibration.[34] The Ikhwan al-Safa had proclaimed that view over 800 years earlier when they said, "Hollow bodies, like vessels...will resound for a long time after they are struck, because the air within them reverberates time after time until it becomes still. Consequently, the wider the vessels are, the greater the sound, because more air is put into vibration.

Those encyclopedic philosophers are also recognized the spherical propagation of sound,[35] whilst the Aristotelian *De Audibilibus* (802a) had stated that "the direction of sound follows a straight line."[36] Meanwhile, the tractates of the Ikhwan al-Safa were being introduced into Muslim Spain by Maslamah al-Majriti (d. 398/1007), and so widespread was their circulation that the name of al-Majriti was attached to them in that land.[37]

From Turkestan there came the world-renowned ibn Sina (d. 428/1037), better known in Europe as Avicenna, and it was in his widely read book entitled "The Cure (*al-Shifa'*) that a chapter (*fann*) was devoted to music. Like al-Farabi, he passed over the Pythagorean dreams of the "harmony of the spheres," being content to deal with the art *per se* which, as he knew from personal experience, was often a cure from mortal woes. His treatment of the theory of music is different from that of al-Farabi because what was practiced in Bukhara, Hamadan, and Isfahan was alien to that in Syrian. The fretting of the lute was certainly dissimilar, the first semi-tonal fret (*mujannab*) being the diatonic interval (112 cents), whereas elsewhere the semi-tone was the *limma* (90 cents), whilst the Zalzalian neutral third was slightly flatter (343 cents).[38]

He gives the notation of a few of the melodic modes, and from that one sees the Persians were retaining their fanciful names of them, such as *Salmaki, Nawa,* etc. These Persians terms crept into Arabian

music in the third/ninth century, at first there scales agreed with those of the old Arab “Finger modes” (*asabi‘*), but later indiscriminately. All the old Arabian instruments are mentioned together with a few strangers, viz. the *‘anqa’*, evidently a long-necked instrument, the *salbaq*, probably the Greek *symbyke* (the Aramaic *sabbeka*), and the *sanj jinni* or *sini*, seemingly the Chinese metalophone.[39] Ibn Sina also introduced a chapter on music in a shorter work entitled “The Deliver” (*al-Najat*) which was translated into Persian – as the *Danish Nameh-i ‘Ala’i* – by his student Abu ‘Ubaid al-Juzajani.[40]

Another of his disciples was Abu Mansur ibn Zailah (d. 440/1048), whose “Book of Sufficiency of Music” (*Kitab al-Kafi fi al-Musiqi*) is even more valuable than the above treatises of ibn Sina. Although Baron d’Erlanger thought otherwise, it contains much material not to be found elsewhere, especially on the practical art of music, and also passages from a treatise by al-Kindi which has not been known hitherto.[41]

Strange to say, al-Kindi had written a work entitled “The Book on the Division of Canon” (*Risalah fi Qismat al-Qanun*), which might have been a commentary on Euclid’s *Sectio Canonis* since we know that he was acquainted with the book.[42] Yet it was not until the emergence of a scientist of the eminence of ibn al-Haitham (d. 430/1039) that we do find a “Commentary on the Canon of Euclid” (*Sharh Qanun Uqlaids*), together with “Discourse on the Commentary on the Harmonics” (*Maqalah fi Sharh al-*[*A*]*rmuniqi*), the latter being probably the *Introctio Harmonica* of Cleonides.[43] A far more remarkable book was ibn al-Haitham’s “Treatise on the Influence of Melodies on the Souls of Animals” (*Risalah fi Tathirat al-Luhun al-Musiqiyyah fi al-Nafus al-Hayawaniyyah*).[44]

Unfortunately, we do not know its scope of inquiry because the ruthless hand of time seems to have erased it. Yet it dealt with a set of phenomena which had long enticed the minds of Muslim peoples – the phenomena that the camel’s pace could be hastened or retarded by music’s power, that horses could be persuaded to drink by its urge, which reptiles could be charmed and stilled, and that birds could be lured by its potency.[45] Nor should we forget the Andalusian lexicographer ibn Sidah (d. 458/1066) whose *Kitab al-Mukhassas* contains several sections on music and musical instruments.[46] There are other famous men of Muslim Spain who “hit the mark” – as the Arabs say – in the science of music, although some of them, owing to the intolerance of the Berber legists, sought other lands where their gifts were appreciated.

One of these was Abu al-Salt Umayyah al-Andalusi (d. 529/1134) who went to Egypt. He not only excelled as a music theorist but as a practical musician as well.[47] His “Treatise on Music” (*Risalah fi al-Musiqi*)[48] must have been an important work since it was translated into Hebrew,[49] and quoted by Profist Duran.[50] An outline of its contents has been given in English.[51] His compositions appear to have had some influence in North Africa.[52] The learned philosopher ibn Bajjah (d. 533/1138) compiled a “Book of Music”(*Kitab al-Musiqi*)[53] which, says ibn Sa‘id al-Maghribi, was famed in Western Islamic lands as was al-Farabi’s book on Eastern Islamic lands.[54] He also contributed a “Book of the Soul” (*Kitab al-Nafs*), doubtless a commentary on Aristotle’s *De Anima*, which deals with the sense of hearing

(*al-sam'*) and the physical bases of sound (*sout*).[55]

Another Andalusian savant was ibn al-Haddad (d. 562/1165). He wrote a work, entitled by Casiri as *Musices Discipline*, without giving the Arabic equivalent.[56] Better known was ibn Rashd (d. 593/1198) famed in European books as a philosopher and commentator. In his "Commentary on Aristotle's *De Anima"* (*Sharh fi al-Nafs li Aristatalis*)[57] he naturally treats of the spherical propagation of sound, which was not touched upon the European writers until Michael Scot translated into Latin which version was printed in 877/1472.

In the Near and Middle East, the names of theorists of music crop up in the pages of cultural history. Abu al-Hakam al-Bahili (d. 550/1155) was highly esteemed as a mathematician and scientist at Baghdad and Damascus. His work on music was "well known."[58] More renowned was ibn al-Naqqash al-Baghdadi (d. 574/1178).[59]. In *'ilm al-musiqi* he was the tutor of Yahya al-Bayasi who was in the service of the Ayyubid Sultan Salah al-Din (d. 591/1193).[60] Muhammad ibn Abi al-Hakam (d. 576/1180), a son of Bahili, too "had knowledge of the science of music," in addition to being a good practitioner in it.[61] At the Nizamiyyah College at Baghdad was Kamal al-Din ibn Man'ah (d. 551/1156); he was "without a rival" in astronomy, conics, music, and mensuration.[62]

Then there was 'Alam al-Din Qaisar (d. 649/1251), the "great master of the age in all the mathematical sciences," a student of Kamal al-Din. Hassan ibn 'Umar says that 'Alam al-Din was particularly distinguished for his profound knowledge of music.[63] Further East there arose Fakhr al-Din Razi (d. 606/1209), whose "Assembling of the Sciences" (*Jami'al-'Ulum*), an extremely useful encyclopedia, contains chapters in nine sections on the theory of Music. In some respects, he was quite an original thinker.[64] There is also a small tract on music by Nasir al-Din al-Tusi (d. 672/1274) preserved at Paris, which, however, contains only the elements of the theory of music.[65]

A really important work is one by al-Hassan ibn Ahmad ibn 'Ali al-Katib (fl. 626/1228) entitled "The Perfection of Knowledge of Music" (*Kamal al-Adab al-Ghina'*), the solitary manuscript copy of which is to be found in Constantinople. It contains 40 sections (*abwab*) and covers the entire field of music.[66] Finally, came the famous Safi al-Din 'Abd al-Mu'mun al-Urmawa al-Baghdadi (d. 693/1294). He was the author of "The Book of Musical Modes" (*Kitab al-Adwar*) and "The Sharafian Treatise on Musical Proportion" (*Risalah al-Sharafiyyah fi al-Nasab al-Talifiyyah*), which revolutionized the science of music in the Near and Middle East.[67] He took the scale of the old Khurasanian pandore (*tanbur Khurasani*) and used its intervallic progression of *limman, limman, comma,* i.e., 90, 90, 180 cents, as the basis for what came to be called the "Systematist" theory.

The German savant Kiesewetter called him the "Zarlino of the Orient,"[68] whilst the English musicologist Sir Hubert Parry considered the new scale to be "the most perfect ever devised."[69] Riemann, the music historian,[70] shows that it gives consonances purer than those of the European tempered scale, whilst Helmholts, the physicist, considered that the theories were "noteworthy in the history of the development of music."[71] It spread far and wide, and was accepted by Qutb al-Din al-Shirazi (d. 710/1310), the

author of the Persian encyclopedia known as “The Jewel of the Crown” (*Durrat al-Taj*),[72] and Mahmud al-Amuli of the same century, who compiled “The Precious Things of the Sciences” (*Nafa’is al-Funun*), also in Persian.[73]

The theories of Safi al-Din ‘Abd al-Mu’min are to be seen the “Treasure-House of Rarities” (*Kanz al-Tuhaf*) written in the mid-eighth/14th century, although we read in the section on musical instruments in that book that some performers were using older system, i.e., the earlier Person-Arabian Phythogrean scale of al-Farabi’s days.[74] The books just mentioned were all in Persian, since the Persian renaissance had spread far beyond its frontiers.

Still, Arabic literature held its own in Spain, Egypt, and Iraq, and in the domain of music theory we have many exponents: ibn al-‘Ala’i al-Baghdadi (eighth/14th century) in his “Reading of Time in the Art of Melodies” (*Qir’at al-Zaman fi’llm al-Alhan*),[75] al-Khatib al-Irbili (fl. 731/1329) in “The Jewels of Arrangement in the Knowledge of the Notes: (*Jawahir al-Nizam fi Ma‘rifat al-Angham*),[76] Muhammad ibn ‘Isa ibn Kara (d. 759/1358) in “The Goal of Inquiry in the Science of Melodies and Rhythm” (*Ghayat alpMatlun fi Fann al-Angham w-al-Durub*),[77] ‘Amr ibn Khidr al-Kurdi (d. 800/1397) in “The Treasury of the Desideratum in the Melodies and Rhythms” (*Kanz al-Matlub fe ‘Ilm al-Dawa’ir w-al-Durub*);[78] but more important still was ibn al-Tahhan (eighth/14th century), whose “Collector of the Sciences” (*Hawa al-Funun*) is of extreme value, especially on the construction of instruments of music.[79]

The Persian renaissance had greatly influenced Turkey. This evocation was due chiefly to ‘Abd al-Qadir ibn Ghaibi (d. 840/1435), a tremendous personality who had been the chief minstrel at many Courts from Baghdad to Samarqand, and was better known as the author of the “Collector of Melodies” (*Jami‘ al-Alhan*) and other works which, with those of Safi al-Din ‘Abd al-Mu’min, became the accepted textbooks. The former were somewhat critical of a few axioms of the latter.[80] Indeed other authors, writing in Arabic, were just as contentious, including the author – probably al-Jurjani (d. 816/1413)[81] – of the “Maulana Mubarak Shah Commentary” and the “Muhammad ibn Murad Treatise” in the British Museum.[82]

All this reflects the keen critical attitude of these Muslim theorists on music. Although the Persian renaissance had greatly influenced Turkey, which was by this time beginning its political domination of the Near East, Arabic culture still held literary sway in Syria, Egypt, and Iraq. A Turkish writer, Khidr ibn ‘Abd Allah, had written a treatise on the “Musical Modes” (*Adwar-i Musiqi*) for Sultan Murad II, in which he mentions al-Farabi, ‘Abd al-Mu’min, Ptolemy, Nicomachus and a certain ‘Abd al-‘Aziz al-Kirmani as his authorities,[83] while another Turkish author, Ahmad Oghlu Shakhr Allah compiled a book based on the Persian “Treasure House of Rarities” (*Kanz al-tuhaf*) written in the previous century.[84]

Al-Ladhiqi (d. 900/1494) dedicated his Arabic “Treatise of the Conquest of Music” (*Risalat al-Fatihiyyah fi alpMusiqi*) to the Turkish Sultan Rayazid II.[85] Meanwhile, ibn Khaldun (d. 808/1406) had written in the famous “Introduction” (*Muqaddimah*) to his universal history the “Book of Examples” (*Kitab al-‘Ibar*)[86] with its chapter on music. More important, to the theory and practice of music, was a treatise by al-

Maridini (d. 809/1406) called the “Introduction to the Theory and Canons of Melodies”” (*Muqaddiman fi ‘Ilm Qawanin al-Agham*). The same writer published a “Commentary in *Rajaz* verse on the Melodic Modes” (*Urjuzah fi Sharah al-Naghamat*).87

In fact, verse had become a popular, although not a perspicuous – medium for that subject. More satisfying was an anonymous treatise entitled “The Advantage in the Arrangement of the Melodies upon the Times and the Zodiac” (*Fi’ideah fi Tartib al-Angham ‘ala al-Ayyam w-al-Buruj*), which reveals that the old conceit in the influence (*tathir*) of the heavenly spheres was still as strong as ever.88 This is also most apparent from the “Treatise Concerning the Knowledge of Melodies” (*Risalah fi ‘Ilm al-Angham*) by Shihab al-Din al-‘Anjami (ninth/15th century).89 On the purely instrumental side is a “Survey of the Conerns and Anxieties in the Explanation of the Instruments of Music” (*Kashf al-Humum w-al-Kurub fi Sharh Alat al-Tarab*), a most important treatise on music and instruments in the ninth/15th century Egypt, quoting many unknown authorities – Taqi al-Din Muhammad ibn Hassan al-Farabi (or Faryabi), Ahmad ibn Muhammad ibn Ayyub al-Khwarizmi, and others.

The only MS available of this book is in Constantinople.90 The names quoted reveal men of Turkoman origin. Two others of that stirps who were music theorists were Sa‘d al-Din Kammari (ninth/15th century) who wrote a book on the harp (*chang*) in the form of a dialogue between master and student, and a Fakhr al-Din al-Khujandi (tenth/16th century) who penned a clever criticism (*hashiyah*) of Safi al-Din ‘Abd al-Mu’min.

With the dawn of the tenth/16th century came the domination of the Ottoman Turks from Kurdistan to Algeria, and within those boundaries the theory and science of music fell into desuetude. The compendiums of the sciences, which almost always include music, were current – the older *Irshad al-Qasid* of al-Akfani (d. 749/1348), the *Maqalid al-‘Ulum* of Jurjani (d. 816/1413), the *Unmuzaj al-‘Ulum* of al-Fanari (d. 839/1435), and the later *Miftah al-Sa‘adah* of Tashkoprizade (d. 968/1560) dealt with the subject, but in his last work most of it was borrowed from older compendiums.91

A certain Shams al-Din al-Saidawi al-Dimashqi wrote a treatise called “The Book Concerning the Acquisition of the Melodies” (*Kitab fi ma‘rifat al-Angham*). Like several other such treatises of the period, it was in verse, but it revealed a neoteric device for notation by means of a stave of eight or so lines.92 Another tract in *rajaz* verse was by Nasir al-Din al-‘Ajami.93 Two others in rhymed prose have come down to us.94 A really solid work of that century was “The Treatise of the Discoverer in the Science of the Melodies” (*Risalt al-Kashif fi ‘Ilm al-Angham*) by Muzaffar ibn al-Hussain ibn al-Muzaffar al Haskafi,95 while in Morocco, ibn al-Wansharisi (d. 956/1549) contributed a valuable work on “The Natures, Elements and Modes” (*Taba’i‘, Tubu‘, wa Usul*).96

In the 11th/17th century there lived a certain bu ‘Isami (d. c. 1103/1690) who was the teacher of another music theorist Muhammad ibn Tayyib al-‘Alami (d. 1136/1722), the author of “The Companion of the Performer” (*al-Anis al Mutrib*), also of Moroccan origin.97 Then there was a “Book of the Combinations in the Science of Music and the (*Kitab al-Jumu‘ fi ‘Ilm al-Musiqi w-al-Tubu‘*) by ‘Abd al-Rahman al-

Fasi (d. 1098/1685).[98] It must be remembered that Morocco, like Muslim Spain, ignored the scale of the Systematists," and followed the old Arabian musical system based on the Pythagorean scale with the occasional intrusion of Zalzalian neutral third (355 cents).

In Persian the scale of the "Systematists" was used in the 11th/7th century, the chief authority being Abu al-Wafa' ibn Sa'id.[99] Here, treatises on music abounded, although some of them were trivial in comparison with those of the glorious past. One is named "The Teaching of the Modes" (*Ta'lim al-Naghamat*), another is the Treatise on the Science of Music" (*Risalah 'Uklum Musiqi*),[100] and lastly "The Exquisite Pearl in the Art of Music" (*Durr al-naqi fi Fann al-Musiqi*). The last was by Ahmad al-Muslim al-Mausili (fl. 1150/1737), but it was in Arabic, having been derived from the Persian work of 'Abd al-Mu'min al-Balkhi.[101]

In Muslim India where Persian, Khurasanian, and Turkomanian musicians were favoured side by side with those of India, it is obvious that the former musicians, trained in an art that was in many respects different from that of the Aryan peoples of India, took direction from such books on the theory of music as were known in Persian, just as the Indian musicians turned to Sanskrit sources of information. We know of two Persian books on music theory that were dedicated to the Emperor Akbar (d. 1014/1605). They were the "Excellent of the Modes" (*Tahfat al-Adwar*) by 'Inayat Allah ibn Mir Hajj al-Harawi, and the "Treatise on the Science of Music" (*Risalah dar 'Ilm al-Musiqi*) by Qasim ibn Dost 'Ali al-Bakhari.[102]

An Amir of the Court of Aurangzib named Shah Qubad ibn 'Abd al-Jalil al-Harithi, called Diyanat Khan, caused a collection to be made of Arabic and Persian treatises on music of such authors as al-Kindi, ibn al-Munajjim, al-Farabi, ibn Sina, ibn Zailah, Safi al-Din 'Abd al-Mu'min, and also of many later writers,[103] whose works he himself had collated. Two Persians writers appear to have made translations of or adaptations from Sanskrit treatises. One was entitled *Rag Darpan* issued by a certain Faqir Allah in about the year 1073/1662. Another was *Kitab Parjat Sangit* written by Mirza Rauzan Zamir (d. c. 1080/1669), praised by Shir Khan Lodhi. A third book was "The Excellent Thing of Hindustan" (*Tuhfat al-Hind*) by Mirza Khan Muhammad ibn Fakhr al-Din and was dated 1086/1675. 'Iwad Muhammad Kamil wrote about playing the *bin* in his *Risalah dar 'Amal Bin wa Thath-i Ragha'i*, while Abu al-Hassan Qaisar contributed a book called "The Knowledge of the Melodies" (*Ma'rifat al-Nagham*).[104]

D. Influence

"Thy neighbour is thy teacher."
An Arabic Proverb

As mentioned elsewhere,[105] the ancient Near and Middle East had been influencing Greece and Rome from time immemorial. With the dawn of Islam, this stimulation from the Orient increased by leaps and bounds, as the Muslims were on European soil from the second/eighth century in the Iberian Peninsula, and from the ninth/15th century in the Balkans. Culturally, the former impact was a widespread blessing, not only to Spain and Portugal but also to the rest of Europe. The Arabs and Moors comprised some

one-tenth of the population of the Iberian Peninsula, and its leisured classes were *facile princeps* in all the concerned art, literature, and science.

It is not all surprising that this newly imposed civilization from the East should have captivated all eyes, ears, and minds. What we owe to Arabic authors in literature, science, and philosophy, and to Islamic artisans in architecture and the minor arts have been detailed at some length elsewhere in the present work.[106] Europe's indebtedness in music in Muslim Spain and Portugal has been the favourite theme of the present writer for many years.[107] Of its more general diffusion, a further endeavour should be made to indicate the *primum mobile* which induced other lands to take this exotic art to their hearts.

To the peoples of Islam, music was not merely a diversion of the privileged classes, but the heritage of all, and was, therefore, part and parcel of the social life of the whole community, as the Ikhwan al-Safa had thought.[108] That was what the peoples of the Iberian Peninsula found to be the case with the Moors. Of the music of this land before the Muslim invasion in 91 – 93/710 – 712 we know very little. It is true that we read of Isidore of Seville (d. 15/636) whose influence on medieval culture has been lauded to the skies,[109] but what Isidore tells us about music in his *Originum sive Etymologiarum* does not enlighten us on the contemporary music, since almost everything that he has collected under the heading is derived from alien and earlier sources, as Migne has shown.[110]

In the "Codex Toletanus" (second/eighth century) of Isidore's *Etymologiae*, we have marginalia in Arabic. One may ask why? The answer is that the educated classes in Christian Spain found that the acquisition of that language opened up a new world to them in the arts, sciences, and literature, and the year 188/804, Arabic was in official use in charters and canonical decrees.[111] The Bishop Alvarus of Cordova (third/ninth century) was lamenting the spread of Arabic culture and learning to the detriment of the Christian Scriptures, shows which way the wind was blowing.[112] It is in iconography, perhaps, that the earliest Moorish influence in music may be espied as, for example, in the S. Medard *Evangeliarum* (second/eighth century), the *Psalterium Aureum* (third/ninth century),[113] and in the miniatures (fourth/tenth century) reproduced by M. Serrano Fatigati,[114] all of which show long-necked pandores and other instruments, including large and small rebecks.[115]

Some of these necked instruments, such as the lute and pandore, had frets (*dasatin*) on the finger board, which fixed the Arabo-Pythagorean scale with absolute precision. Prior to that, European musicians had to depend on their ears alone while tuning strings and "stopping" notes. Here is a list of Spanish instruments with their Moorish originals named in parentheses: atambor (*al-tanbur*), laud (*al-'ud*), rabe (*rabab*), canon (*qanun*), axabeba (*al-shababah*), albogon (*al-buq*), annafil (*al-nafir*), sonajas de azofar (*sunuj al-sufr*), and atambal (*al-tabl*). All of these instruments may be seen in the miniatures of the *Cantigas de Santa Maria* of Alfonso el Sabio (d. 683/1284),[116] whilst the *Libro de Buen Amor* of Juan Ruiz (d. c. 751/1350) makes distinction between Spanish and Moorish instruments such as in the *gitarra morisca* and the *guitarra latina*.[117] One is, therefore, not surprised to find Rafael Mitjana, the historian of Spanish music, lauding "this Oriental civilization, so rich and so exuberant...imprinting an

indelible mark on so many examples of Spanish art, and more especially upon music."[118]

The Spanish population, seeing how universal and attractive Moorish music and song were among its people, soon became as ardent auditors and practitioners as the Muslims themselves, and gathered to the "leila" (Ar: *lailah*) and "zambra" (Ar. *zumrah*) of the latter to hear their "cana" *ghaniyyah*), "huda" (Ar. *huda*), and "anaxir" (Ar. *nashid*), since Moorish "aravia" fascinated their ears, and the "mourisca" tempted their feet. So ravished by enthusiasm were the Spaniards with such displays that they were led in excitement to cry "algzara" or "alarido" in admiration. These words are the Arabic *al-ghazara* (copious) and *al-'arid* (amplitude).

One may still hear cries of "Ole, Ole" (Allah, Allah), punctuating the performance of a "cante hondo" in modern Spain, when the audience is carried away by the clever ornamentation (Ar. *tahsin*) or the melody by a singer or a player.[119] As Professor J, B. Trend says, "this tendency to profuse ornamentation is seen in every form of art, whether cultivated or popular, and it…undoubtedly goes back to the time of the Moors."[120] Among the dances the "mourisca" was much fancied by the Spaniards and the Portuguese, and in the sports and pastimes of the latter the Moorish influence is quite patent.[121] Joy as well as thanksgiving was at its height during the Great Muslim festivals, and that the dance was given recognition on such occasions seems very probable because the Portuguese had a dance called the "muchachim," which may be the Arabic *muwasim*, the name of the six Muslim festivals, as we know from the ibn Battutah[122] and al-Maqqari.[123]

On the other hand, Pedro de Alcala (911/1505)[124] gives word *muwajjah* the plural of which is *muwajjahin* (mascarado con caratula), which Dozy and Engelmann link up with "los matachines," a troop of four, six, or eight persons who performed a clownish dance.[125] This word is claimed to be derived from the Arabic *mutawajjahin* (masked people). That leads us to the Spanish words "mascara" (actor) and "zaharron" (merry andrew), which are the Arabic *maskharah* (cause of laughter) and *sakharah* (scoffer). Another figure of entertainment was the Spanish "moharrahe," who was no other than the Moorish *muharraj* (buffoon).[126] It was the arts of these people which captivated the Moors and the Iberians alike,[127] and their influence spread abroad at the hands of the wondering minstrels.

It was these minstrels who were the real disseminators of music during the Middle Ages, for, as Naumann, says they were carrying new themes from one people to another, as well as many "an original and singular rhythm."[128] This latter would have far-reaching effect, as we shall see presently. Even the Arcipreste de Hita (eighth/14th century) realized that it was not the bowed instruments which typified the exotic Moorish rhythms, but the plectrum-struck lute and pandore.[129] The other feature of that Oriental art was the mellisma or embroidery of the melody by Muslim singers and players which Professor Trend has well compared with the arabesque in Mudejar art.[130] The Spanish Courts were well supplied with Muslim players, singers, as the official records, even their names have been registered.[131]

That the wandering minstrel class contained a fair sprinkling of Moors, there is some evidence. It is probable that the long hair, painted faces, and gaudy raiment were prompted by Oriental minstrels,[132]

and the Spanish “mourisca,” already mentioned, with *grelots* on the dancers’ legs, and the “hobby horse,” both borrowed from the Moors, inveigled the ears and eyes of audiences. The *kurraj* or hobby horse of the Moors and its impedimenta of bells (*jalajil*) are mentioned as far back as Jarir (d. c. 110/728) and have also been described by ibn Khaldun. Let us turn to the diffusion of these arts.

Some of the external features of the music of the Basques reveal a Moorish tinge. Their “mutchikoa,” which was danced by young men armed with batons, immediately suggests that the original was the Arabic *muskwikah* (bristling with arms). In Catalonia, there was a dance which specialized the water flagon called “almaratxa,” which was the Moorish *al-mirashshah*. That feature was dropped about 1215/1800. The Basque “zortzico,” also common in Spain, has a time measure of “five-eight” which immediately reminds one of the Moorish *makhuri* rhythm.[133] P. Donostia assures us that the “zortzico” “does not represent the musical basis of the Basque people.”[134]

In other words, it is an exotic plant, reared among the Moors. Among the most popular of the Basque folk instruments are the “alboka” and “atabula,” the originals of which are to be sought in *al-buqi and al-tabl* of the Moors. Clearer still is the Moorish influence in the Basque “zamalzain” to which the people still skip about, little suspecting that it is the Arabic *zamil al-zain* (gala limping horse), the English “hobby horse.”[135]

All of these neoteric devices soon spread over the Spanish and Portuguese borders, as the French, Italian, and English languages and customs reveal, some of them are to be found even today in Pyrenean provinces in something akin to their pristine character. One recalls that the tambourine made its entry into Western Europe as the “tambour de Basque” and “tambour de Biscaye.” Jean Poueigh, in his entrancing book on the *Chansons populairs des Pyrenees francaises*, shows how the popular song of some regions in France has been influenced by the Oriental art, and in his own particular sphere of research he hears and sees quite definitely the Moorish pattern.[136]

Among his numerous examples in the “mouchicou” of Bearn, which is the warlike Basque dance “mutchikoa.’ One of the Pyrenean song dances is a kind of “branle” called the amelet,” which had its origin in Toulouse in the sixth/12th century. There it fell into desuetude, although it may still be heard in the mountains of Foix. Could these binary measured song dances owe their name to the Moorish *ramal*? Yet the inherent wandering propensity of folk music is notorious, and one example of this is the Bulgarian rhythmic “aksak” which is to be found in Basque instrumental tune.[137] Its paternity is traceable to the Turkish *aqsaq*, a 9/8 movement.

In France, iconography supplies the clearest evidence of the Moorish and Saracenic influence in musical instruments,[138] whilst its literature clinches that certainty.[139] The Moorish *‘ud, rababah, quanun* and *tanbur*, appear in the seventh/13th century as the “leus” (luth), “rubebe,” “micanon” and “mandore” – the Spanish “guitarra morisca” of Juan Ruiz (eighth/14th century), the “morache” of Guillaume de Mechaut (c. 743/1342) in France. With these came the Saracenic *naqqarah, tabl,* and *tabl-zan* – the last meaning really “a drummer” – which were Gallicized into “naguarre” (nacaire), “tabor” and “tabolzan.” Later, the

French adopted the Persian *tinbal* as the “tinballe” in 876/1471.[140]

French minstrels were welcomed at the Spanish Courts,[141] and these as well as the peregrinating type were the means by which these Moorish instruments and music were spread abroad. The Spanish “mourisca” was danced in France as the “Moresque,” whilst “los matachines” were “les matassins” of that land, all of whom were “masques,” as did the Moorish *maskharahs*. As late as Thoinot Arbeau (997/1589), the French “Morris dancers,” i.e. Moorish Dancers,” were putting dye on their faces.[142] He calls the “matassins” by the name “les bouffons” (Ar. *muharrajat*).

The troubadour problem, in relation to the Moorish influence, has been the arena of fierce conflict since the days of Heut’s *Origine Fabularum Romanensium* (1105/1693), as the present writer has shown elsewhere.[143] The discovery by Levi–Provencal in 1374/1954 that the fifth song in Jeanroy’s *Les Chansons de Guillaume IX* was not only inaccurately transcribed but that its final lines were actually purely Arabic,[144] was a veritable bombshell to the sceptics. Whether the troubadours actually borrowed their form and material from the Moorish *mutrib* (minstrel) or not, they certainly had the opportunity to do so.[145]

Indeed, it is not improbable that the Provencal word “trobador” was coined from the Arabic *tarrab* (*taraba* = “to rejoice”, *tarraba* = “to sing”).[146] The orthodox explanation of the word is that it issued from the Provencal verb “trobar’ (French “trouvere”) meaning “to find.” If that be so, it was a very lucky “find,” seeing that it gave birth to the verse of the troubadours. Joseph Anglade says[147] that the “trovador” who lived at the princely Courts was known as a “sergrier,” a name which was no more than the Moorish *sakharah*.[148] On the other hand, Menendez Pidal believes that the “segrier” belonged to a class between the “trovador” and the “juglar.”[149]

In Pedro de Alcale (915/1509), the “trobador” equates with the Moorish *sha‘ir* (poet), *nadim* (boon companion), and *adib* (scholar).[150] There can be little doubt that the Moorish *muwashshahah* and *zajal*, which were popular verse forms as old as the fourth/tenth century, were the mould from which much of the poetry of the troubadour sprang, as Ribera has claimed.[151] Even the scenes and *dramatis personae* of that poetry reek with the Orient. If they could borrow those features, why could not the melodies which enhanced that verse also be copied? In truth, they were almost inseparable. Even if the troubadours could not grasp the significance of the Arabic language they could at least seize the prosodical structure, the melody of which would be transfixed in their ears with certainty.

In any case, they had their “juglar” who attended them ostensibly for that purpose. Some of the later works of that early troubadour, Guillaume IX (d. sixth/12th century), “can be explained only by *muwashshahah* and *zajal*,” as Nykl insists, and he says of the later Marcabru that his two *estornel* (Ar. *zurzur*) were, “in all likelihood, made upon an Andalusianbilo” and “stanza” equate precisely with the Moorish *markaz* and *bait*. What is stranger still is the literal identity between the Latin musical term “conductus” and the Arabic *majra*, although we may not at present be able to pin the likeness down to precise identity of usage.[152] What we do know for certainty is that the Spanish “estribillo” and “stanza”

equate precisely with the Moorish *markaz* and *bait*. What is stranger still is the literal identity between the Latin musical term “conductus” and the Arabic *majra*, although we may not at present be able to pin the likeness down to precise identity of usage.[153]

Concerning the famous *Cantigas de Santa Maria* of Alphonso X (d. 683/1284), the miniatures of which present us with the delineations of many Moorish instruments, Julian Ribera has made wide claims for the Moorish influence in both the melodic and in the rhythmic structure of that work.[154] As his interpretation of the latter does not agree with the Arabian rhythms of the third/ninth to the fifth/11th centuries examples known to us,[155] that part of his elucidation is suspect, whilst his transcription of the melodies has been disputed by many.[156]

On the other hand, the literary material which he amassed is extremely valuable to all who are interested in the problem. Yet the failure of Ribera, in the circumstances mentioned, does not validate the sweeping statement of Higini Angles that there is not the slightest trace of an Arabian (Moorish) influence in the melodies of the *Cantigas*.[157] Others of the anti-Moorish influence party are more guarded in their utterances, since they admit that because there is not contemporary Moorish music available there can be no absolute proof either “for” or “against” that thesis. They evidently know the reason why there was no written contemporary Moorish music, seeing that the pious Cardinal Ximenes, according to his biographer Robles, committed a million Arabic manuscripts to the flames,[158] believing, as the late Reynold A. Nicholson has said, that he could “annihilate the record of seven centuries of Muhammadan culture in a single day.”[159]

Spanish composers of the standing of Pedrell and Falla are outstanding opponents of the claims for a Moorish influence. The former asserts that Spanish music “owes nothing essential” to the Moors,[160] but takes care not to define what he means by “essential.” He prefers to acknowledge a Byzantine influence, but does not quote documentary evidence which he and others demand the pro-Moorish advocates should exhibit. In fact, there are no Byzantine documents of the pre-Moorish days that authenticate his contention.

Fella makes a different approach. He acknowledges the Oriental strain in Spanish music, but he attributes that feature of the “gipsies.”[161] In other words, a handful of uncouth gypsies, who entered Spain not earlier than 846/1442, are to be credited with having exerted a more pre-dominant influence on Spanish music than a million Arabs and Moors whose ancestors entered the Iberian peninsula so far back as 94 – 95/712 – 713, without including the countless Mozarabes, Mudejares, and Moriscos, who had adopted the Arabian and Moorish mode of life.

The fact is that Spain is compelled to face the question of the Oriental strain in her national music as exhibited in the “cante hondo” and “flamenco,” but dare not acknowledge the influence of Islamic peoples. Jean Sermet says of the “cante hondo” that it “is certainly of Oriental origin,”[162] while Raoul Leparra states that the “very special *mentalite* of the ‘flamenco’ goes back, according to the hypothesis most justified, to the domination of the Moors.”[163] Fortunately, there have been and are men of the

stature of Menendez Pelayo,[164] Mitjana Gordon,[165] Menendez Pidal,[166] Ribera,[167] and Nykl[168] who recognize clearly the Moorish influence as they would the sun at noonday.

The Moorish influence spread quite naturally to Italy, where such instruments as the "liuto," "rebecca," "canone," "tambura," "taballo," and "nacchera," as well as such terms as "maschera" and "mattaccino" reveal their ancestry.[169] Of course, the definitely Oriental Courts of Frederick II (d. 648/1250) and Manfred (d. 665/1266) at Palermo and Naples had their quota of "Saracen" minstrels and dancing girls.[170] A glance at medieval documents enables one to note the frequent appearance of Italian minstrels at Spanish Courts and *vice verse*,[171] all of which conduced towards the inter-change of alien ideas in music, including that of the Moors, which the poles asunder from that of Europe proper.

The Sicilian instruments of the period are displayed on woodwork screens of the sixth/12th century of Palermo, while those delineated by Fra Angelica, Bellini, and Montagna (ninth/15th century) are quite revealing of the Oriental influence in their ornamentation as well as in their shape.[172] It was here that the mounted men-at-arms of the English condottiere, Sir John Hawkwood (d. 796/1394), were using a nacarino which was, of course, the Arabic naqqarah. Meanwhile, the crusaders had returned from Palestine with fresh ideas of martial music. Previously they only used trumpets (*tubae, litui*) and horns (*corni, bucinae*), whereas the Saracens were equipped not only with trumpets (*anfar, karnat*) and horns (*buqat*), but also with large (*kusat*), medium (*naqqarat*), and small (*qas'at*) kettledrums, together with reed-pipes (*zumar*), shawms (*surnayat*), cymbals (*sunuj*), and bells (*ajras*), which were used not merely for signalling but to create fear and dismay among the Christian array.[173]

It is generally believed that the cylindrical bore "trump" of Richard Coeur de Lion, first heard in 587/1191, was borrowed from the Saracens.[174] With the latter the military band was a distinct unit known as the *tabl khanah* or "Drum House" which was drawn up with the standards away from the actual conflict, where it played unceasingly during the battle for tactical purposes. In times of peace it was the function of the *tabl khanah* to perform the five-fold *naubah* for the Caliph and the three-fold *naubah* for princes or governors. Generals, according to their rank, were allotted a specific number of players, although only the highest of the Amirs were allowed kettledrums.[175] Europe adopted all those customs, and up to the 13th/19th century the various ranks of European generals could be determined by observing the musical honours bestowed on them.[176]
In Britain we observe the Oriental current flowing, presumably *via* France, as one sees in the word "mattachin," the dance in which a duel was fought with wooden swords typifying the struggle between the Christians and the Moors. Here it was dubbed the "Morris dance," but, as Brand points out, "the genuine *morisco* was very different from the European Morris."[177] Each of the performers being a "masker" (Ar. *maskharah*), they painted their faces and wore masks. A folk-song and dance authority of today, Maud Karpeles, dismisses the Moorish origin of the British "Morris Dance" by saying it "is now discredited" – by whom, we are not told.[178]

Such English authorities as Thomas Blount, Joseph Strutt, and John Brand had no doubts about its

Oriental origin, and anyone who has seen the “hobby horse” and knows its history will scarcely be convinced by the latest heresy. “Moor’s garments” are specified in English documents as early as 914/1508 just as “Turk’s garments” for kettle drummers were mentioned a century later, the reason being obvious in both cases. With the general infiltration of Moorish instruments came the “lute,” “rebeck” of “ribible,”[179] “tabor” and “naker,” and they did not necessarily intrude through France, since both English and Scottish minstrels were welcomed at the Spanish Courts, where not only Moorish instruments were in common use, but Moorish minstrels were playing.[180]

In the east there came the Turkish eruption into Europe during the ninth/15th century, when the whole of the Balkan Peninsula was conquered. That the music of the latter was influenced by that of the Turks can scarcely be denied, however much collectors of folk and national music may strive to minimize that persuasion. The Oriental strain exists to the present day, more especially in Bulgaria, Albania, and Yugoslavia. According to Raina Katzarova, the Turkish rule only left “infinitesimal traces in Bulgarian folk music.”[181] Yet among those immeasurably small vistiges are many irregular Oriental rhythms from 5/16 through odd numbers up to 13/16. Further, did not those instruments of a definite Oriental prompting contribute something – if but the merest fraction – to those “infinitesimal traces?”

Those instruments include the “tamboura,” “kemence,” “kaval,” “daara,” and “tarabouka” – all adopted from the Turks.[182] In Yugoslavia the Oriental impress is deeper, since many of their melodies are acknowledged to be of Turkish or Arabian origin.[183] The “tanburica” is common to the Yugoslavs together with its cousins the “saz” and “shargy.” The Arabo–Turkish lute (*‘ud*) is known in Macedonia as the “oot.” Among Balkan wind instruments, the “duduk,” “zurne,” “dzamare,” and “bore,” as well as the percussion group – “daule,” “deff,” “daulbas,” “daire,” “dalbujane,” and “chapara” – all tell the story of their parentage. Albania used a host of Turkish instruments, including pandores of the “yonghar” ad “paraduzen” class.[184]

Even Rumania and Russia were influenced by the Turkish *kopuz* in their “kobsa” and “cobsa,” whilst the latter adopted the Arabian *al–tabl, naugah*, and *tab–li baz* in the tenth/16th century “litavri,” “nabat,” and “tulumbaz” respectively for their military bands.[185]
Perhaps the greatest of all the “borrowings” from the Turks was made by European military bands. It began about 1138/1725 when the Turkish Sultan presented the ruler of Poland with a complete military band instrumented after the Turkish fashion. The craze soon spread to Russia, Austria, Prussia, France and Britain. The pre–dominant feature of this Turkish music was the use of the bass drum, cymbals, triangle, tambourine, and “Janissary bells.” These not only helped precision in marching for the army, but the new tonal colour attracted the attention of the orchestra, and very soon Mozart (1196/1781) and Haydn (1290/1794 were scoring for such instruments in their immortal works, the former using them in his opera *Il Serablio*.[186]

Indeed, the Orient became the scene for countless *libretti*: Beethoven’s *Ruin of Athens*, Rossini’s *Turks in Italy*, Webber’s *Abu Hassan*, Boieldieu’s *Caliph of Baghdad*, David’s *Lalla Roukh*, Bizet’s *Djamileh*,

Massenet's *King of Lahore*, Bantock's *Pearl of Iran*, and so on. What would the annual pantomimic productions in Britain be without *Aladdin, Sindbad*, and *The Forty Thieves*, all from the *Arabian Nights*, although some of us may be amused at the pseudo-Oriental music which accompanies them.

The musical influence of Islamic peoples is not confined to the West. South of the Maghrib and Egypt we find the *tabl, ghaitah, bandair*, and *shaqshaq* in the Sudanese languages as the "tabala," "tamba´or "tumbul," "algaitaru," "bendere," "bendo" or "bentere," "segesege" or "asakasaka."[187] The "azamari" or troubadours of Abyssinia may have derived their name from the Arabic *al-zumar*, meaning people who gather together to make music. Their agarit" is clearly the Arabic *naqqarat*. The neighbouring Somalis use the Egyptian *zummarah* as the "zomari," just as they do in Zanzibar, although it becomes the "anjomari" of Madagascar.

The lute-like *qabbus* of the Arabs and Turks became the "kabus'u" of Somaliland and the "qalbus" in Zanzibar. Turning to the west coast of Africa one recognizes the Arabic *al-tabl* and alghaitah, as well as the Turkish *boru* in the "tabulaie" of Senegal and the "a-tabule" of the Gold Coast, the "algaita" of the hausa, and the "buro" of the Gold Coast.[188] Returning to the east coast, it should be noted that, in spite of Sanskrit influence on the Malagasy language and the cultural pressure of Indianized Sumatrans, we do not find a solitary musical instrument of Indian or Indonesian origin. That statement takes us to India itself, where the Islamic cultural influences are as patent as the noonday sun.

A recent writer on Indian music avers that "the stories that tell how the various styles of North Indian music were invented by musicians of the Muhammadan period have probably *no basis in reality*."[189] So far as the "form," the method of performance, the actual instruments, and the technical nomenclature of that music is concerned, the above statement is a distortion. That some "styles" came via the "musicians of Muhammadan period" must surely be allowed, and among them are the *qual, ghazal, taranah*, and *firu dasht*. One recalls that Amir Khusrau (d. 725/1325) has been actually censured by the purists of the old Indian school of music for *Islmaic innovations*, and one presumes that the above were among them.

The *naqsh*, an ornamental piece of music, was another feature in Amir Khusrau's time, and that and the preceding items would seem to be those specifically Islamic features which Alain Danielou believes that "no one can seriously speak of their having any influence" on the development of Northern Indian music. One asks, would that include the *khiyal*? Surely that deserves some claim to pristine utterance. It certainly lives up to its name, which means "fancy" or "imagination," since the embellishment of its melodic outline becomes perfectly scintillating at the hands of a Muslim *ustad* (*virtuoso*). Fox Strangways said that the *khiyal* received "its highest development" at the hands of the Muslims, having originated with a certain Mahmud Sharqi of Jaunpur (d. 844/1440).[190]

The names of such modes as *'ushshaq* and *nigar*, together with such technical terms as *basit* and *sarpardah*, are quite alien to Sanskrit. One is prompted to inquire why Sanskrit or Hindi words are not used instead of the Arabic *midrib* for the "plectrum," and *khali* for a "rest" in a rhythmic pattern. Why call the drum "brace" the *diwal* instead of its Sanskrit equivalent? Seemingly there is some "basis in reality"

for the Muslim claims.

When we examine the musical instruments of modern India, we find overwhelming evidence of the influence of Islamic peoples, which is a sufficient rebuttal to Alain Danielou's claim that "outside influences" were only "temporary fashions." Nobody can scan the names and features of those instruments without concluding that Pakistan and parts of Muslim India have been wearing those supposedly "temporary fashions for many centuries. Search as one may in the old Sanskrit treatises, even *Sangita Ratnakara* (seventh/13th century), one will not discover in their pages the *sitar, rabab*, or *tanburi*.

Indeed, the *chargah–sitar* and *tarabdar sitar* bear an unmistakable Persian likeness. Even the *sarod* or *sharod* can be no other than the old Turkoman *shahrud* of the fourth /tenth century. All of these instruments as well as the *dutarah* and *chartarah* bear names which determine their origin. Grosset claims that the *qanun* or psaltery was derived from the old Indian *katyayanavina* or *svara–mandala*:[191] but since the latter is not mentioned in the Sanskrit treatises earlier than the *Sangita Ratnakara*, which is of later date than the Arabic authorities, the claim for Indian priority is far from convincing. Among the bowed types the *kamanchah* is the most obvious of the borrowed Islamic instruments. The insistence of Grosset that the Sanskrit term *kona* stands for both "plectrum" and "bow" cannot be justified, although he claims the *Amara kosha* (first/seventh century) as his authority for the use of the "bow."

Yet Ananda K. Coomaraswamy declares that "no Indian *vina*, whether ancient or modern, was ever played with a bow."[192] The antiquity of the *ravanahasta* as claimed by Fetis, who was foolishly influenced by the mythical *ravanstron* of the Sonnerat, was sheer imagination,[193] as was his indication of a manuscript at Vienna, dating from the days of the first Caliph (first/seventh century, *sic*), supposed to delineate a bow.[194] The Fetis design of a *ravana* and his so–called *ravanastron* and *omerti* are actually of Chinese provenance, as was his Indian *tambourah*.[195] The fact is that the earliest account of the function of the bow is given by al–Farabi.[196] Passing to wind instruments – the *surna, alghuzah, moshuk, nafir*, and *karna* – their very names confirm their origin, as do those of the percussion group – the *tablah, tablik, naghara, duffda*, and *da'irah*, however much some of these names may have been altered.[197]

The music of the peoples of the Malay Archipelago was also influenced by India, especially Muslim India, on the instrumental side. The bowed *rabab*, or spike–footed viol, which spread with the adoption of Islam is known in the various islands as the "regab," "repob," "erbabi," and "arababu." The lute–like Arab *qabus* or *qanbus* and the Turkish *qopuz* appear as the "gambus," "babbus," and "kabosi," whilst the *surna* or *sunray* becomes the "serunai," "sarune," "sruni," and "sralai."[198] Further north, when the Mughuls became masters of China (641 – 770/1213 – 1368), the instruments of Islamic peoples began to influence that land. Kuglai Khan introduced an organ called the *hsing–lung–sheng* into China; it is being expressly mentioned as coming from the "Muslim kingdoms" of the "lands of the West."[199]

The armies of the Yuan rulers comprised large contingents from Turkestan, and a number of their Court

officials were Persians. Was it any wonder that bands and orchestras of Muslim musicians should find favour at Chinese Courts? Here were to be heard such instruments as the “tan–pu–la” (Turki *tanbur*), “sai–t’o–erh (*sitar*), “huo–pu–ssu” (*qopuz*), “la–pa–pu” (*rabab*), “ha–er–cha–k’o” (*ghijjak*), “k’o–erh–nai” (*qanun*), ta–pu–la” (*tabl*), an “ta–pu” (*daf*).200 Thus, we discern how the Islamic arts in music traversed land and sea, covering continents and oceans, bringing to distant shores the indigenous music of several Near and Middle east peoples, which was not only fresh and novel, but had a comeliness and grace, a form and symmetry dissimilar from their own, some of which, wherever possible, were eventually absorbed.

Finally, there is the question of the influence of the music theorists of Islamic peoples – especially that of the Arabic theorists – in the practical and theoretical spheres of music. All historians of art and science have openly acknowledged the debt that we owe to Islamic peoples during the Middle Ages,201 and one can include the science of music in Europe’s indebtedness, however small it may be, in our modern concept of obligation. Greece had always been a borrower from the East in the distant past. Even in the days of Byzantium she was absorbing from the Orient.202 Yet with all the trumpeted fame of the Hellenic world, not a single treatise on the theory of music was produced – or at least has survived – from Anonymus II (fourth/tenth century) at the same time of Psellos (fl. 442/1050).

It was only the Arabic treatises on that subject which had currency from Seville to Samarqand, viz. those of al–Kindi and al–Farabi up to those of ibn Sina and ibn Zailah (d. 440/1048).203 One cannot help noticing the complete absence of genuine music theorists in Christian Europe from the pre–sixth century A.D. to the mid–third/ninth century.204 The reason for the decay has been described by the Muslim historian al–Mas‘udi (d. 345/956). He says, “In the days of the ancient Greeks...and Byzantium, science was developed and scholars were honoured. Natural science was particularly studied...as well as the *quadrivium*, i.e. arithmetic, geometry, astronomy, and music...Then came the Christian religion, which...destroyed and blotted out the teachings of science. All that the ancient Greeks had placed before the world vanished, or was distorted. Among the noble sciences which were thrown aside...was the science of music.”205

This is not a biased picture by a Muslim. The facts can be proved up to the hilt by Christian historians who had the *ipissima verba* of the Fathers of the Church before their very eyes. Tertullian (d. c. 240 A.D.) decried Pagan literature,206 i.e. the literature of Greek and Latin philosophers, which was in strict accord with the authoritative *Apostolic Constitutions* which laid down, “Hold aloof from pagan books entirely.”207 Saint Jerome (d. 440 A.D.) was warned not to dabble in heathen literature,208 although he actually lamented that so few knew of Plato and Aristotle.209 Even Saint Augustine (d. 430 A.D.) pandered to his readers saying, “Heaven is for the ignorant.”210 Cassian (d. 480 A.D.) reveals that the decrees against Pagan literature were still being observed.211 Even 60 years later Saint Benedict (d. c. 544 A.D.) recommends only the Bible and expositions thereon to be read by the Catholic Fathers.212 It has been admitted that “at no time have the general mass of Benedictines has learned.”213

Under such conditions one can readily appreciate the total neglect of the works of the great Greek theorists of music. Europe knew of them only through fragments – often mistranslated as Roger Bacon affirmed – offered by Martinus Capella, Boethius, Cassiodorus and Isidore of Sevile,214 whereas the scholars at the House of Learning" (*Bait al-Hikmah*) at Baghdad had made Arabic translations of the works on music by Aristotle, Aristexenus, Nicomachus, Euclid, Cleonids, and probably Ptolemy and Aristides Quintilliannus by the third/ninth century.215 We have seen how both Euclid's *Canon* and Aristotle's *De Anima* had been the subject of Arabic commentaries (*shuruh*), and all were part of collegiate studies in Islamic lands, since music (*'ilm al-musiqi*) was part of the course of mathematics (*riyadiyat*), i.e. the *quadrivium* of the medieval European studies.216

To appreciate the meaning of the impingement of Arabic learning – in the sciences especially – on Western Europe, one has to consider the prevailing cultural conditions there. In Spain, the hub of Islamic culture in Europe, we have Bishop Alvarus (third/ninth century) complaining that whilst his congregations could not pen a letter in their own tongue, they could accomplish mono-rhyme in Arabic,217 while the ignorance of his clergy was deplorable.218 At the centre of Europe's intellectual culture – the Carolingian Empire – learning had so declined that studies had almost ceased, whilst at Cluny the subjects of the *quadrivium* were but little studied.219 The Monk of Angouleme admits that "there existed in Gaul scarcely a trace of the liberal arts" before the days of Charlemagne, and it was no better in Rome, the very centre of Christianity.220

In Muslim Spain the cultural atmosphere was far different. Sa'id ibn Ahmad al-Qartabi (d. 462/1070) writes of that land thus, "The learned of al-Andalus exerted themselves in the cultivation of science, and laboured in it with assiduity."221 Ibn al-Hijari (d. 590/1194) testifies that under the Umayyad regime in al-Andalus (second – fifth/eighth – 11th centuries) "students from all parts of the world flocked...to learn the sciences of which Cordova was the noblest repository, to derive knowledge from the mouths of the doctors and *'ulama'* who swarmed in it."222 What was taught specifically of the theory of music we do not know. The treatises of al-Farabi, the Ikwan al-Safa, ibn Sina, and the later Abu al-Salt Umayyah, ibn Bajjah, and ibn Rushd were available to all, most of these authors being known by their Europeanized names as Alpharabius, Avicena, Avempace, and Averroes. (See H. Albert, *Musikanschauung des Mittlealters*, Halle, 1905, pp. 143, 169).

In spite of the destruction of Arabic manuscripts by Cardinal Zimenes in 898/1492 *et seq*., a few manuscripts on music theory have survived, notably that of al-Farabi, the "Major Book on Music" (*Kitab al-Musiqi al-Kabir*), now preserved at Madrid, being a sixth/12th century copy made for a student of ibn Bajjah (Avempace).223 Al-Farabi's treatment of the physical bases of sound, also dealt with by the Ikhwan al-Safa, was a notable advance in that particular sphere.224 His description of the musical instruments of his day stands unique in the history of music. European theorists seem not to have considered the subject worthwhile. His minute account of the *accordatura* of the necked stringed instruments, the scales of harp-like instruments, and the compass and digit holes of the wood-wind family were subjects unheard of before his time,225 although al-Kindi had dealt with the lute in that

fashion a century earlier.[226]

In a Persian treatise, the "Treasure House of Rarities" (*Kanz al-Tuhaf*), dating from the eighth/14th century, we have another example of the thoroughness of Islamic music theorists. In this we have not merely the musical gamut of an instrument described, but recommendations as to the style of facture, the best types of wood for use, an elaborate account of the manufacture of silk and gut strings, devices for amplifying the tone by means of sympathetic strings – the first account of its kind as well as the sprinkling of powdered glass on a glue covered interior of an instrument so as to improve the tone. The earliest mention of that device in Britain is a patent (No. 7454) taken out in 1253/1837. Ibn Sa'id al-Maghribi (d. c. 680/1280) says that books on "the various instruments and the art of making them are common among us," while in the days of Ibn Rushd and al-Shaqundi (d. 629/1231) Seville was the centre of the manufacture of musical instruments, and had an export trade.

How much of the Arabic material recorded above was translated into Latin we have no record. Yet seeing that Arabic was not only spoken by the Arabs and Moors, but also by the Mudejars and Mozarabes, who were, respectively, the Muslims who remained in the reconquered Christian Spain, and the Spaniards and Portuguese who lived under Muslim rule, much would have been passed on orally. One outstanding man in the former group was Muhammad ibn Ahmad al-Riquti, who, when the Christian armies took Murcia in 640/1242, was retained by the Christian king to teach in his schools, he himself being a famed as a music theorists and mathematician.[227] That some of it was passed on via the Latin tongue or script we know from Anthony a Wood who says that when Roger Bacon lectured at Oxford, using faulty Latin translations, he was ridiculed by Spanish students, who have known the Arabic originals.

According to Bacon, there were few mathematicians among the Latins, and both he and Adelard of Bath strongly advised students abandon European schools and seek the fountain-head in Muslim Spain.[228] Two Arabic tractates on the sciences which contained a section on music were translated into Latin, viz. al-Farabi's "Register of the Sciences" (*Ihsa' al-'Ulum*) and an anonymous "On the rise of the Sciences" (*De ortu scientiarum*), both of which became formal textbooks in European schools. Neither was of much value *per se*, since each merely outlined the bases of the study.[229] Yet they were quoted by Gundisalvus, Magister Lambert (Pseudo-Aristotle), Vincent de Beaufais, Roger Bacon, Jerome of Moravia, Walter of Oddington, and others.[230]

The Islamic impact on musical instruments has already been shown, especially in the stringed variety with their frets. These latter were fixed according to the old Arabian system of ibn Misjah (d. c. 97/715), which was based on Pythagorean tuning, a circumstance which completely dispels the erroneous assumption of the Director of the "Museo-Labordtiorio de Musica Marroqui" at Tetuan, D. P. Patrocinio Garcia Barriuso, that the music of Morocco, Algeria, and Tunis is not "Arabian music.[231] As H. G. Farmer has been demonstrating for many decade, the "musica hispano-musulmana," which he believes originated in Spain, was actually the old Arabian system of ibn Misjah, Ishaq al-Mausili, Ziryab, ibn al-

Munajjim, al-Kindi, and al-Farabi, a "sisteme model distonico y cromatico," as he terms the present Moroccan music.

According to him – and his book has received the "Imprimatur" of the Roman Church – those "eminent musicologists" who have studied Moorish music have approached the subject with "prejudice, lack of knowledge, and impropriety of nomenclature," when they have dubbed "Spanish-Muslim music" as "Arabian music." So as to demonstrate the "superficial affirmation" of those erring musicologists mentioned above, he would enlighten the octave, of which Europe was an *au fait* so early as Sir John Chardin (1123/1711) and about the quasi-Arabian quarter-tone system, really Turkish, which succeeded in the 11th/17th century, the latter being illustrated by Dr. Barriuso, who copies a diagram from a music treatise of Kamil al-Khalu'i (1322/1904), so as to prove that his "Spanish-Muslim" music of a thousand years earlier was not "Arabian music." *O sancta simplicitas!*

So far back as the third/ninth century, when Christian Spain was in its intellectual childhood, the Baghdad scholars had translated from Greek into Arabic the Muristus treatises on the organ and hydraulic. Such works enabled the Arabs to construct similar instruments which led to some interesting results. An organ or hydraulic was being used in the Caliph's palace at Baghdad in the time of Princess 'Ulayyah (d. 210/825),[232] and there is evidence that organ constructors were known in Syria during the sixth/12th century.[233] There is no reference to the hydraulis in the Orient since the time of Isaac of Antioch (fl. 459 A.D.), and in the Occident since the days of Apollinaris Sidonius (c. 483 A.D.),[234] because the Greeks had adopted a weighted blast bag instead of hydraulic pressure.

Could the resurgence of the hydraulic in the third/ninth century have been due to the Arabic translations of Muristus?[235] Amedee Gastoue says that "the makers of the first large organs in the Occident in the third/ninth century were, without doubt, either Greeks or Syrians," and since he shows that the hydraulic had died by that time among the Greeks, the greater probability rests with the Syrians at the revivers.[236]

Returning to the question of the frets on the necks of stringed instruments, the Arab theorists used an alphabetic notation to designate the notes produced as those frets as we see in the "Treatise of Music" (*Risalah fi al-Musiqu*) of ibn al-Munajjim (d. 300/912),[237] which the author specifically stated was based on the system of Ishaq al-Mausili (d. 235/850) who was the teacher of Ziryab (d. c. 238/852), the famous musician of Moorish Spain. Europe, however, possessed no definite and practical notation of that sort. In its church music, neumes were used as a means of registering the melodic outline, but they did not convey any precise intervallic steps. By the time of Hucbald (fourth/tenth century), we find an alphabetic notation on very much the same lines as that of the Arab system, giving a major diatonic scale.[238]

No wonder that the latter has been attributed even to the Arabs,[239] or to the Semitic Orient.[240] It may also be pointed out that the instrumentalists of the minstrel class possessed a practical knowledge of music theory (*ad delectandos audientes artis ratione temperare*), whereas the church singers did not. This was stated by pseudo-Huebald.[241] Later, the Arabic influence on the alphabetic tablature for stringed instruments is openly admitted in a Latin manuscript entitled *Ars de pulsation lambuti*[242]*et*

aliorum similium instrumentorum (902 – 903/1496 – 1497) in which the tablature is said to have been "invented" by a "Moor of the Kingdom of Granada."[243]

Conde de Morphy said that Spanish lute tablature was "probably of Oriental origin," whilst his helper, Gevaert, more positively asserted that the Castilians and Aragonese "elaborated their tablature in imitation of that of the Muslims."[244] Some other strange coincidences crop up in history. In his section on the "Eight Tones," Odo of Cluny (d. 330/942) attached names to the *chordae* which have more than casual interest because three of them are Arabic, viz., "schembs" (*shams*), "caemar" (*qamar*), and "nar" (*nar*).[245] This terminology belongs to the doctrine of the ethos (*tathir*) as related to music, firmly believed in by Islamic peoples up to the present day.[246] The General influence of Islamic culture on Gerbert of Aurillac (d. 394/1003) and Constantine the African (d. 480/1087) is not unworthy of notice. The former studied the mathematical sciences (*matheses*) at Barcelona, and that included music,[247] which had been neglected in France.[248] Indeed, he had been dubbed "Gerbert the Musician."[249]

Constantine was born at Tunis (Carthage), and then held by the Muslim Zairids. He spent 39 years in the East among the Chaldaens, Arabs, Persians, and Egyptians, and studied their sciences, including music. Because of his settling in Sicily and at Monet Cassino in Italy, his writings had considerable influence on European culture.[250] One theorist who used him was Aegidius Zamorensis (seventh/13th century), a *protégé* of the Arabophile Alphonso X el–Sabio,[251] but a recent writer, Gerhard Pietsch, does not perceive any "Arabian influence" in his writings. Aegidius could scarcely have avoided the "Arabian influence" since we read in the *incipit* to his *Ars musica* that he learned "chiefly from Iraqian (Chaldaen) and Egyptian books."[252]

The music practiced by the Arabs and Moors also influenced Western Europe in other directions, notably in the melodic arabesque, organum, and the hocket. The arabesque or free embellishment of the melody (*tahsin*) was the art in which the Moorish *virtuoso* excelled. His "excesses" (*zawa'id*) – as those *melismata* were called – were usually vocalized on such words as *ai* or *laili*, which were introduced even into Spanish songs. (See E. L. Chavarri, *Musica Popular Expanola*,Barcelona, 1927, p. 36.) All sorts of tricks prevailed – the *mabturah* (staccato), *istirahah* (repose), *shadhharah* (short, soft note), and the *nabrah* (a glottal catch like the *coup de glotte*).[253] This last may possibly be the device hinted at by Magister Lambert, which Merchettus of Padua calls a "feigned voice."[254]

On the other hand, it may have been the "embellishment" known to the Arabs and Moors as the *shahajah* (a whining sound), which was accomplished by the singers making a swift *glissando* from a low note to its fourth, fifth, or octave.[255] This latter was in partial accord with the instrumental device known as the *tarkib* illustrated by al–Kindi under the name of *jass*, which meant plucking two lute strings with the thumb and forefinger.[256] Ibn Sina gave the name *tarkib* only to the simultaneously struck fourth or fifth, whilst striking with the octave was called the *tad'if*.[257]

In other words, he recognized the distinction between "organizing" and "magadizing." It was that Arabian and Moorish *tarkib*, which, most likely, prompted the European "organum," although with the Muslims

the *tarkib* was, at that time, simply an “embellishment.” Today, the music of the Turkoman peoples is an “organum simplex” with the “diapente.”

The most significant influence by the Moors on the music of Western Europe was in mensural music. Neither the Greeks nor Romans were particularly interested in other than prose rhythms. With the Arabs, rhythmic modes (*iqa‘at*) in music, six in number, had existed since the first/seventh century, two or more were added later.[258] Up to the third/ninth century the singer and instrumental accompanist observed the same rhythm, but Ibrahim ibn al-Mahdi (d. 224/839) and his Romantic school introduced schemes whereby a singer and the accompanist used different rhythms.[259]

When to that contrariety there was added a further diversity in the prosody (*‘arud*) of the verse, a performance became more than intriguing, and H. G. Farmer has given an illustration of that in an article on *iqa‘at* in the *Urdu Encyclopaedia of Islam* and in *Grove’s Dictionary of Music* (1374/1954).[260] No wonder the Muslims referred to their rhythm as the “heartbeats of Allah,” for its content was infinite and boundless. Islamic music is fundamentally homophonic, and therefore quite different – in that respect – from that of Europe which is harmonic or polyphonic. Yet the Muslim seeks his harmony (*muwafiqah*) in the variegated rhythmical and prosodical structure of song and in the tonal differences of the rhythmic beats (*durub*). At first, such disparate things must have appeared to Christian Europe as a *lucus a non lucendo*.

Yet the time came when the Spanish singer and instrumentalist found themselves imitating the Moorish *mughanni* and *mutrib* in their rhythms. In the very nature of things the beats of the plectrum (*midrib*) on the lute or pandore strings, or the taps on the tambourine or drum, often left intermediate silences (*sukun*), which were the very anti-theses of the sustained notes of the melody. It was because of that circumstance that Europe – after it had adopted mensural music – called the Moorish *iqa‘* by the name of *cantus abscisus*: hence Simon of Tunstede’s chapter called *De truncationibus sive hoketis*.[261]

The latter word, “hocket,” “hoquet,” or “ochetto,” is simply a phonetic reproduction of the Arabic *iqa‘at*, a fact which European scholars only very tardily acknowledge,[262] although H. G. Farmer had claimed that derivation as far back as 1344/1925.[263] Most of them still adhere to the non-sensical – when it is not actually laughable – derivation from the English “hiccough” or “hiccup.”[264] We see the same intrusion of the “h” in “hocket” as in Latin translation of Avicenna’s “Canon” (*Qanun*) where *‘ishq* becomes “hash.” Of course, not all of the Moorish rhythms were borrowed by Europe.

Such an outlandish design as the *makhuri* of al-Kindi or the *khafif al-ramal*, both quintuple, were rejected, although Johannes de Grocheo (c. 700/1300) admitted that the music of the peoples was “not precisely measured,” and that included the Basque “zortzico,” which was also a quintuple rhythm. Curiously enough, the examples which only used two note values of the “longa” and “brevis” in “hockets” were dubbed *musica resecata*, whereas those which used many more note values were classed as *hoquetus vulgaris*, and this may imply that it was more used by the people at large.

The mention of note values and the popular “hocket” raises two vital points which deserve consideration. We are told by one of our leading musicologists, R. Thurston dart, that in Europe “the first steps towards a convention establishing the duration of a note were made in the late sixth/12th century,”265 and there were only two or three duration values to notes in those days. Yet the Arabs recognized five different mensural types of sound at least, although they had no definite “notion” for the latter, save a cumbersome tablature and onomatopoeia,266 up until the seventh/13th century, when an alphabetic (*abjadi*) and numeric (*‘adadi*) notation or tablature was introduced.267

Concerning the *hoquetus vulgaris*, it is worth recalling what Jerome of Morvia seventh/13th century) quotes on the authority of Franco of Cologne (fifth – sixth/11th – 12th centuries) who was the earliest of the mensural theorists. He affirms that the “hocket” was applied to songs which had *already been composed*, whether in Latin or in the Vulgar tongue, which means that the “hocket,” that is to say the Moorish *iaq‘at*, was a new device which was being applied to older material, notably the music of the people. Lastly we should remember that the approach of the Arabs and Moors in their *iqa‘at* and that of Ehristian Europe in their borrowed “hocket” were different; the former, because they viewed music horizontally, using rhythmic contrariety between the vocal line (prosodic) and the accompaniment (rhythmic), the latter, because they visualized music vertically and introduced those mensural features into three or four melodic parts.

European notation may also have received novel outlook from Arabian or Mozarabian sources, as H. G. Farmer pointed out in 1344/1925.268 One of the Latin mensural theorists, known as “Anonymous IV” of Coussemaker, mentions in the work entitled *De mensuris et discantu* (c. 674/1276) two technical terms, “elmuarifa” and “elmuahym,” as the names of notation symbols.269 The words are Arabic, although the first of them appears in the fifth/11th century *Glossarium Latin–Arabicum*, under the term *al–ma‘rufah* which equates with “nots.”270 It may be identified with the form *al–ma‘rifah* (cognition).271 It is explained in “Anonymous IV” as having “a stroke on the left side in descending, just as the English depict it.”272

As for “elmauhym,” that word looks suspiciously like *al–mubhim* (shutting) or rather *al–mubham* (locked, closed).273 In the Latin translation of the Arabic of Euclid’s *Elements* the word “elmauhym” stood for the “rhomb.” We are told that some music scribes penned that note with a square head, whilst others made it rectangular. In one form it was a “plica” with an ascending and/or descending stroke (*tractus*). When it was written as an obliquely protracted line it was one of the “currentes” running notes), in which character it could be a “double, triple, or a quadruple ‘elmuahym’” – and could even be extended to sevenfold.274

The problem raised by this Arabic technical nomenclature is not easy to solve. One naturally asks, “Why were Arabic words used in a Latin work if there were technical equivalents in that language?” The author of “Anonymous IV” was certainly well acquainted with Pamplona and other Spanish works on the subject, and that Arabic terminology may have come through a Mozarabic scribe who would, in southern Spain, be acquainted with that language. Could we not assume that “elmuarifa” and “elmuahym”

represented some new mensural devices in notation? Incidentally, “Anonymous IV” features both Leonin of Paris (sixth/12th century) and Perotin, his successor (seventh/13th century).

Gustave Freese sees in the “Currentes” of Leonin a synonymity with the “elmauhym” and “elmuarifa,”275 i.e. that it “may owe something to Arabian sources, by way of the troubadour influence,”276 whilst in Perotin, “the quick–moving upper parts would seem to suggest some troubadour and folk influence.”277 One of the last tributes to the music of Islamic peoples by A. H. Fox Strangways, the author of *The Music of Hindustan*, was to say this, “The Arabs, who taught to Europe their mathematics and medicine, have influenced our music in ways that we are only now finding out.”278

Yet whatever the “pros” and “cons” in the subject may be, both East and West agree fully in their praise of music, and Walter do Odington (eighth/14th century) quotes Avicenna (ibn Sina) side by side with St. Gregory, St. Bernard, and the Psalmist, saying, “Inter omnia exercitia sanitatis cantare melius est.”279

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Chapter 59: Minor Arts

A

Anyone embarking on the study of Muslim arts would, during the course of his investigation and research, have to answer three fundamental questions satisfactorily.

(1) What is the reason for the surprising unity of style which we observe in works of art throughout the Muslim countries during a certain period?

(2) Why is it that a period of almost hectic artistic activity is followed, sometimes almost immediately, by qualitative decline and technical decadence?

(3) What is the reason for the remarkable success achieved by the Muslims in the domain of minor arts?

The answers to the first two questions rest on an appreciation of the relationship which existed between the artists of the Muslim countries and the rulers thereof.

The development of Muslim arts–major or minor–is related inalienably to the rise and fall of powerful dynasties of rulers. Every dynasty invited to its Court craftsmen and artists from all over the land under its sway. If an invitation was not enough, force was sometimes employed to compel their appearance. Under the Umayyads, the 'Abbasids, and the Fatimids, therefore, artists flocked to Damascus, Baghdad, and Cairo which alternately became centers of artistic activity, learning, and letters. Artistic traditions were developed and techniques perfected under the patronage of the rulers and the aristocrats. The middle class, obviously, had no say in the matter, and the artists kept themselves aloof from the masses.

As a particular dynasty fell from power and another emerged as its successor all the artists flocked to the new center of patronage, and overnight, as it were, the new dynasty "at one stroke inherited an artistic tradition that had been matured elsewhere." The transport of works of art themselves over great distances also helped to spread style and technique.

This answers more or less the first question. The second question is, perhaps, easier to answer. Since the development of arts was linked primarily with the fortunes of ruling dynasties, as soon as political conditions were disturbed at their center of activity, the artists deserted it and proceeded to other centers to put their fortunes to the stake. If a new dynasty arose which was capable of patronizing the artists and

maintaining the artistic tradition, the artists' activity continued unabated, but if there was a period of chaos or political disturbance spread over a considerably wide area, artistic traditions had a tendency to evaporate into thin air. The artists deprived of royal patronage could not produce great works of art and, thus, in a few years the tradition built up by conditions of stability and prosperity would lose force, and products of art suffer qualitatively. It may be observed that just as the decline of artistic traditions was amazingly swift, the stabilizing of artistic activity was also correspondingly quick. Now for the third question.

The line of demarcation between arts and crafts is admittedly fine. It necessarily follows that it is finer still between major and minor arts.

In the case of Muslim minor arts there is another factor which has to be taken into account, if we are to assess correctly the value and worth of the contribution made by the Muslims in this domain.

On account of certain restrictions imposed upon Fine Arts even where State patronage was available, there existed a lurking suspicion in the mind of the artist that he was working contrary to the precepts of religion. Since religion has always been a living force and a vital factor governing human activity, especially in the East, artists in Muslim countries were forced to adapt themselves to the conditions created by theological restrictions on Fine Arts and to devote themselves to the minor arts, such as calligraphy, carpet-making, wood-carving, etc. This is why we find that the Muslim peoples have achieved such remarkable success in the minor arts. The inspiration which would have molded works of Fine Arts was diverted into other channels. The Muslims, therefore, developed crafts indicative of such exquisite skill, superb craftsmanship, and artistic sensibility as is not to be found among the artists of any other nation, race, or country.

As a matter of fact, arabesque–a minor art of great importance–derives its name from those who originated and practiced it with great skill–the Arabs. Before we proceed to discuss in detail the phases of the various minor arts it would perhaps be expedient to take note of another remarkable phenomenon related to artistic activity in Muslim countries.

It is generally believed that the fall of the 'Abbasids and the destruction of the Caliphate as a symbol of authority and a pivot of political sanction led almost immediately to qualitative decadence in the realm of major and minor arts. This is not the whole truth. As a matter of fact, the fall of the 'Abbasids did lead–as was usual in Muslim countries with the fall of a powerful dynasty–to qualitative decadence in the realm of art for some time immediately after the destruction of the Caliphate.

However, the opening up of the trade routes by the Mongols, the diffusion of cultural and artistic traditions generally, and the establishment of powerful dynasties which inherited, as it were, the cultural and the artistic legacy of the 'Abbasid Caliphate, resulted after a century or so in the creation of conditions which were favorable to the birth of new ideas in the domain of art and were also responsible for the continuity of new artistic traditions which had come into being due to the diffusion of cultures and

the admixture of civilizations as a direct result of the Mongol invasion.

This remarkable phenomenon of the development of artistic traditions can be observed to be occurring almost simultaneously under the Mughul rulers of India (933–1119/1526–1707), under the Safawids in Persia (908–1052/1502–1642), and the Ottoman Kings in Turkey during their most glorious period (768–1058/1360–1648).

B

Of the leading minor arts we shall consider one by one the following: (1) calligraphy and illumination, (2) book–binding, (3) pottery, (4) textiles and rugs, (5) wood–carving, ivory and bone–carving, and (6) metal–work, glass, and crystal.

1. Calligraphy and Illumination

The art of calligraphy or artistic writing can be divided into two principal types: (a) the Kufic, deriving its name from Kiifah where it was probably first used and (b) the naskh.

The Muslims have shown themselves to be worthy practitioners of both types. The earliest copy of the Qur'an which has come down to us is in Kufic characters. This style of calligraphy with angular letters remained popular for many centuries amongst the Islamic peoples.

After the fifth/eleventh century the Kufic script gave place everywhere almost invariably to naskh with rounded letters in sharp contrast to the angularities of the Kufic script.

The Muslim genius in Spain, having come in contact with Western influence, gave birth to another distinctive school of calligraphy known as Maghribi (western). This school is also known as Cordovan.

In Iran, after the Islamic conquest, the indigenous artists cultivated the scripts adopted by the Arabs and also the methods of illuminations which were then popular in other Muslim countries. The Iranian calligraphers, under the Great Saljugs, however, generally emphasized in their calligraphy the vertical as distinguished from the horizontal. The type of illumination and calligraphy found under the Saljugs is varied, rich, and extremely beautiful since the Iranian genius could fall back upon the tradition of Mani. Maui (third century A.D.) himself was reputed as an excellent painter, but his disciples were also well known for beautiful illumination and charming calligraphy. Specimens of the works of Mani's followers have been unearthed in Central Asia in the Turfan basin and it has become abundantly clear that the Iranian calligraphists and artists gave free reign to their indigenous genius while adapting the Arabic script and method of calligraphy.

The most beautifully illuminated copy of the Qur'an of this period was prepared by Abu al–Qasim in the fifth/eleventh century. It is preserved in the British Museum.

It was perhaps during the sixth/thirteenth century that a new school of writing was developed in Iran which was to be known as ta'liq: the characters in this type of writing tend to slope downward from right to left. Ta'liq flourished but naskh also remained in use especially in religious texts.

It is the irony of fate that the descendants of Hulagu, who was responsible for massacring millions of Muslims and killing the last 'Abbasid Caliph, became the patrons of calligraphy when they embraced Islam.

These convert kings known as 11-Khans of Persia had many fine works executed under their patronage. Uljaitu Khuda Bandah Muhammad was one of the most celebrated patrons of this art.

It was perhaps during the regime of 11-Khans (654-750/1256-1349) that illuminated pages of books were for the first time decorated with abstract ornamental designs. This may have been due to Chinese influence which permeated painting, and since calligraphy was considered to be a branch of painting, it was bound to be affected thereby. The illuminated manuscripts of this period show geometrical compositions of great beauty and charm, the favorite colors being gold and blue. It may be remembered that the use of gold-dust was a peculiar feature of the book-illuminations produced by Mani's followers. There is no doubt that the Iranian artists never forgot their national heritage and used the background colors-mainly gold and blue-in sharp contrast to other colors in the foreground with great dexterity and sensibility.

It was during the rule of Timilrids in Iran that calligraphy really came into its own. The princes of the House of Timur were polished diplomats, skillful administrators, and celebrated devotees of Fine Arts. Their possessions were vast and the talent which mustered to their courts was correspondingly impressive. It was during their regime that the art of calligraphy underwent a revolutionary change and the Nasta'liq was invented which is a highly developed type of writing combining the elegance, vigor, and charm of both Naskh and Ta'liq.

It is generally stated that Mir'Ali of Tabriz was the inventor of this type of writing, but most probably his calligraphy was the culmination of the fusion of the two types, namely, Naskh and Ta'liq-a process which must have been going on for a very long time. One of the princes of the House of Timor, namely, Sultan Husain, is justly celebrated for being one of the greatest .patrons of arts and learning. Sultan 'Ali Meshedi, the famous calligraphist, was a prot6ge of his. Other celebrated calligraphers of the period were Ja'far of Tabriz, 'Abd al-Karim, and Sultan Ibrahim (son of 4h rah Rukh). The story goes that Sultan Ibrahirn was capable of writing in six different styles. A copy of the Qur'an written by him in 828(1424 is preserved in the shrine of Imam Rida' (Meshed, Iran).

In the domain of illumination also certain changes occurred after the Mongol invasion. Arabesque was interlaced with figures of grotesque Chinese dragons and fantastic imaginary plants. The use of gold-a remnant of the Sassanian tradition-however, remained a constant feature.

Calligraphy and illumination as developed under the patronage of the Timarids continued to flourish also

under the Safawids, who were contemporaries of the Great Mughuls and who gave to India the gift of miniature painting. One of the most famous calligraphers of the Safawid period was Mir 'Ali of Herat who prepared a manuscript of one of Jami's famous Mathnawis.

The art of the book–calligraphy and illumination–found its most worthy and celebrated exponent in Mir 'Imad Katib whose name for all practical purposes is even today synonymous with elegance, charm, and beauty of writing. He settled in Ispahan in 1008/1599 and copied for Shah 'Abbas many manuscripts revealing superb skill and unique craftsmanship. His rival 'Ali Rida' 'Abbasi–not to be confused with a painter of the same name, well known for his devotion to the Chinese technique of painting–also executed many works of beauty and elegance.

Illumination painted in gold also came into its own under the Safawids and reached the culminating point of the development of the Sassanian tradition. Mahmud, a celebrated painter and calligraphist of Bukhara, appended to his signature the cognomen Mudhahhib. Sikandar Munshi, the celebrated historian of the Safawid princes, opines that “Hasan Baghdadi was unmatchable, unsurpassed, and unique in his time in the art of gilding. In short, he brought the art of gilding almost to a miracle ... and the gilding of Bari cannot bear comparison with his minute and fine work.”

Several other techniques practiced by Safawid artists may here be named: stenciling in which the design emerges in the form of light or dark silhouette, de coupe work in which the design is cut out and then pasted on colored ground, generally blue.

Turkish calligraphists also achieved distinction but, as compared with the Iranians, their contribution does not appear to be very significant.

2. Book–binding

It is obvious that book–binder had played a very important role in the preservation of valuable manuscripts before the press made it possible to produce mass duplicates of valuable works. It is quite possible that the bookseller was also the book–binder because it was one of his duties to ensure that valuable manuscripts are not destroyed or damaged by the passage of time. This view is strengthened by the fact that the word warraq means both a book–binder and a bookseller.

The earliest known book–covers of the Muslim period were made by Egyptian artists and we may safely assert that they may be dated from the second/eighth to the fifth/eleventh century.

Book–binding also reached its zenith under the Timurids. The artists of the Herat Academy executed leather work of great beauty and distinction, leather being the ideal material for book–binding.

The exterior of the cover generally shows stamped decoration with Iranian landscape, Chinese motifs, and arabesque interlacing.

Under the Safawids the book-covers were more decorative, and gold was used more abundantly. Gilded arabesque was interlaced with very fine and beautifully executed floral scrolls and Chinese cloud bands. Birds and animals were also represented, but, generally speaking, it was arabesque interlacing which was more emphasized.

Under the Safawids painted and lacquered book-binding also became the rage of the day. The process was as follows. The covers which were to be painted were given a coat of very fine plaster or gesso and then a thin layer of lacquer. This constituted the background for watercolor painting. Again, the watercolor was given several layers of lacquer so that climatic changes may not prove damaging to a fine work of art.

Ustad Muhammad was one of the most notable book-binders who painted lacquer covers. The Cartier Collection in Paris and the Royal Asiatic Society, London, possess some very beautiful examples of lacquered book-binding.

The Turkish artists, as usual, followed in the footsteps of their Persian brethren in book-binding, but, though their work was beautiful, it bore no comparison with the original and polished products of Iranian craftsmen.

In concluding this short note on calligraphy and book-binding, it is necessary to point out that book-binding and illumination in the West is indebted to the East. The Italian painters, book-binders, and artists, especially in Venice in the late ninth/fifteenth and tenth/sixteenth centuries, imitated Eastern technique especially that of the Iranian craftsmen, and through them many Oriental motifs and decorative features were introduced in the West, the book-binding of which today is the envy of the East.

3. Pottery

There seems to be no doubt that Mesopotamia or the “Land lying between the two rivers” was the most important center of the potter's art even in the most ancient times. In the ancient kingdoms of Assyria and Babylon the potters were at their best, especially when using what is commonly termed as the “naturalistic style.” The Parthians (249 B. C. to 226 A. D.) whose language is known as Pahlawi, the forerunner of modern Persian, and the Sassanians (226-641 A. D.) who were justly celebrated for the grandeur of their architecture and the splendor of their monuments and inscriptions, liked their artists to express themselves in abstract patterns. Mr. Arthur Lane in his monograph, Early Islamic Pottery, would have it that the Assyrian and Babylonian traditions almost died out after the Sassanian times and that Islamic pottery developed in accordance with the technique current in the Mediterranean area and not with that in the Asiatic hinterland. It is difficult to agree completely with this assessment of the Near Eastern influences as they contributed to the development of pottery in Muslim countries because when pottery came into its own in the third/ninth century it was in Mesopotamia that it found its most skillful exponents and designers.

Pottery fragments found in Samarra show signs of great skill and craftsmanship. Not only the variety of the different specimens of the potter's art found at Samarra is interesting and significant but it so appears that there were certain secrets pertaining to the manufacture of luster pottery which were known only to the Mesopotamian potters. These closely guarded secrets, however, became common property when the Mesopotamian potters migrated to the Courts of the Fatimid Sultans. By a curious anomaly of fate the descendants of these immigrant artists again came to Persia after the collapse of the Fatimids and brought to this country a skill which had been vastly improved in the congenial atmosphere of Egypt under the Fatimids from 359–567969–1171.

The conquest of the Near East by the Arabs was responsible for the evolution of a new technique of the potter's art. In the beginning the Muslim potters followed in the footsteps of the local artists but, in due course of time, they became the originators of new and far more elegant and beautiful varieties of pottery.

Under the 'Abbasids, Iranian potters from the second/eighth to the fourth/ tenth century achieved astounding success in their art and their products revealed such richness of pattern, warmth of color, and beauty of design as were never seen earlier. Usually designs were painted under a transparent glaze or over an opaque one. In the former case, the painting was usually over white or dark slips. Nishapor was a great center of this branch of art and excavations made reveal that even before the advent of the Saljfigs, the potter's art had achieved maturity if not that consummate elegance which was to characterize the products of the Saljaq period.

The greatest contribution of the Muslim potters is the luster technique. It would appear that the Muslim potters were infatuated with the patterns created by light–"light mysteriously refracted by their luster pigment; light playing over a carved or subtly modelled surface; light gleaming through the glazed windows pierced in the walls of a vessel or through the translucent material itself," as Arthur Lane would have it.1

Almost all historians suggest that it was the Chinese porcelain or pottery which inspired the Muslim artists, but it may be pointed out that, whereas the art of China is a little stilted and stiff, the pottery of the Muslims is at once "easy, harmonious and well bred."2

After Nishapour it was Kashan which became the center of the activity of the potters of the Saljiiq period. It was here that the potters gradually learnt the art of manufacturing wall–tiles painted in luster. The origin of luster painting is uncertain, but it would appear that it was first used in Egypt in decorating glass. Even if we concede that the Iranian artists of Kashan are indebted to Egyptian artists it does not detract from the originality and brilliance of their technique in manufacturing glazed tiles. If we compare the specimens of Egyptian pottery found in Fustat (it was at the same time a city of some importance under the Fatimid rulers) with Iranian pottery and glazed tiles, we arrive at the conclusion that the Iranian artists showed grater skill in execution and mature sense of color.

The glazed tiles of Persia, especially of Kashan, became so celebrated that the word Kashi is now a synonym for a glazed tile. The most beautiful works were executed by the members of one single family (602–735/1205–1334). Apart from tiles the Kashan luster-ware is justifiably praised for technical perfection. The decoration is typically Persian–flowers and birds on the wings and interlaced arabesque. After the Mongol invasion, Mongol hats, Chinese dragons and lotus flowers also appear as a natural consequence of the fusion of the traditions of Chinese and Iranian arts. The three mihrabs in the sanctuary of Imam Rida' at Meshed are perhaps the most elegant examples of the Iranian artists' skill so far as glazed tiles are concerned. These were made by Muhammad abi Tahir.

During the Mongol period lustered tiles were commonly used for the decoration of public buildings, mosques, tombs, and the houses of the great and the rich. Some of these tiles are cross-shaped, some rectangular, and some in the form of stars. It was during this period that another technique was evolved, viz., and the faience mosaic, which became very popular.

The technique of the Mongol era was followed by the artists of the Timurid period, but it may be observed that almost all types of pottery had suffered qualitatively. It may be due to the fact that the Chinese influence being predominant during this period, the artists, instead of reviving the indigenous traditions, tried to imitate specimens of art imported into Iran.

During the Safawid period Iranian artists continued to imitate the Chinese ware and the imitation was sometimes so skillful that the copy was mistaken for the original. Even the decorations consisted of Chinese landscape with typical birds, animals, and foliage, especially legendary dragons and serpents.

In the time of Shah 'Abbas the Great the art of lustre-painting, however, was revived by the potters of Isfahan. Typically Iranian decoration came into vogue. Iranian landscape with birds, animals, and foliage came into its own. The products of these Isfahani potters show great originality and can be clearly distinguished from the imitations of Chinese pottery, especially in porcelain.

Turkish and Egyptian potters also continued to execute beautiful works of art, but there is no doubt that supremacy rested with the Iranian artists.

Gradually, industrialized Europe excelled the East even in the field of pottery, and the Persian market was flooded with white earthenware from Staffordshire.

4. Textiles and Rugs

(a) Textiles under the `Abbasids, Tulunids, and the Fatimids of Egypt (second/ eighth to sixth/twelfth century).–When the Arabs conquered Egypt in 21/ 641, the weaver's art began to undergo a change of great artistic significance. In the early stages, the Copts, who were really very skillful technicians and weavers, were pressed into the service of the Arab Caliphs and noblemen. They taught and practiced the weaver's art in royal factories, known technically as Tiraz factories. It is necessary to point out at this juncture that the term “Tiraz” was used for (i) bands containing woven or embroidered

inscriptions, (ii) embroidered garments and clothes, and (iii) institutions where such garments were manufactured. Unless this three-fold significance of the word “Tiraz” is kept in view, one is liable to get confused.

The importance of the Tiraz factories may be gauged from the fact that many of these were situated in the very homes of the Caliphs-palaces and State mansions.

The Tiraz factories, having been established in Egypt and working under the skillful guidance of the Copts, produced linens and silks of very fine quality. The city Tinnis near Port Said bad 5,000 looms and was justly celebrated for producing fabrics of great excellence, such as Kasab, Bukalimun: the former was used generally for turbans and the latter with amazingly changing colors for saddle cloth and for covering the litters for the Caliphs. Every year the 'Abbasid Caliphs sent a covering for the Ka'bah at Mecca known technically as Aiswah manufactured by the craftsmen of the Royal factories established in Tuna. Another city famous for its silks was Dabiqi; the term “Dabiqi” is mentioned very often in Persian lyrics and Arabic odes. Fustat or old Cairo was also a celebrated center of the weaver's art.

During the regime of the Fatimids, the Egyptian craftsmen surpassed their Coptic masters. The linens and silks of the Fatimid period became so elegant and fine that they were exported to all parts of the civilized world. Generally speaking, the Fatimid artists followed the artists of the `Abbasid regime in the sense that they used either geometrical patterns or figures of animals for decorative purposes, although the Kilfic writing was also observed flanking the decorated pattern. When naskh replaced the Kilfic script, the linen and silk fabrics were decorated with arabesque motifs and the cursive writing of the naskh.

The linen textiles on which decorations and inscriptions were painted or stamped were even more skillfully manufactured. These inscriptions were occasionally in liquid gold, again reminding us that the Sassanian traditions were very strong even under the Fatimids. The technique of stamping and printing decorations on fabrics was developed to such an extent by the Fatimid artists that it spread to Europe, and the Germans showed great skill in imitating the artistic patterns and motifs of the Egyptian Muslims.

(**b**) **Textiles of the Ayyubid and Mamluk Dynasties**.-From the sixth/twelfth to the eighth/fourteenth century, the weaver's art continued to flourish but signs of decline were occasionally noticed. As a matter of fact, the decorations of this period are simple as compared with the superbly executed Fatimid, embroideries in polychrome silk or gold thread.

Stamping and printing were also practiced in accordance with the traditions inherited by the artists. There was a departure in the manufacture of silk which deserves mention. During this period the silk fabric was usually woven with a shuttle on a draw-loom in sharp contradistinction to garments and fabrics with tapestry-woven decorations wherein the weft threads of the designs were introduced with a bobbin or a needle. With the advent of the Mongols and even earlier, the Chinese technique began to influence the weaver's art. It would appear that the Mamluk Sultans of Egypt especially favored the Chinese style of decoration.

(**c**) **Iranian Textiles**–When Tiraz factories were established throughout the territorial possessions of the Caliphs, Iran was no exception. As a matter of fact, the Iranian craftsmen who had inherited the traditional skill of the Sassanian craftsmen very soon adapted themselves to the new conditions and began to produce incomparable works of art. During the earlier period Merv and Nishapour housed famous Tiraz factories.

The Iranian artists of these cities produced silk textiles which appear to have been influenced by the fusion of many artistic traditions–the Sassanian, the Coptic, and the Egyptian. The use of the gold thread is certainly reminiscent of the Sassanian traditions, while the decorative patterns bespeak of Coptic influences. History is curiously silent about the place occupied by Samarqand so far as textiles are concerned, but in literary works we find many allusions to the beautiful fabrics, silks and linens, woven in this great city which witnessed the emergence of the Persian renaissance and which under the princes of the House of Saman became a great center of intellectual activity, learning, and cultural movements.

Under the Great Saljuqs, the Iranian artists proceeded from strength to strength. There was a revival of almost all crafts and minor arts, and Rayy during this period became the most celebrated weaving center. The Sassanian tradition lost its hold, and, slowly but steadily, arabesque motifs of Islamic origin with finely executed scrolls came into their own.

It would appear that Baghdad also was a famous center of the weaver's art during this period, since Marco Polo (seventh/thirteenth century) praises the silks, linens, and gold brocades of Baghdad and Mosul. Allusions in works of literature would tend to show that weavers in this period had spread all over the territorial possessions of the Saljuqs: it has been proved beyond any shadow of doubt that many fine brocades, silk fabrics, and linens preserved in European museums were manufactured in Asia Minor, especially at Quniyah.

It is an admitted fact that the Mongol invaders of Persia patronized the craftsmen and the artisans and massacred the learned and the erudite, considering the latter as useless appendages of civilized life. Amazingly, however, very few Iranian textiles can be assigned with any amount of certainty to the Mongol or Timfirid period. M. S. Dimand has pointed out that many brocades attributed to Iran by Falke are most likely of Spanish origin. The matter, however, is not free from doubt. All that we can assert safely is that the weavers continued to flourish under the Mongols and Timfirids; unfortunately, however, very few genuine fabrics manufactured by them have been preserved.

As with other branches of art, Iranian weaving blossomed forth into its full splendor under the Safawids who had become infatuated with craftsmanship of all types except that of words since poetry excluding the elegy was looked at askance by them. Safawid silks were primarily of three types: (i) plain silks, (ii) silk brocades, and (iii) silk velvets. All the three types were most elegant and were used commonly for the garments of the rich, as hangings and curtains of palaces, and as gifts from the Safawid princes to those who deserved them or who had the good fortune of being present when the kings and princes were in their high spirits during festivities or celebrations.

The decoration of these fabrics is almost typically Iranian–animals moving about gracefully, birds on the wings or perched on branches and foliage moving or still as in breathless suspense. The Iranian artists painted even scenes taken from the famous Persian romances or the epic of epics, the Shahnameh. Nizami seems to have been one of the most favorite authors; incidents from the stories that he weaves have been interwoven by the weavers into silks and fabrics manufactured for their royal patrons and generous nobles. Linens, brocades, and velvets of this period are to be found in many museums all over the world and appear amazingly fresh, spick and span, glowing with life, with warm and soft colors.

Under Shah `Abbas the Great who was a generous patron of all Fine Arts, artists manufactured textiles of great beauty in Yazd and Kashan. Some of these fabrics have come down to us and we know also the names of some artists, for example, Ghiyath and his son. All critics and historians of art agree–and it is very refreshing to observe this agreement–that the velvets and the brocades manufactured under the Safawids, especially during the reign of Shah `Abbas, constituted the most glorious fabrics ever produced in any part of the world.

Under the Safawids the Iranian artists also developed the art of embroidering and printing cottons. Many specimens of block–printed cotton hangings known technically as galamkar have come down to us and it appears that they were made most probably in Isfahan, Hamadan, and Yazd.

(**d**) **Turkish Textiles and Embroideries**.–The fabrics of the Ottoman period consisted mainly of finely made brocades and velvets, but it may be observed that the decoration of these fabrics is far less skillful and varied than of those manufactured by the Iranian or Egyptian artists. The Turkish artists almost invariably confined themselves to floral and geometrical patterns. However, Turkish textiles are important in the sense that the artists of Venice imitated the Turkish craftsmen and, slowly but steadily, this art spread to Europe via Italy.

Turkish artists were very fond of embroidering handkerchiefs and towels, and it is obvious that they were used merely for decoration or ceremonial purposes. Most of them belong to the twelfth/eighteenth and thirteenth/ nineteenth centuries.

(**e**) **Indian Textiles**.–The Indian artists of antiquity were justly celebrated for manufacturing cotton muslin so fine as to be considered miraculous.

When the weaver's art came into its own under the Moghuls, both Iranian and Hindu motifs became clearly discernible in fabrics manufactured in India. During the period of Shah Jahan very fine velvet was produced. The decoration consisted primarily of floral scrolls.

Silk brocades were the specialty of the Indian artists under the Moghuls. We know on undisputable authority of Abu al–Fall and others that Lahore, Aurangabad, Benares, and Ahmedabad were great weaving centers. Silk brocades were very skillfully designed with vivid colors and abundant use of gold. The elegant saris and head–dresses and sashes (shash) manufactured during the Moghul period have been justifiably claimed to be specimens of the finest weaving in the world: some of them are to this day

preserved in museums.

Europe knows Indian textiles most probably through Kashmir shawls, some of them embroidered and others woven.

The art of block-printing and resist-dyeing reached its zenith under the Moghuls. Specimens of printed cotton known to Europe as palampores and pintados were beautifully designed and executed with great skill and ingenuity.

(f) Rugs-Although fragments of rugs have been excavated at Fustat in Egypt which would show that rug-making was very well known to the Egyptian artists, yet there is no doubt that it was only with the advent of the Saljugs that fine rugs were manufactured for the first time. Marco Polo, who passed through Asia Minor in 669/1270, informs us that the most elegant rugs in the world were made by Greek and Armenian artists under royal patronage. It is surprising, indeed, that the Saljugs Turks, barbarian by origin, were responsible for reviving many major and minor arts throughout their territorial possessions. The Saljug rugs have simple decorative patterns-interlacing arabesque, geometrical figures, and medallions.

As is the case with textiles, very few rugs of the Timurid and Mongol periods have come down to us, but if we closely observe the rugs as represented in miniature paintings and as described by poets, we have to concede that the art of rug-making had achieved considerable maturity under the Timirids. As a matter of fact, spring with all its beauty, colors, and abundance of flowers and foliage is described by the poets as inferior to the decorated rugs found in royal palaces.

The finest Iranian rugs were manufactured admittedly under the Safawids. Tabriz was the center of Iranian arts and crafts and it was here that the weavers of Kashan, Hamadan and Herat would learn the craft of rug making and go back to their homes to spread this artistic activity throughout the possessions of the Safawids.

The most celebrated types of rugs manufactured under the Safawids may be grouped as follows: (i) medallion and animal rugs with arabesque and floral designs, (ii) woolen rugs with animal figures drawn, with the greatest skill, realistically and not in stilted conventional manner, (iii) silk rugs, (iv) rugs with floral designs, and (v) vase rugs.

Under the Moghuls rug-making or carpet-making in India became very favorite with kings and princes and Abu al-Fadl, eulogizing Akbar, writes that “all kinds of carpet weavers have settled here and drive a flourishing trade. These are found in every town, especially in Agra, Fatehpur, and Lahore.”

Some of the Moghul rugs have been preserved, particularly those in the collection of the Maharajah of Jaipur. Dimand is of opinion that “in technical perfection the Indian weavers of the time of Shah Jehan often surpassed their Iranian Masters.”

Turkish rugs are mainly of two kinds, (a) manufactured by royal factories with all facilities attendant thereupon, (b) made by ordinary villagers and peasants who occasionally grouped themselves with industrial ends in view. The design of the Turkish rug is mainly geometrical and this characteristic can be traced even in the peasants' productions right from the tenth/sixteenth to the thirteenth/nineteenth century.

Some time back a series of beautifully designed rugs of different sizes with floral patterns was wrongly attributed to the skill of Damascus craftsmen, but recent research has established beyond any shadow of doubt that these rugs are the products of Turkish looms; many technical specimens of these are to be found in the Metropolitan Museum. Rugs bearing floral patterns and designs may safely be assigned to Court manufactories, especially those established by Sulaiman (906–974/1500–1566) in Constantinople or Brusa (Asia Minor). Obviously, the rugs made by the peasants are comparatively coarse and their patterns and designs clearly show that the sensibility of the designers was not fully developed.

There is no doubt that these Turkish rugs, whether manufactured by artists attached to the Court or by peasants, are, on the whole, inferior to the Persian rugs of the Safawid period which were brilliantly conceived and superbly executed as works of art.

5. Wood-carving, and Ivory and Bone-carving

(**a**) **Wood-carving**.–There is no doubt that the Muslim artists during the early centuries of Islam developed the art of wood-carving under Hellenistic and Sassanian influence.

The most celebrated specimen of wood-carving produced during the early 'Abbasid regime is the prayer pulpit in the mosque of Qairawan situated in North Africa which, it would appear, was brought from Baghdad during the third/ninth century along with some lustered tiles by some notables of the Aghlabid dynasty. This pulpit contains panels decorated with geometrical patterns and designs. It is regarded as a masterpiece of wood-carving of the Baghdad School and was most probably executed under the patronage of Harun, the `Abbasid Caliph. The abstract art of modern times would benefit to a great extent if its exponents study carefully the fine patterns and designs executed during the early 'Abbasid period.

Gradually, the `Abbasid artists developed a style of their own and freed themselves from the fetters imposed upon them by the Sassanian and Hellenistic conventions. The 'Abbasid style of decoration was imitated by the Egyptian artists under the Tulunids (324–359/935–969) and it became very popular in all parts of Egypt, especially in Cairo.

The craftsmen of Egypt, however, gradually improved upon the `Abbasid technique and evolved out a style of their own in the fourth/tenth century. The motifs “were more deeply undercut and there was a tendency towards roundness.”

It is extremely difficult to estimate the part played by the ancient crafts and arts of Egypt in the

development of wood-carving by the Egyptian artists. After all Egypt had inherited artistic traditions of great significance and value and it would perhaps be safe to assert that the artists must have benefited from the heritage of ancient Egypt.

With the passage of time geometrical patterns gave way to other types of decoration, namely, the carving of animal figures and arabesque scrolls; the devotion to detail in these works is amazing and is indicative both of the skill of the artist and of his painstaking labor.

Some of the panels of wood made during the Fatimid regime are magnificently carved and depict typically Egyptian scenes; the figures of birds or animals are emphasized and this is but natural because the ancient Egyptians worshipped certain birds and animals as gods and goddesses.

During the Ayyubid period the Fatimid tradition continued to influence wood-carving with the difference that arabesque scrolls became more delicate, fine, and complicated, and nasj h replaced Kiific inscriptions. With the passage of time the devotion to detail which has already been noticed was emphasized still further. It was in this period that various valuable types of wood including ebony came into use.

The art of carving in Egypt declined in the ninth/fifteenth century.

The wood-carver's art in Iran showed signs of considerable maturity even during the regime of Mahmnd of Ghaznah; a door from his tomb has been preserved, ironically enough, in the Museum at Agra. This door reveals that the Iranian artists evolved a style of their own and arranged the deep undercutting of the ornament in several planes. This characteristic feature is undoubtedly of Iranian origin.

Wood-carvings of the Saljug period have, unfortunately, not come down to us in sufficient quantity to enable us to evaluate their artistic worth but it may be safely asserted that the artists of Asia Minor during the sixth/twelfth and seventh/thirteenth centuries produced works of very high quality the decoration of which compared favorably with that of the Egyptian and the Syrian artists.

Wood-carvings pertaining to the early Mongol period are also very rare but there is no doubt that in the second half of the eighth/fourteenth century the Iranian artists, especially in Western Turkestan, achieved a technical perfection which leaves nothing to be desired.

The art flourished for some time under the Safawids but in the eleventh/ seventeenth and the twelfth/eighteenth centuries signs of decline were noticeable: during this period the panels were painted and lacquered, not carved.

(**b**) **Ivory and Bone-carving**.-Ivory and bone-carving of the early Islamic period has been found at various places in Egypt, especially in old Cairo, and shows that Coptic traditions influenced the work of the earlier artists to a large extent. Artists flourished under the Fatimid, Ayyubid, and Mamliik dynasties. Decoration during this period was very elaborate and finely executed.

Sicilian ivory-work has also been preserved in certain museums and it reveals a fusion of the Eastern and Western styles. The decorative motifs are mainly arabesque, human figures, animals, birds on the wings and perched on the branches of trees with dark somber and sober outlines and occasional flashes of vivid red, bright violet, blue, and dazzling gold.

6. Metal-work, Glass and Crystal

(**a**) **Metal-work**.-The Sassanian tradition in Iran was so strong that the earlier products of Muslims, particularly silver and gold vessels, have been attributed mistakenly to the artists of the Sassanian era. However, it is easy enough to distinguish earlier Islamic metal-work from the Sassanian because vessels which are decorated with Kiiflic inscriptions, birds, interlaced arabesque, and medallions are definitely of Islamic origin. It has been conjectured and there seems to be merit in this conjecture-that the earliest products of the art of metal-work pertain to the period of the Samanids who were res-ponsible for heralding the Persian renaissance in letters, learning, and Fine Arts.

Early Islamic vessels consist mostly of trays and ewers fashioned in the shape of animals and birds.

With the advent of the Saljuq Turks in 429/1037 Muslim metal-work came into its own. The bronze, gold, and silver utensils which have been preserved in different museums reveal patterns and decorations which are extremely original and seem to have been developed by the artists of the Saljuq period. Enamel-work was also known, although it was not of very high quality. Gold jewelry of a considerably high standard consisting mainly of ear-rings and pendants, fashioned again in the shape of animals and birds, has come down to us. During this period both Iran and Mesopotamia became centers of the art of casting bronze objects with relief decorations-mirrors, plaques, and animal figures. Two mirrors which have come down to us (preserved in the Harari Collection in Cairo) reveal that the artists devoted great care in the execution of their work and paid painstaking attention to details.

Metal-work during the Fatimid period consists mainly of jewelry and is relatively very rare. Some specimens are to be found in the Harari Collection mentioned above.

It is interesting to note that some of the metal-work under the Ayyubid Sultans is decorated with Christian motifs.

Although artists in metal-work continued to flourish during the Mongol period and after, signs of qualitative decline were apparent.

Under the Safawids, however, the metal-workers achieved great distinction in moulding iron and steel and produced works of art which are technically perfect and in no way inferior to the earlier masterpieces. Unfortunately, very few specimens of Safawid metal-works have survived, but in the tenth/sixteenthcentury miniature paintings we can observe the elegance and charm of some of the metal-works represented therein.

The artists of other Muslim countries did not achieve any great distinction in this art as compared with the Iranian artists.

(**b**) **Glass and Crystal**.–During the Roman period the artists of the Near East, particularly Syria and Egypt, were justly celebrated for their skillfully executed glass–ware. The Muslim artists learnt the various techniques of decorating glass from the local artists.

Excavations made at Susa, Rayy, and Sava have given to us specimens of glass–work which prove that the Iranian artists continued to walk in the footsteps of their Sassanian masters and even copied the Sassanian forms and decorative features.

The glass–work of the earlier Islamic period consists mainly of bottles, flasks, cups, and receptacles for oil and perfume. The earlier works were undecorated but with the passage of time the artists learnt the art of decoration and produced works which were exquisitely beautiful. Especially charming were the small thick prismatic perfume bottles.

Under the Fatimids the glass industry reached its zenith. Excavations at Fustat and Alexandria have revealed that the artists had achieved great skill in this art and developed technical perfection. The greatest distinction achieved by the artists of the Fatimid period was the decoration of glass with luster–painting and enamel. It is unfortunate indeed that this type of work has come down to us only in fragments.

Some pieces, incomplete as they are, in the Arab Museum in Cairo, the British Museum, and the Berlin Museum, each decorated with beautiful scroll work and abstract geometrical patterns of Kafic inscriptions, sometimes painted in brown luster and sometimes in silver, reveal great skill.

The cut decoration was also perfected by the Fatimid artists.

There were signs of deterioration of this art under the Mongols and the Tienfirids and it was under Shah Abbas the Great (996–1039/1587–1629) that glass–making again reached technical perfection most probably due to the impact of the West, especially the influence of the Italian art. It would appear that Shiraz and Isfahan were the greatest centers of the glass–maker's art.

After the Safawids, industrialized Europe gave the quietus to this branch of artistic activity in the East.

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2. z Ibid.
