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ISLAMIC ARCHITECTURAL HERITAGE : PROBLEMS OF CONSERVATION AND PRESENTATION

Introduction

World of Islam possesses a unique architectural heritage in the shape of standing monuments and archaeological mounds. They represent cities and towns, mosques and mausolea, palaces and pavilions, maktabas and serais, sūqs and market places, and forts and fortifications, built during the past fourteen hundred years at various places of different geographical, geological, social and political set-up, but under a common inspiration of Islam and Islamic traditions. The beginnings of this unique experimentation took its place at the place where Islam itself began. The re-building of the Ka'ba in the shape of a hollow cube in stone at Mecca and the construction of the first mosque of Islam at Medina, were the two events of far-reaching effect in the history of Islamic Architecture.*

The Mosque Architecture

Though simple and utilitarian, the first mosque of the Prophet (may peace of Allah be upon him) set a standard for the future mosque architecture. As time went on and the needs and resources of the Believers gained momentum, scores of the houses for prayers were erected throughout the land of Islam. While the prime of the Umayyad caliphate witnessed the Dome of the Rock (Qubbat al-Sakhra) built by the caliph Abd al-Malik (685-705) and the Great Mosque of Al-Walid

*As has been pointed out latter in this paper, the subject has been studied by several archaeologists and architectural historians like Creswell, Pope, Kuhnel, Sarre and, in the more recent past, by Oleg Graber, Umberto Scherrato, Ronald Lewcock, James Dickie, Ernst Grube, Wayne Begley, etc. The narration here is mainly based upon these studies, though the arrangement is new especially the treatment of the Islamic monuments in Pakistan which have been figured here elaborately for the first time in order to portray a comprehensive picture of the inception and development of the architecture of the Islamic world

at Damascus erected between 705 and 715, the Abbasid caliph Al-Mutawakkil constructed the great Jame Mosque at Samara (Iraq) with a majestic "spiral" minaret, more than 165 feet high.

The first mosque erected on the soil of Pakistan in 712 was at Debul. Though its traces no longer exist now, archaeological remains of two grand Jame mosques of a little later date, at Debul and at Mansurah are indeed eloquent proof of the devotion and enthusiasm of the builder and the proficiency of the master mason. These mosques remind the style and tradition of the earlier mosques erected elsewhere in the land of the Umayyad and Abbasid caliphate.

The Ibn Tulun mosque at Cairo though recalling the grand Samarra, was an impressive prototype of its predecessor. The great mosque of Cordova (Spain) built by Abdul Rahman I in 785 was the third largest mosque of the world. The two early mosques in Iran, the robust Tarik Khana mosque at Damghan erected about mid-eighth century and the Masjid-i-Jame at Nayin had the Sassanian influence specially in the shape of their pillars and the stucco ornamentation. They present a grandiose in cut-brick and stucco work. The mosque belongs to the Ghaznavide period. Likewise, the grand Masjid-i-Jame at Isfahan (Iran) is the earliest known four-iwan mosque created originally in the late eleventh century. It is the embodiment of grandeur and elegance in brick and faience mosaic revetment, mostly executed during the Safavid times. At Konya (Turkey) the Mosque of Ala-ud-Din (1156-1220) constructed at the top of a hill is a composite structure having a great prayer chamber with seven naves. At Delhi (India) the Quwwat-ul-Islam Mosque specially its arcaded facade was the first of its kind on the soil of the sub-continent. While the *Arhai din ka Jhonpra* at Ajmer (India) and the Firuzia Mosque at Depalpur (Pakistan) show the gradual development of the mosque architecture in the sub-continent.

It would be seen that among all the Islamic countries, Iran excelled in providing surface decoration to her buildings. For the purpose, the medium of faience mosaic as well as stucco was used. The medium was obviously meted out to the brick structures. The Iranian mosques of the Safavid period are a special case in point and the Jame Mosque at Isfahan, Varamin and Tabrez are perhaps the best specimens having the profuse ornamentation in these techniques. The *Masjid-i-Shah* was erected by Shah Abbas the Great (1588-1629) and the mosque of Shaikh Lutfullah began in 1603 and completed in 1617. These are the most sumptuous and the most elegant edifices both from their architecture as well as architectural ornamentation. The influence was brought to the sub-continent by the Iranian immigrants who came

to the imperial court of the Moghuls to seek employment and many of them settled here permanently. Imbued with the hereditary traditions of their ancestral home, they gave a new colour and range to the art of building practised here. Some of the best specimens of mosque architecture still exists in Pakistan like the Shahjahan Mosque and the Dabgaran Mosque at Thatta and the Wazir Khan Mosque and Dai Anga Mosque at Lahore. Other mosques of note in the sub-continent which reveal a definite style of architecture are the Shahjahan Mosque at Delhi (India) and the Badshahi Mosque at Lahore. The two dainty pearl mosques (*Moti Masjid*) erected as royal chapels in the Forts at Lahore and Dehli are indeed exquisite specimens of workmanship in marble.

The quick and brief description of some of the more important mosques in the Islamic World does not necessarily provide all the aspects of the mosque architecture. However, it is obvious that material resources and technical proficiency combined religious fervour and spiritual enthusiasm in the evolution and development of this type of religious architecture. The grand and majestic dome, the tall and impressive minarets, the sumptuous arcaded *iwans*, the most elaborate *mihirabs* and the expansive revetment all contributed in making these coveted specimens of Islamic architecture. The religious fervour is still at work and we see the fabulous grand mosques coming up everywhere even in the modern times like the Musafir Khana Mosque at Karachi, Faisal Mosque at Islamabad, the Jame Mosque at Wah and the biggest ever Mosque in Indonesia completed very recently. Some of these specimens reveal a definite deviation from the traditional style as is manifest, for instance, in the Mosque at Defence Society, Karachi, and its proto-type in a miniature form named Masjid-i-Shuhada, at Lahore.

The Madrasa Architecture

Before we pass on to consider and evaluate the other categories of monumental buildings representing Islamic architecture, it is pertinent to cast a glance over the grand edifices of Madrasa (College) constructed in great number throughout the World of Islam. While it has been a tradition since the very early days to create a madrasa as an essential adjunct to almost every mosque, independent buildings were also erected for the purpose. Often these were included in the over all complex of the religio-cultural buildings. Indeed, it has been considered a virtuous accomplishment by all the pious caliphs, sultans and rulers to create madrasas to impart education to all those who

sought admission to it. While all the rulers endeavoured to fulfil this obligation, the great Seljuq sultans showed particular interest in creating grand edifices throughout their realm. For instance, the famous Khwana Khatun complex at Konya had an elaborate building of Madrasa while the sumptuous Kartay Madrasa, created in 1258 at Konya was planned with diligence and ornamented fabulously. Likewise, Samarqand and Bukhara, the two great centres of art and learning during the Timurid sovereigns, had several complexes of religious-cultural centres including the Madrasas. The Madrasa of Sultan Hasan (1356-63) at Cairo was considered as one of the masterpieces of the Mamluk architecture. The Gor-i-Amir, the Mausoleum of Amir Timur and the Righistan, both in Samarqand (U.S.S.R.), included elaborate buildings for the madrasas.

Although no definite architectural specifications and nature of the buildings for the madrasa could be standardised in the light of the existing buildings, they had elaborate arrangement for the teachers and the taught. Separate spacious halls and rooms were designed for the lecture rooms and the assembly and hostels were provided for the board and lodging of the students. Libraries and laboratories were included. The plans of these buildings were carefully drawn and due stress was given on their decoration and ornamentation to create an atmosphere of elegance and charm. While the complex at Samarqand was the best specimen of this type of architecture, those erected at Isfahan, Delhi, Agra, Lahore, Pakpattan, Uchchh and Thatta, carried through the tradition. The Madrasa of Madar-i-Shah in Isfahan was indeed a fabulous specimen of this type of architecture.

Tombs and Mausolea

Islam prohibits creation of splendid buildings over the mortal remains of the dead howsoever big and influential the departed soul might have been. The earlier days of Islam did not, therefore, experience such an experimentation. However, the temptation of creating a memorial over the grave became dominant gradually and we see a number of such funerary memorials erected over the graves of the spiritual personages. It has been asserted that the examples at Samara, the *Qubbat-al-Sulaibiya* and those at Qum and Najaf may be regarded as the earliest known specimens of the series.

Architecturally, several plans and elevations were devised and adopted for these memorials. While simple square or octagonal plan crowned with a dome was adopted in Central Asia, Iran might be remembered for her excellent tomb-towers. The *Gumbad-i-Qabūs* built

in 1006-07 to enshrine the mortal remains of Qābūs ibn Vashmgīr, one of the last Ziyarid princes of Gurgān in northern Iran, is a slightly tapered structure, some 160 feet high and crowned with a conical dome. The other type of the tombs are those erected at Lajin in Mazanderan and the *Pir-i-Alamdār* at Dāmghān erected in 1021. At Bukhāra, now in the U.S.S.R., is one of the earliest surviving examples of the square tomb of the Samanid rulers. Built of brick in 907 and completed in 943, it is a classical example having brick revetment, erected under the influence of Sassanian architecture. Yet another tomb created at Merv, also in the U.S.S.R. now, over the grave of the Seljuq Sultan Sanjar (1157) is crowned with a conspicuous dome placed on a high drum.

A little later, the fabulous edifices created by the Timurid princes at the various centres of their empire, gave birth to the particular Timurid style of architecture. The tombs and Mausolea erected at Samarqand, Bukhara, Balkh, Herat, Tabrez etc., created history in the style of architecture meant for the funerary memorials. The Mausoleum of Gohar Shad, the queen of prince Shah Rukh Mirza, erected at Herat, now in Afghanistan, and the Mausoleum of Ghazi Zade Rumi (1437) at Samarqand are most sumptuous and most elegant specimens of the style. The *Gohar Shad* had dazzling revetment of faience mosaic, the dome of which was supported by stalactite corbellings. The domes of Ghazi Zade are faced with blue tiles and the high drum possesses Kufic inscriptions in tile mosaics.

In Pakistan, a definite style of tomb architecture was evolved during the thirteenth century as a result of the adaptation and assimilation of the Seljuqi and the Il-Khani style. The first surviving and lone specimen of tombs in Pakistan is now standing at Bela (Baluchistan). Square on plan, the tomb represents in fact a curiously well-developed example of the naked brick architecture with a low, rather squat dome, and embellished with cut-brick geometric motifs. It is significant to notice that cut or moulded bricks used here for ornamentation are all unglazed. The tomb is locally known to have enshrined the mortal remains of Muhammad b. Harūn, a famous general in the Arab army of Muhammad b. Qasim, and governor of Bela who died during the Arab campaign of 711-12. If the local tradition is accepted to be correct, the edifice might have been erected over the grave much later than the date of the burial. This was in fact the time when ancient Pakistan was having the influx of men and matters from Central Asia. The to and fro movement of the population in search of

knowledge or business to the famous centres of trade and learning had brought the two places quite near. The havoc created by the Mongol contributed further to the whole-sale migration from Samarqand and Bukhara to Uchchh, Dipalpur, Pakpattan and Multan where came and settled men from various walks of life, including those proficient in the art of building. They naturally introduced the Central Asian traditions of architecture in their new building enterprises. We can judge the extent of these traditions focused in the existing specimens which are almost all in the shape of tombs and Mausolea. The tombs of Baha'ud-Din Zakariya and one of his disciple, Shāhid Shahīd (commonly known as Shadna Shahid) are instructive examples of the series. Both are built in brick in three stages on square plan and are slightly tapering with recessed arch-entrances and crowned with hemispherical domes. It is significant that both the monuments do not possess glazed tiles for decoration except the earlier one which has an upraised panel first on the eastern entrance. The profuse use of faience on the tomb of Shams Sabzwari, a famous Ismaili saint, is a later addition. The climax of this style is noticed in the grand edifice known to world as the Mausoleum of Rukn-i-Alam, one of the most splendid memorials ever erected in honour of the dead. The celebrated mausoleum is a classical example of the adaptation and assimilation of Central Asian traditions built entirely in brick with wood framing in the usual three stages with tapering walls and entirely decorated with cut-and-moulded brick work and faience and mosaic revetment. It has been crowned with majestic hemispherical dome placed on a high and pronounced drum. It is the first ever octagonal edifice created on the soil of the subcontinent in 1320-25, augmented with tapering turrets. The interior is again embellished with cut brick and glazed tiled panels. However, the most interesting is the wooden Mehrab with exquisite epigraphical and geometric design carved in imitation of the art of wood carving. The Mausoleum created a tradition in funerary architecture influencing the later erections in the shape of several tombs at Uchchh, Sitpur, Dera Ismail Khan, Daira Din Panah, Muzaffargarh and Multan. Incidentally, the tradition remained confined to the geographical limits of what is now Pakistan.

The earlier tomb of Sultan Eltutmish at Dehli (India) created in about 1235 in stone was decorated in extensive stone carving in imitation of the local art of stone carving. Its three tiered marble ecnotaph is embellished with a series of polylobed arches created on a continuous lines of arabesques. The whole scheme is a pleasant

assimilation of the Ghaznavid and the local traditions of architecture. The other tombs of the series, still existing, are at Uchchh, Pakpattan, Depalpur, Thatta (Pakistan) and at Jaunpur, Malwa, Gujerat, Bijapur (India). The tombs of Muhammad Bin Tughluq at Dehli and the mausoleum of Sher Shah at Sehsaram are apt examples of the series.

With the inauguration and establishment of the Moghul empire in the subcontinent in the early decades of the sixteenth century, a most exotic style of tomb architecture was introduced. This has been named as garden tomb architecture. The first of its kind was erected over the grave of the second Moghul emperor Humayun at Dehli under the influence of the Iranian style. Begun in 1556 by his empress Haji Begum under the supervision of a Persian architect, Mirak Mirza, it has been placed in the midst of a garden having geometric articulation on the pattern of *chār bāgh*, divided by two axial paths into four squares. Since then the tradition of garden tombs has been kept intact and the tombs of Moghul emperors, empresses, princesses and the nobles have been built in gardens. The tombs of the next two Moghul emperors, Akbar and Jahangir, are domeless erected within formal enclosed gardens. The tomb of I'timād ud-Daula, the father of the queen Nur Jahān, at Agra, is a grand monument having delicate inlay work in marble. The domeless tomb of Jahangir at Shahdara in Lahore possesses some of the most sumptuous ornamentation in the shape of stone inlay, pietra-dura, faience-mosaic and fresco work. Likewise, the mausoleum of Asaf Khan, again at Lahore, is one of the very few funerary memorials ever erected in the truest Persian traditions in the subcontinent. Finally, the climax of the tomb architecture in the subcontinent is available in the mausoleum called the Taj Mahal at Agra. This has been considered the greatest achievement of the Islamic architecture in the subcontinent.

The array of these grand edifices created in honour of the dead provides sumptuous foundation of the real characteristics of Islamic architecture. Starting with the Samanid tomb at Bukhara and reaching climax in the Taj they had to go a long way to create these marvels.

Secular Architecture: Cities and Towns

The taste, ingenuity and resources utilized in creating the marvels of religious edifices were also exploited in building the cities and towns, palaces and pavilions, towers and gardens for pleasure and utility. The Prophet of Islam (may peace be upon him) and the early pious caliphs were content with the modest buildings they had for their religious as well as secular use. However, a change took place soon when material

resources and political supremacy was gained and the Muslims became the inheritors of the Roman and Sassanian values. The Umayyad caliphs adopted a life of pomp and luxury and their courts became the reminiscents of the glory of the Byzantine and the Sassanian empires. The desert-palaces of the Umayyads were in fact designed and erected on the Byzantine architecture. The *Khirbat al-Mafjar* at Jerico, now in Jordan, was a great complex erected during the time of the Umayyad caliph, Hisham (724-43).

It contained the porticoed court, pavilions, the palace, the mosque, the great hall with polystyle pillars and the audience hall. The remains of this fabulous complex have been brought to light through archaeological excavations. The hunting palace, *Qusayr Amra* built by al-Walid I (705-15) as a hunting palace in the open desert had beautiful paintings in its interior. It had throne room, dressing room and the baths with heating system. Similarly, the unfinished palace of *Mushatta* in Jordan had four residential apartments, audience halls, prayer rooms etc., all enclosed by a perimeter wall strengthened with bastions.

The Abbasid caliphs created cities and towns. Caliph al-Mansur founded Baghdad in 762, while al-Mamun (813-33) was responsible for raising the Samarra situated some fifty miles north of Baghdad. Both the cities had palaces and pavilions, courts and halls of audience, suqs and market places. Similarly, the Umayyad and the Abbasid governors and the elite created towns and palaces. In Pakistan, the Abbasid governor Hakam bin 'Awana Kalbi had raised two cities in Sind namely Al-Mahfuza and al-Mansura. The latter eventually became the capital of the celebrated Arab Emirate of the Habbaris, while the famous sea-port of Debul was redesigned by the Arabs through creating several palaces, mosques, suqs, and other civic buildings, all enclosed with an impressive fortification strengthened with bastions at regular intervals.

The fabulous palaces created throughout the land of Islam reveal the grandeur and proficiency of the art which had reached the zenith at Cordova, Cairo, Qairwan, Sfax, Agra, Lahore, Delhi, Isfahan etc. The Moghul emperor Shahjahan added a new city to the old Dehli and named it Shahjahanabad. Similarly, the fabulous *Maidan-i-Shah* created in Isfahan by Shah Abbas the Great was a unique building enterprise. An area covering 509 feet by 1650 feet was surrounded by an arcaded screen on two sides, augmented by the palace of Ali Qapu on the left and the Masjid-i-Lutfullah on the right. It also had a market place and a polo ground, all arranged and woven in one whole complex, created fabulously and artistically.

Victory Towers, Forts and Fortifications

The tradition of erecting victory towers to commemorate military gains in wars and conflicts has been practised since time immemorial although their design and shape have been varied throughout. The more refined and artistic manifestation of this kind of erections which could be defined as the fine specimens of architecture were created in Central Asia, Iran, Afghanistan, Turkey and in the sub-continent. The Ghaznavide, Seljuqian, Il-Khanid and the Ghorid sultans are renowned to have erected this type of towers. Mainly constructed in brick, they are majestic structures embellished with cut-brick decoration, both geometrical as well as epigraphical. The minaret of the Ghaznavid sultan Behram Shah (1118-52) and that erected by Ghiyas-ud-Din Muhammad (1163-1203) at Ghazni and at Jām in Afghanistan, and the famous Qutb Minar of Qutb-ud-Din Aibak at old Delhi (1199) are the best representation of the series.

Similarly, these Muslim rulers built impressive forts to defend their kingdoms or for the purpose of their residences. Sultan Sher Shah Suri is renowned for the construction of military forts and fortifications. The Rohtas Fort erected by him at Jhelum is an impressive specimen of this kind, while Akbar's Fort at Attock is yet another specimen, though small in size but majestic in appearance. Sher Shah built his military Forts in the Salt Range, while Akbar had it at the River Attock to thwart the military exploits of his half-brother, Hakim Mirza. Among the palace-forts of the Moghul Emperors, those built by Akbar, Jahangir and Shahjahan at Dehli, Agra and Lahore are the best specimens. The Lahore Fort was the creation of Akbar to which his successors, Jahangir, Shahjahan and Aurangzeb added several buildings. Akbar erected a fortification and residential as well as official buildings within it in about 1566. The fabulous Akbari Gate (now called *Masjidi Gate*) the *Diwan-i-Khas-o-Ām*, and the residential palaces represent some magnificent specimens of royal architecture of the period an admixture of Iranian and local building traditions. Among the surviving buildings of Jahangir in the Lahore Fort are his palace called *Dalan-i-Sang-i-Surkh* and the gateway to the palaces, a grand complex of several rooms and halls created in 1617-18. However, Shahjahan the royal builder is responsible for creating some masterpieces of Islamic architecture in the Lahore Fort. He renovated the *Diwan-i-Ām-o-Khas* of Akbar to which he added the *Dalan-i-Chehl Sutoon*, and re-decorated the interior rooms with exquisite stucco tracery. Besides, he erected dainty *Diwan-i-Khas*, all wrought in chaste marble, and the *Shah Burj*

with *Shish Mahal* and *Naulakha*, a complex built in marble and embellished with pietradura, inlay, stucco, glass mosaic and fresco work, all superb and unique. To these buildings, Aurangzeb added the majestic Alamgiri Gate in 1673-74, in fact a barbican remodelled after the eastern gateway to fort originally constructed by Akbar. The Jahangiri palace and *Shah Burj* were designed by the imperial architect and superintendent of buildings, Abdul Karim Ma'mūr Khan (Lord Architect).

The royal hunting resorts of Imperial Moghuls is represented by the fabulous Hiran Minar and Baradari, built by Jahangir and renovated by Shahjahan at Sheikhpura near Lahore. the Baradari is built in the centre of a huge tank following The tradition created by Kamran Mirza. The famous *Kamran Baradari* was erected by him at Lahore within an enclosed *chār bāgh* garden in the centre of a big tank.

Pleasure Gardens

The Moghul Emperors were also responsible for introducing fabulous pleasure gardens in the sub-continent, the best representation of which is now found in the shape of the three-terraced Shalamar at Lahore. Shalamar, or the house of bliss and beauty, was constructed by Shahjahan in 1637 as a place of recreation for the royal family in three ascending terraces, having different names and different purposes. The upper most terrace was named *Farah Bakhsh* and the next two *Faiz Bakhsh*. The two upper terraces possess beautiful pavilions and summer houses. The upper most terrace had the imperial sleeping chambers (*Ārāmgāh* or *Khwābgāh-i-Shāhi*), now opened to be used as the main entrance. Below the central pavilion of the upper terrace is the marble cascade and a delicately ornamented throne, both in marble. It was on this throne that Zeb-un-Nisa, the talented daughter of Aurangzeb, sat once and on looking the *ābshār*, composed a *rubā'i*:

ای آبشار نوحه گر از بهر چیستی
چین بر جین فگنده ز اندوه کیستی
دردت چه درد بود که چون من تمام شب
سر را به سنگ می زدی و می گریستی

The terraces of this pleasure-garden have been divided by means of water channels into equal compartments in the shape of *chār bāgh*. The middle terrace has a big tank in the centre, augmented with

fountains, causeways, pavilions etc. The two lower terraces were reserved for rose garden. The garden was designed and created by Ali Mardan Khan and Mulla Ala-ul-Mulk Tuni.

Public Works

Among the public works these Muslim Emperors and their nobles built for the welfare of their people, many bridges, serais, khans, baolis (stepped well) and roads still exist throughout the world of Islam. *Pul-i-Khawājū* at Isfahan is a bridge-dam built by Shah Abbas II (1642-67) over the Zayande river along the road to Shiraz. It is an elaborate bridge having arcades and pavilions to provide an ideal place for recreation. Earlier, a similar bridge was erected by Allahverdi Khan, again in Isfahan, during the time of Shah Abbas I, and was named as *Pul-i-Allahverdi*. Here in the sub-continent, Sher Shah Suri is well-known for creating the famous *Sarak-i-A'zam* alongwith which many serais, baolis and check posts were established. The tradition was followed by the Moghul emperors who created many such buildings. Akbar's Baoli at Jandiyala Sher Khan (Sheikhupura), *Serai Kharbuza* of Jahangir near Rawalpindi, *Begum ki Serai* at Attock, *Serai Manak Khan* near Amritsar (India) are such well known edifices.

Conservation and Presentation : Problems and Prospects

For centuries these marvels of Islamic Architecture remained popular as the centres of activities, religious and secular. However, with the decline and fall of the patronage and sharp change in taste and resources these buildings suffered, first at the hands of careless renovation, addition, alteration, and then from neglect, misuse and disuse : many of them fell apart, perished and disappeared. While the mosques lost their original pattern because of constant additions and alterations, secular buildings underwent changes and alterations sometimes beyond the scope and original layout. Besides, they suffered from warfare as well as from natural calamities. During the military conflicts, many of these were looted and put to fire, while earthquakes, thunderstorms, floods and problems like water-logging and salinity played their role in their destruction. Frequently, cities and towns were abandoned and forgotten to be reduced to dust and mounds, the individual monuments especially residential houses, bazars, market places were gradually pulled down to be replaced with edifices having more modern enemies. Indeed, changes in socio-economic conditions throughout the Islamic world have played havoc to these 'old' structures.

Earlier Academic Studies

The process went on and no one thought it advisable to preserve them to assess the contribution the Architecture of Islam had made for the advancement of world's art of building. Indeed, many scholars and critics had refused the existence of such a style to be called Islamic architecture. Banister Fletcher and the like had whiled away the subject and were not prepared to give it proper representation in their narratives of the history of architecture; some called it saracenic, while others termed it Moslem. It was not until late eighteenth century that interest was generated to study the specimens of Islamic art and architecture. The earlier studies of archaeologists and architectural historians like James Fergusson, K. A. C. Creswell, A. U. Pope, G. L. Bell, von Domaszewski, H. Herzfield, S. Flury, Fuad Safar, R. W. Hamilton, Henri Saladin, Ernst Kühnel, Robert Byron, Ernst Diez, Strzygowski, C. H. Rivaiva, F. Sarre and many others were mainly of academic nature. In the sub-continent, general studies of Alexander Cunningham, Sir John Marshall and Percy Brown opened up a new era of research. The establishment of the Archaeological Survey of India in 1902 and the appointment of Dr. John (later Knighted) H. Marshall as its first Director-General brought a new phase of research, conservation and preservation of architectural heritage. Earlier, James Burgess and H. H. Cole had attempted studies of certain important monuments of Islamic period in order to recommend measures for their conservation. The team of specialists built under the guidance of John Marshall included Henry Cousen, Zafar Hasan, J. F. Blackiston, G. A. Page, G. Yazdani, E. W. Smith and J. Ph. Vogel. Almost all these specialists carried out academic studies as well conservation of several key monuments of Islamic period in the sub-continent. Indeed, John Marshall's own studies of early Muslim architecture of India paved the way of much more elaborate treatment of the subject by Percy Brown, G. Yazdani, Vincent Smith. He was responsible for devising a comprehensive policy of conservation of monuments. The pattern set forth by the Indian Archaeological Survey was followed in many Islamic countries including Iran, Afghanistan, Syria, Jordan, Egypt, Iraq etc. where departments of antiquities were established. Later on, Italian, French, American and German schools of archaeological research and Missions for selected studies were constituted. The Italian Archaeological Missions in Iran, Afghanistan and Pakistan, undertook extensive work of exploration, excavation and restoration of archaeological remains and standing monuments,

while various teams and bodies of experts undertook the task of architectural studies and conservation and restoration of stray monuments or groups of monuments under the aegis of UNESCO. The ICCROM undertook the task of training architects, historians and archaeologists in the field of conservation and preservation of 'cultural property'.

However, these sporadic efforts can hardly meet the gigantic task of saving and presenting the cultural heritage of Islamic world. Unfortunately, the countries whose proud possession it is, have hardly been aware of their value in the over all pattern of their cultural and intellectual life. The general tendency in these countries is to replace the 'old' with 'new' in view of the changed and developed circumstances in the wake of oil wealth, while the poorer nations are handicapped of resources, both monetary as well as technical. The over all picture is, therefore, very dismal requires immediate and serious attention of experts and patrons alike so that these specimens of Islamic Architecture could be saved from decay, deterioration and oblivion.

A Proposed International Centre for Survey and Documentation

It is, therefore, necessary as well as imperative that an organisation to co-ordinate the efforts being made in various countries and at various quarters, should be established at International level. The set-up could be devised keeping in view the experience and experimentation of the other allied agencies like that created by the Council of Europe. The work of the survey and documentation of the common architectural heritage of European Countries, and organizing several symposiums to thrash out problems relating to restoration, preservation, possible reuse, etc. is both commendable as well as adaptable. A series of the reports on these undertakings were published which may provide a guideline while planning such an International organisation. The objective of the organization would, *inter alia*, be :—(1) Survey and documentation ; (2) Cataloguing and classification ; (3) Study and research ; (4) Utility and services ; and (5) Dissemination and adaptation. The following is the explanation of these services :—

1. *Survey and Documentation.* Very few comprehensive attempts have been made so far in Islamic countries to survey and enlist specimens of Islamic architectural heritage in its entirety, whether standing on the ground or buried under the earth. It is true that almost every country has its own official organization to look after these edifices and, for the purpose, has official lists of these monuments. However, most of these lists cover the more important specimens classified

under the categories of monuments of national or local importance being looked after as the Nation's heirloom and protected under some relevant law. The practice naturally leaves out a majority of specimens of lesser importance though they constitute the bulk and their survey and study would invariably reveal many a hitherto facts not represented by other monuments. It is, therefore, necessary that a complete and comprehensive survey of all such monuments be carried out in each Islamic country on unified and systematic lines. It would eventually be collected and collated in a single volume to form basic data for the study of the Islamic architectural heritage. A proforma devised by the writer of the present article for the purpose appears as Appendix.

2. *Cataloguing and Classification.* The exhaustive survey would yield a number of hitherto unknown or little known specimens. Their documentation would entail compilation of architectural data, measurements of the elements, listing of building materials, recording of surface decoration etc. The data so collected and collated would be catalogued and classified according to a uniform system.

3. *Study and Research.* The data so collected would then be studied from various angles including collection of historical information/data available in relevant literature. Each monument would have to be photographed thoroughly and various plans, elevations, sections and other special features drawn. The technique developed through photogrammetry will be used for best results.

4. *Service and Co-operation.* The data so collected and collated would be got together and kept systematically for effective utilization by interested experts, scholars, architectural historians, architects, engineers, conservators, etc. for the purpose of academic and technical research as well as for those who are engaged in planning the conservation, preservation and restoration of this architectural heritage.

5. *Dissemination and Adaptation.* Besides the utilization of the data for academic or conservation purposes, it should be studied by our planners and architects who are involved in planning new cities, complexes and individual buildings. It is no denying the fact that the old and traditional buildings possess many a facets and factors which could be used in our modern buildings which are in their present shape a mere adaptation of western style and are too inadequate for our socio-economic needs.

CONCLUSION

The work of such an international documentation and research centre would indeed be varied and enormous. It would, therefore, be

impossible for one country to undertake it single handedly as no Islamic country possesses technical know how or financial resources commensurate with the task. It would, therefore, be ideal if the proposed centre is organized under the auspices of some international organization like OIC on the lines of the Council of Europe, or more appropriately by Council of Aga Khan Award for Architecture. The broad-based Centre would be set up with at least four Regional Offices with its headquarters located in any Islamic country. The following centres could be considered as convenient :—

- | | | |
|---------------------|-----|---|
| I. Tehran or Lahore | for | Iran, Afghanistan, U.S.S.R., Pakistan, India. |
| II. Baghdad | for | Turkey, Syria, Jordan, Iraq, Saudi Arabia, U.A.E., etc. |
| III. Dacca | for | Bungla Desh, Indonesia, Malaysia, Far East. |
| IV. Cairo | for | Spain, Morocco, Tunisia, Algeria, Libya, Egypt, Sudan and other African Muslim countries. |

The organizational set up of the centre could include a director-general at the headquarter with his deputies and other necessary administrative and technical staff, while the regional offices would be headed by a director, a deputy director and technical and administrative workers. It should be possible to complete the survey, cataloguing and enlisting work within a period of five years, while another two years should be required for research and publication of the data. Thereafter, the number of the centres could be reduced to two, one for the Middle East and the other for the Far East with a headquarter. The main task of these centres would then be to provide details/data or information on relevant aspects of Islamic architecture to the interested specialists, architects etc.

APPENDIX

PROFORMA FOR THE INVENTORY OF ARCHITECTURAL MONUMENTS

Devised by

Dr. Ahmad Nabi Khan

1. Name of the Monument

.....

2. Date

3. Location

Mauza/Village

Tehsil/Taluka

.....
City/Town

.....
Distt. and Province

4. Owner's 1.

2.

3.

4.

5. Protected Yes/Unnecessary.

Notification No.

dated

6. Condition

.....

.....

.....

.....

.....

7. Class

.....

8. Historical references/general description

.....

.....

.....

.....

9. Architectural data:

(i) Sizes/Dimensions:

- (a) Walls
- (b) Plinth/dado
- (c) Doors/windows
- (d) Arches/soffits
- (e) Domes/drums
- (f) Stones/bricks
- (g) Turrets
- (h) Pillars/pilasters
- (i) Minarets
- (j) Stairs
- (k) Parapets

10. Architectural description:

(i) The plan.....

(ii) The fortification/walls

.....

.....

(iii) The entrance gate vestibule

.....

.....

(iv) The Courtyard :

(a) Size

(b) Paving/ornamentation

Brick Stone

(c) Ablution tank/graves/other structures.

(d) Other details.

.....

.....

(v) Arrangement of structures

.....

.....

(vi) The Cloisters.....

(a) Measurements

.....

.....

(b) Openings.....

Arched/Closed

(c) Other features:

.....

.....

.....

(vii) Prayer chamber/tomb/chamber etc.

.....

.....

.....

(viii) Domes.....

.....

.....

(ix) Minarets/turrets

.....

.....

(x) Squinches/stalactites/pendentives

.....

.....

.....

11. Architectural Decorations:

(i) Type of decoration

(A) Tile/tile mosaics

(a) Colours

(b) Material.....

(c) Sizes.....

(d) Decorative design:

1. Floral

2. Geometric

3. Inscriptional

() Other details:

.....

.....

(B) Fresco painting

(a) Colours.....

(b) Decorative design:

1. Floral

2. Geometric

3. Inscriptional

(c) Other details

(C) Brick imitation

(a) Colour/s

(b) Material

(c) Sizes

(d) Location

(e) Other details

(D) Brick patterns

(a) Decorative scheme

(i) Floral

(ii) Geometric

(iii) Inscriptional

(iv) Sizes

(b) Location

(E) Wood work

(a) Location

(b) Sizes

(c) Material

(d) Decorative scheme

(i) Floral

(ii) Geometric

(iii) Inscriptional

(e) Any other detail:

(F) Stone work

(a) Pietradura:

(i) Colours

(ii) Decorative scheme:

(iii) Geometric/floral/inscriptional:

(iii) Materials used

(b) Inlay work

(i) colours

(ii) Decorative scheme

(iii) Materials

Other details

12. Inscriptions

(i) Quranic/non-Quranic/Arabic/Persian/Urdu/Sanskrit/
Gurmukhi, ek.

(ii) If other language, specify.....

(iii) Dated/un-dated

(iv) Location.....

(v) Material: Stone/Wood/Brick/Tile

(vi) Script.....

(vii) Sizes.....

(viii) Name of scribe, if any

(ix) Special features

(x) Text:

13. Published/un-published

14. Photographs:

(i) Negative numbers:

(ii) Location:

15. Drawings: No/Nos/.....

Location.....

16. **Bibliography:**

Author	Title	Page/Plates/Figs.
.....
.....
.....

17. **State of Preservation**

.....

18. **General Remarks**

.....

19. Data recorded by

20. Date of recording