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Pre-Muslim Architectural Tradition in Ancient Pakistan

Tauqeer Ahmad
University of the Punjab, Lahore

Introduction

For thousands of years man had been taking refuge in the caves or under the trees to safe himself from the devastating effects of natural forces. For a long time the idea of making shelters like huts or rooms never struck his mind. Although building material like clay, stone boulder, or river pebbles, were lying all round him but, he even, accidentally, did not attempt to erect any kind of shelter for a long time. Why had he been unable to build an artificial refuge is now differently interpreted and explained. However, it seems that most dominant factor behind this was the lack of economic resources available at one place. When he was offered and provided by environment and nature with favoured circumstances, he, without losing opportunities began to exploit the land resources surrounding him. It is generally agreed that as soon as he discovered the art of agriculture and learned to domesticate the animals he began to build shelters in the open air beside the cultivable land by using, whatsoever available, such as wood, bushes, twigs, stone, river pebbles and clay. This was the earliest material used by man in the construction of huts and houses.

Architectural Traditions

So far as the origin of architectural activities in ancient Pakistan is concerned, seven thousand BC date has been suggested in this context (Jarrige et al 1995: 58-60). According to the archaeological researches the earliest structural remains are found in Sibi, a district of Baluchistan, at a place locally known as Mehrgarh. Here archaeological excavations uncovered a vast group of compartmented buildings or cell-units which were oriented north-south and east-west. These structural remains indicate that almost all buildings followed rectangular plan and were made of mud-bricks having rounded ends and finger impressions on their upper sides. However, these bricks are varied in size. Therefore, it may be suggested that at this early stage the device like ‘mould’ was not known to the people of Mehrgarh. The true nature or utility of these “compartmented buildings” is not so far correctly

understood. Although, on the bases of material culture discovered from the related layers it is sometimes inferred that this group of buildings would have served as industrial area for craft activities. So far as the domestic architecture is concerned several mud-brick structures were unearthed consisting of small rooms which were separated from one another on the one hand and on the other communication was also provided within the buildings. How these buildings or structures were entered or approach in and out, no traces of doors or sills were found (Jarrige et al 1995: 210-11; 504-5). Since no traces of doors in these structures were noticed in the excavations which led to one of the archaeologists to suggest that these buildings may have been entered by the roofs (Gregory L. Possehl 2002: 25-26). In present days some of the rooms of a house, particularly, in the country-side in Pakistan, are provided with a small hole in the middle of the roofs, however, such holes are not used as doors. The houses of Mehrgarh were built of packed clay and sun-baked bricks in the form of small compartments and rooms. These rooms were roofed with wooden rafters and would have been daubed plastered with a mixture of wattle and clay (Allchin et al 2003: 93). In the absence of archaeological evidence regarding the roofing system of the structural remains of the buildings found at Mehrgarh it seems hard to explain that how exactly these building were roofed. However, most probably trabeation roofing system might have been used to cover the roofs. According to trabeation roofing system horizontal beams are used in an architectural construction which cover the whole width of a room from wall to wall and placed parallel to each other leaving some space in between. This space is filled up by transverse rafters as it is still practiced in Pakistan. Architecturally trabeation roofing system may be termed as ‘corbelling technique’. The concept of ‘grid-pattern’ in the architecture of Mehrgarh is vaguely evidenced in the form of separate compartmented buildings or cell units. However, these groups of buildings were not regularly aligned into streets and lanes, as the town-planning of Harappans was later on developed on iron-grid pattern by dividing the whole space into different blocks with the help of main streets which crossed one another at right angles. It is sometimes rightly observed that, though, no direct links between these early patterns of cell-units and town planning of the Harappan urban centers is supplied by archaeological excavations, but, in the course of time, it seems certain that early cultural modes, in term of architecture and town planning were further evolved and developed (Kenoyer 1998: 52). Though, it was the simplest appearance of architecture, but it had prolific germs to become huge buildings in succeeding period. This simple style of architecture spread in the course of time in other tracts, particularly, in the flood plains of river Indus and its tributaries and piedmont areas of Pakistan.

For centuries this crude and unpretentious mode of architecture continued. It was 4th millennium B.C when new changes, ideas and concepts in the field of architecture appeared. The evidence of such changes is supplied by archaeological researches. The archaeological site of Kot Diji is regarded as the earliest one where such developments are observed. So far, Kot Diji is considered as the earliest town in Indus Basin where defensive wall or fortification was exposed

during excavations. This defensive wall was strengthened by square bastions and towers. The foundation of the wall was provided with rough stones on which sun-dried bricks were used in the masonry. Moreover, the evidence of well-regulated town-planning with spacious streets, oriented from north to south and probably east to west dividing the whole lay-out of the settlement into blocks, occurs at Kot Diji for the first time in the history of pre-Muslim architecture of ancient Pakistan. These blocks are further sub-divided by lanes through which access is provided to the houses (Khan 1965: 29). Another early Harappan site where settlement was laid down within defensive walls is Rehman Dehri, the remains of which are located to the west of the Indus. The beginning of occupation at this site is approximately dated to the fourth millennium BC. Arial view of the site has revealed a regular lay-out of the settlement which is covered by a huge defensive wall. Within this massive fortification the whole space is laid out according to an extra-ordinary regular plan dividing the whole town first into two halves by straight street running from north-west to south-east, then, straight narrow lanes are providing access to houses, (Allchin et al 2003: 150). Another town is Kalibangon where defensive wall was discovered (Ibid: 157). Which circumstances precisely led the people of these towns to defend their houses by providing high wall is not known. As the archaeological site of Kot Diji is situated on the left bank of river Indus, it is obvious; its population would constantly have been experienced devastating floods every year. The flood plains of river Indus and its tributaries were once densely forested and would have been packed with wild beasts and animals. To ward off such ferocious wild animals, which were constant danger to human life, the people of these early communities were obliged to raise high fence round the towns. Moreover, robbing activities of marauding gangs of looters and others may also have led to the idea of providing protection. But once this magnificent idea was perceived it became the permanent feature of city architecture. In succeeding centuries, it was maintained as a cultural and an essential tradition of ancient architecture. Apart from defense purpose, it also served as decorative element of city or town architecture.

Third millennium B.C. however, marks new development and an era of architecture having new traditions and trends and manifestations. The exhaustive archaeological researches in the last century have made marvelous and epoch making discoveries by uncovering remains of sumptuous ancient cities of the Indus valley, now known by their local names such as Harappa and Mohenjo-Daro, situated in Sahiwal, the district of the Punjab and Larkana in Sindh, respectively. The uniformity of material culture discovered from these sites made one of the pre-historians to treat them as twin capitals of an empire (Piggot 1949: 138). Astonishingly, unparallel achievements were made in the field of architecture by the inhabitants of Harappa and Mohenjo-Daro by creating and providing such an advanced architecture and town planning for which the Indus civilization is now known all over the world. Obviously, it seems that technical skill and architectural experiences of generations ultimately appeared in a matured form during the Harappan times. All major contemporary cities or towns such as

Harappa and Mohenjo-Daro were fortified and planned into two distinctive portions, well communicated by providing main streets and lanes, crossing each other at right angles. Though, architecture of these two cities was extremely simple and un-decorative but, simultaneously, it is highly impressive because of its articulation and proportions. These twin cities were built of well proportionate and standardize burnt bricks. As the building material was pre-dominantly burnt brick of standardize mould and wood .

The architecture of urban centers or cities differed with that of villages or small towns as if the masonry of village buildings or houses was entirely built of mud bricks. However, the use of stone along with the mud bricks was occasionally applied in smaller size rural communities while, the buildings of the cities like Harappa, Mohenjo-Daro etc, were made of both baked and sun dried bricks and in certain cases the evidence of stone was also found particularly in the foundations and drains. Of all the buildings of the Harappan settlements may be divided into three groups and categories on the bases of size and nature of the structures. The first category or group consisting of private houses is characterized by a central courtyard around which rooms were so arranged that the privacy of the resident was ensured. Besides this, to admit light and air in the windows were kept in the wall of the rooms. Thus, architecture of almost every house prevented its inner view by a wall or hallway from the passer-by—a tradition which is still maintained as such in the architecture of Pakistan. Generally, houses were consisted of single story buildings, however, structural remains with upstairs indicating second or third stories were also found from the Harappan settlements. The clay models of ornamented windows with projected eve or chajja (Kenoyer 1996: Fig. 313) however, are interesting which seems precursor of marble lattices of Mughal buildings as well as wooden screens of present day Pakistani houses.

The technique used for the construction of the Harappan arch and niche is now termed as ‘corbelling’. The sockets of walls near the roof certainly suggest that wooden beams are universally used in roofing of the Harappan architecture. The walls built of burnt bricks were left naked. Masonry was, however, laid course after course according to header and stretcher technique by disturbing joins of the walls over several points. Briefly, like other cultural norms the Harappans left very strong legacy in architecture, may be accounted for as corbelling arch and niche, header and stretcher technique, well organized town planning, well connected sanitary system, naked brick masonry, tapering walls and wooden roofing system and doors (Mackey 2001: 21-63). All these architectural traditions had been much appreciated and, being an essential component of architectural legacy as they may still be seen in Pakistan. Although, the Harappans could not survive from the ravages of time and disappeared in such an enigmatic way as to leave the modern archaeologists in a quagmire of interpretations, speculations and explanations. The drop scene of the Harappan cities was so complete that for almost one thousand years the inhabitants of the Indus valley could not produce urban centers like Harappa and Mohenjo-Daro.

The Harappans ceased to exist after 1500 B.C and ultimately went out of memory till their discovery in the first quarter of 20th century (Piggott 1961: 11-21). According to some scholars the decline of the Harappan cities was a result of Aryan invasion from north-west frontier of the sub-continent in 16th or 15th centuries BC (Wheeler 1997: 126-134). So far as the material evidence of Aryan is concerned, the archaeologists have failed to find an authentic proof through researches. Although a large number of graves in N.W.F.P, (present Khyber Pakhtoon Khwa, a province of Pakistan) and Taxila were discovered and excavated. On the bases of material culture these graves are associated with the Aryans (Dani 1968: 49-55). However, the settlement sites of these people are still awaited. We, therefore, do not know about the architectural activities of these buried people. After the disappearance of the Harrapan cities and before the appearance of Achaemenian towns it appears that there would have been an architectural blank of almost one thousand years (1500-500 B.C.).

It is generally believed that after the disappearance of Harappans in the Indus region it was Indo-European language speaking people who poured into this land in round about 1600/1500 BC and occupied the river valleys stretching from the Kabul to Sarasvati rivers; unfortunately no remnant of the dwellings of these people have survived the ravages of the time. However, attempts have been made to reconstruct the architectural abodes of the Aryans the references of which are found in the Rigveda.

Vedic literature frequently mentions different architectural terms such as thabha (upright post) palisad (fence), suchis (rods), gamadvara (recess of a fire place or furnace) etc. These architectural elements clearly mark the existence or presence of the building structures which were used as dwellings or abodes by the Aryans. However, they appear to have been built with organic constructional material namely wood or bamboo which decayed in the course of time (Brown 1959: 3-4).

Archeological as well as historical sources, now tell us that in the last quarter of 6th B.C the Indus valley was captured by the Achaemenians who maintained their occupation over ancient Pakistan for round about two centuries. Culturally, Achaemenians left a great impact on this land but in field of architecture they could not produce the cities like Susa, Pasargadae and Persepolis as they had in Iran (Ghirshman 1951:165-175). Architectural remains found in Pakistan associated with Achaemenians period show very poor mode of construction. This may be seen at Bhir Mound in Taxila valley, where the remains of Bhir Mound does not follow a regular layout and pattern. At Bhir Mound exposed structural remains seem to have followed haphazard town planning having narrow zigzag streets, sub-streets and lanes. Even two persons would often find it difficult to walk abreast. Unlike Hrappans, where baked bricks along with sun-dried bricks were predominantly used, the inhabitants of Taxila had a different experience regarding the masonry of the walls of the houses and other buildings which were built of natural gravel or stone pieces termed as “rubbles”. The walls of the Houses built of limestone and Kanjur were plastered with a thick coating of mud and were

left either plain or whitewashed. To keep the mud-plaster together chopped straws were mixed in it---- a technique which continued to be practiced in posterity and still it survives in Pakistan, particularly in the country-side. The plan of the houses is not clear due to the rebuilding activities in successive periods and sometimes it becomes difficult to identify that where one house ends and another starts. Nonetheless, ample evidence of open court of some of the houses is found and on one side or the other of his court rooms were built. This typical feature of Pakistani houses first occurred at Mehrgarh and predominantly continued to Harappans and survived in the posterity. Moreover, the floors of certain rooms of the houses at Bhir Mound were paved with pebbles or cobble stones. The evidence of drains, soakage pits nearby the houses were also found at Bhir Mound (Marshall 1951:87-111).

In the 2nd half of 4th century BC Achaemenians were overpowered by Alexander but the latter's dominance over ancient Pakistan proved a whirl wind and in turn gave way to the Mauryans. Chandragupta Maurya established a great empire by uniting the two great rivers valleys i.e, the Indus and Ganges, under Pataliputra (Majumdar at el 1981: 61).

It was Asoka, the grandson of Chandragupta Maurya, after conversion, became a zealous follower of Buddhism. In one of his rock edicts, we are informed that Buddhist missionary was sent to Gandhara for the preaching of the message of Buddha (Smith 1964: 162). Beside this, Asoka is said to have reopened original stupas and redistributed the relics of Buddha. The burial places of the Buddha in Buddhism came to be known as sputa , while the other forms or versions of same word is termed as tope, thupa, stup etc. (Mitra 1971:21) Regarding the construction of the earliest stupa in ancient Pakistan is concerned no concrete evidence in this regard has so far been found. However, some of the stupas are traditionally claimed to have been the earliest ones. Among them one was built at Taxila by Asoka which is locally known as Chir Tope and was designated by Marshall as 'Dharmarajika'. It was built of rough rubble masonry of locally available stone (Marshall 1951:233). Another is But Kara (=actually Buddha kada) built at Swat (Faccenna et al :4-15). These are regarded as the earliest ones ever built on the land of ancient Pakistan.

Dharmmarajika and Butkara Stupas

On account of the pre-eminent status of the city of Taxila as well as the size of the "Chir-tope" Stupa led Sir John Marshall to surmise that the stupa, whom he designated as 'Dharmarajika" would have been built by Asoka in the course of redistribution of the relics of the Buddha. Among the north western cities or towns no doubt, Taxila earned fame because of the role it played in imparting knowledge in the region, but, so far as the size of the Chir-tope is concerned it does not seem an exception. In the absence of concrete evidence, therefore, it seems hard to suggest or identify any stupa unearthed in Gandhara as well as Taxila valley as the

"earliest or oldest ever erected by Asoka". However, after once, Chir-tope was declared as the earliest, it is now generally believed in its antiquity. So far as the original form of a stupa is concerned, traditionally, the Stupa of Bharhut and Sanchi are thought to have retained their original forms, having a hemispherical mass of masonry forming a solid domed structure which contained the relics of the Buddha and this particular place on the top of this mound was marked by wooden parasol or chhatras. It appears that Dharmarajika main stupa was erected on plain ground surface without platform or plinth, approximately, circular in shape. This simple, rather, crude pile of rough rubble masonry marked the initiation of a new beginning of the architecture to be evolved in the succeeding centuries under the auspicious patronage of the followers of the Buddhism. However, Buddhism inspired the aesthetic of its followers, as they could not satisfy themselves with this unpretentious form of architecture, and in the course of time they started to embellish the tumuli of their Lord----the Buddha. In this regard the Dharmarajika stupa could be one of the best examples which clearly mark the architectural and decorative developments. The experiments of the generations of architects and masons as well as cultural influences from abroad, together, greatly contributed to the development of the Buddhist architecture in ancient Pakistan. As, we now see that the Dharmarajika stupa passed through a number of constructive and decorative stages. Another stupa which is also regarded as the earliest, is known as But-Kara 1(correctly Buddha Kada). The remains of But-Kara 1 Buddhist establishment lies nearby Saidu Sharif in the district of Mingora (Swat). This site is marked by a main stupa surrounded by a number of votive stupas in its courtyard. The Italian Archaeological Mission to Pakistan conducted excavations at But-Kara 1 from 11956-58, intermittently and exposed the structural remains of votive stupas as well as a main stupa which was termed as "Great Central Stupa". At But-Kara exposed structural remains reveal that the stupa underwent through at least six successive constructional phases as each phase is clearly marked by a circular hemispherical ring. Although, before excavations the site under discussion was badly devastated by treasure hunters, however, it still presents enough regarding the history of Buddhist architecture, building techniques applied as well as the sequence of the structures of the Great Central Stupa. This event, in the history of architecture of ancient Pakistan was of a great significance because it marks the introduction of a new creed and beginning of architecture which was not known to the people of Pakistan. As now Pakistan possesses accountless Buddhist architectural treasures, both religious and secular architecture that includes ancient cities, their fortification, fort and fortresses.

The stupa was, originally, a sepulcher or burial in which ashes of the dead was placed and a small mound was piled up, just to mark the burial place having no religious significance. In the course of time, however, in Buddhism burial mound having Buddha's ashes emerged as a 'cult object'. With the introduction of Buddhism a second phase of architecture took start in ancient Pakistan after the decline of Harappans which tells us about the major development happened in this field in between 3rd century BC to 10th century AD. The north-western territories

of the Indus valley, well known in ancient times as Gandhara (Cunningham 1924:55), emerged as the great centre of Buddhist religious activities and architecture.

However, a large number of Buddhist remains are also lying in Sindh, a province of Pakistan. The fundamental contrast, in the Buddhist architecture of Gandhara and Sindh is seen in the building material. As, in Gandhara local stone was predominantly used where as in Sindh sun-dried bricks were applied in the construction (Lohuizen-de-leeuw 1979: 151-74), as latter speaks the practice of old-age traditional mode of construction. Stone rubble masonry of the Buddhist architecture of Gandhara, however, took many centuries in passing through its development the evidence of which is still seen in the architecture of stupas and monasteries. This orthodox or primitive form of the Buddha's tumuli was departed by Gandharan builders who seem to have intended a structure of more height. Thus, to elevate the stupa a platform and series of diminishing drums was devised, which were crowned by a slender and many tiered umbrella (Percy Brown 1959:33).

Monastery

Along with stupa structure another building emerged which came to be known as "Sangharama". The Sangharama (i.e, resting place for Bikkshus or monks) is sometimes believed to have been added to stupa structure later in date. The Sangharama is originally a composite word: sangha means 'a group of followers or companions of the Buddha and 'rama' to take rest or resting place'. Thus the words sangha and rama together mark a resting place for bikkshus or Buddhist monks. In the beginning such specific residences would have been built with organic material such as wood or bamboo, etc. But, severe climatic conditions would have made the members of the Sangha to take shelter in the thick woods or groves. No structure of such early Sangharama has survived the ravages of the time. However, what have survived in connection with the structural remains of early Sangharama, with all probabilities, can not be dated before Sctho-Parthian period (first century BC), particularly in Gandhara. So far as the original concept of this structure is concerned, it is sometimes thought that on the instructions of the Buddha Sangharama was built or erected, most probably with wooden material (Debala Mitra 1971:31-32). The monasteries or vihara of Gandhara are all square or quadrangular in plan an open courtyard in the centre and living cells all around; none of them is domical However, domical structures depicted in Gansdharan reliefs has erroneously been identified as monasteries (Ingholt 1957:172-3 ;pls 468, 469, 471) which actually seem to be shrine instead of vihara (Ingholt :pl.468). From where did the architects of Gandhara derive the ground plan for Gandharan Sangharama the remarks of Sir John Marshall are worth quoting in this regard. Marshall says thus "The new type sangharama which here came into fashion took its design from the dwelling-houses of the time, the fundamental

principle of which was then, as always, the open court encompassed by chambers, access to which could only be obtained through the court itself. In India this type of dwelling house goes back to the Chalcolithic age, if not earlier, and at the beginning of the Christian era it must have been just as familiar in Hindustan as it was on the North-West Frontier or in the Western Asia generally" (Marshall 2006:234).

The Buddhist religious architecture also speaks about the aesthetics of its builders as they applied, other than plastic art, a number of decorative as well as architectural elements to embellish especially the stupas. These elements may be accounted for as mouldings, cornices, dentil lines, Corinthian pilasters, Persepolitan columns, trefoil-arches, pediment–arches, toranas and ogee arches. Most of these architectural and decorative traditions reappeared in the Hindu temple architecture of Salt Range (Meister 1996: 41-52).

Some of these features, however, suggest as the result of foreign influences particularly Corinthian pilasters, mouldings and Persepolitan columns. The trefoil-arch, however, interestingly recalls an ancient trefoil textile design on the shawl of the image of the Harappan king priest. How did Harappan trefoil pattern, with little variation reach to the Buddhist masons and was introduced as architectural element by modifying it according to architectural requirements is not easy to trace the actual surviving process in the absence of historical as well archaeological data. Anyhow, circumstantial evidence is convincingly suggestive to speculate that some of the cultural, particularly, decorative as well as architectural traditions and elements continued from proto-historic to Gandharan time.

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Biographical Note

Dr. Tauqeer Ahmad is Assistant Professor, Department of Archaeology, University of the Punjab, Lahore-Pakistan