

Lalbagh Rethought

Exploring the incomplete Mughal fortress in Dhaka, Bangladesh

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ABSTRACT

Lalbagh Fort is probably the most ambitious building activity undertaken by the Mughal rulers of Dhaka. Although the complex coined the name 'Lalbagh Fort' because of its huge fortification walls and gateways, the master plan and the layouts of the buildings that still exist suggest little or no similarity with the other Mughal forts either in Bengal or any other parts of India.

The construction of the complex ran only for one decade and it was left abandoned for unknown reason. The brief history of the megaproject had been buried since 1688 and the fort remained incomplete till date. Several attempts have been made so far to recover the memories of this monument after the amnesia of centuries. However, the incomplete nature of construction, the limited amount of archaeological resource, literary evidences and epigraphic records at the disposal of the architectural historians appears as the main thicket. Filling up this lacuna using these apparently inconspicuous resources certainly put the existing discourse regarding this monument in a perplexed situation.

This perplexity is the character of the architecture of Lalbagh today. It poses a long list of questions regarding its original master plan, its purpose and its history of construction, of which we are yet to provide definite answers being in a telescopic distance. This paper is an attempt to examine and compare different contesting hypothesis regarding its architecture. The main idea is to explore the building by drawing parallels with other Mughal buildings in Bengal and outside. It would provide us further room to rethink and reinterpret all the possibilities and posit a narrative of its architecture as it was originally planned and designed.

Key Words: Mughal Heritage in Bengal, Mughal Garden, Mughal fort, Architecture of Bengal, Lalbagh Fort

1.0 INTRODUCTION

Lalbagh fort is one of the most important Mughal monuments in Bengal, currently Bangladesh. The fort was earlier in this year (2011) with a group of students from third year architecture of International Islamic University of Malaysia (IIUM) as part of their Heritage Studies program. The author accompanied the team as an advisor and noted his personal observation on this monument. In comparison with Mughal monuments in Indian sub-continent and South Asia, this particular building, although incomplete, poses certain interesting features that are worthwhile to study. This paper is an attempt to illustrate those aspects. The deltaic condition of Bengal and the commissioning of Dhaka as the Mughal capital played an instrumental role in determining the architecture of this monument. It necessitates a back ground study of the context before we delve further.

2.0 THE LAND OF BENGAL DELTA

Bangladesh is a small coastal country of South Asia bordered by India on the east, west, and north and by the Bay of Bengal on the south. There is also a small strip of frontier with Myanmar on South Eastern edge. Dhaka is the capital and largest city with the 14.251 million people. Bangladesh is the largest live delta in the world at the confluence of Ganges, Brahmaputra and Meghna rives and their tributaries. The landscape of the country can described mainly as flat alluvial plain crisscrossed with numerous rivers that are continuously shifting their course.

The cultural, social and political lineage that determines the characteristics of architecture of Bengal delta can be found beyond its geo-political entity. Bangladesh is a new state in an ancient land. This eastern fringe of Indian Subcontinent was mentioned as *Vanga* or *Bangala* in the ancient texts. Etymologically, this is derived from the cognate *Vanga*, meaning the wetland [1]. The Arab Traders used to refer it as *Bangalah* from which its present nomenclature is believed to have gradually evolved.

The records of Pliny and Periplus of the Erythrean Sea (first century AD) as well as Ptolemy's map suggest that the ancient land of Bengala was known to the West since earliest time. The unique landscape of the delta posed certain degree of apprehension, marked by mixture of awe and contempt. The Vedic Aryan considered this land outside the Aryandome and anybody who ventured there had to be cleansed through rituals. Even for the Muslim Turks and Afghan this eastern periphery of Hindustan was considered as *Dozakh-Pur-I-Niamat*, as Ibn Batuta commented '(This is) hell full of bounties and wealthiest and cheapest land of the world' [2]. Although repulsive to certain extent, the attractions of the place were so immense to the outsiders that to quote Bernier 'it has a hundred gates open for entrance but not one for departure'[3]. Bengal's *muslin* and luxury items were so much adored by the ladies of Imperial Rome that according to Pliny, it resulted in serious drain of gold of the

Empire. Due to its strategic location between east and the west, *Bangala* served as a flourishing entre port and intermediary in trade and commerce.

The invasion of Muslim Turkic-Afghan in the 13th century marked a major event in Bengal's political and social life. It introduced the Turko-Persic culture and most importantly, a new religious environment. During the 300 years rule of the Turkic-Afghan that was known as Sultani period, Islam had developed a resilient relationship with local culture that was reflected in every aspect of the social life as well as its architectural vocabulary. The adaptation of the local hut as a type for the Bengali mosque is the best example. By 1596 the Mughals captured almost all of the Bengal and formed *Subah-e-Bangla*, the eastern most province of the empire. This 150 years Mughal rule over Bengal, marked a new political reality, a continuous contestation between the Delhi centered empire and the provincial status of the region.

2.1 The Mughal Capital of Dhaka

Although the history of Bengal could be dated back to the ancient period, Dhaka as an urban centre is a very recent phenomenon. In the ancient texts and records there were mentions of a place/ urban centre which might be today's Dhaka. However it got its full city status under the Mughal rule, when it was declared as the capital of the province. A place called Dabaka in Bengal was mentioned in the Allahabad *Prashasti* (eulogy for the emperor) of Shamudragupta (4th Century AD) that according to some scholars was the earliest evidence of settlement in Dhaka [4]. In the 7th century AD Dhaka was a small urban settlement under the Buddhist Kingdom of Kamrup. Since ninth century onwards it was ruled by the Sena kings of Vikrampur. Archaeological evidence suggests this place to be a town or settlement. To the Europeans, Dhaka of that time was identified as Bengala and was probably a small town (with "fifty two *bazaars* and fifty three lanes") lying by the river Dulai. Dhaka was successively under the Turks and Pathans for centuries (1299 to 1608) before the arrival of the Mughals. During this period Dhaka was used more as a military as well as trading outpost. The old Afghan fort was located at present day central Jail area, which according to Mirza Nathan one of the two biggest fort of the Mughal era [5]. Dhaka went under the rulers of Sonargaon from whom the sovereignty of the area was acquired by the Mughals.

The first Mughal viceroy of Bengal Subahdar Islam Khan (1608-1613), shifted his capital from Rajmahal further inland to Dhaka in 1610 to subjugate the rebelling landlords. He renamed the new capital as Jahangir Nagar after the name of the ruling emperor Jahangir).

As a capital of *Subah-e-Bangla*, one of the most revenue earning province of the Mughal Empire, Dhaka has experienced actual urbanization rapid development in terms of trade and commerce since the beginning of the 17th century. During the rule of Ibrahim Khan (1616-1620), Dhaka attained great commercial importance and having trading activities especially with countries including Arabia, Persia, Armenia, China, Malaya, Java and Sumatra. As a consequence of this, the European traders mainly the Portuguese, the Dutch, the English, the French and also the Armenians started coming to the city from 1616. Although the seat of the governor was shifted back to Rajmahal by Shah

Shuja for several years in 1640, Dhaka remained its full status as the trading hub. It became the capital again with Mir Jumla as the Viceroy in 1660.

The whole 17th century could be considered as a golden age in the history of Dhaka. However under the rule of Shaista Khan (1662-1677 and 1679-1689) Dhaka attained its peak of development in every aspect. The city then stretched for 12 miles in length and 8 miles in breadth and is said to have nearly a million people. Tavernier wrote about his visit to Dhaka in 1666: "Dhaka is a great town ... The length of this town is about two leagues"[6].

However, with the shifting of the capital in 1717 from Dhaka to Rajmahal (Murshidabad) the Mughal glory of Dhaka started to decline. This resulted into waning of the urban character of the city for centuries.

3.0 ARCHITECTURE OF THE MUGHAL IN BENGAL AND THE CONSTRUCTION OF LALBAGH FORT

Between the two terms of Shaista Khan, Prince Azam came to Bengal as a viceroy for one and half years. Although short, during his sojourn in Dhaka he undertook several building activities that are still to be remembered. The most significant of them was his ambitious project of the Palace Fortress of Lalbagh.

For the Mughals of Central Asia, the Bengal delta was never a very attractive place due to its climate and topography. They were interested in the province primarily for economic reasons, and to some extent its exoticism. Abul Fazal in *Ain-I-Akbari*, mentioned that the Architecture of two regions, Gujarat and Bengal was very popular to the Mughal royalties of Agra [7]. The best example could be the use of Bengal roof for the marble canopy of the emperor's throne. This particular roof form was also used in other important buildings like of the Shah Burj kiosk in Delhi and the roof of the emperor's audience hall, and emperor's private mosque in Agra and Lahore.

In their early years in Bengal the Mughals concentrated more on establishing an efficient imperial administration system. The construction of utilitarian buildings like forts, mosques, roads and caravanserais was far more important than building monumental or grand architecture. Although there were some traces of tombs and palatial complexes in Rajmahal and Murshidabad, many Mughal buildings were ordinary. Tavernier wrote about Dhaka, 'The Governors's palace is a place enclosed by high walls, in the midst whereof is pitiful house built only by wood, He generally lodges in Tents, which he causes to be set up in a great court of enclosure' [8].

While the Sultani builders tried to interpret the local architectural language into their mosque and other architecture through a process of hybridization, the Mughal builders were quite perfunctory in nature. They were more inclined towards Delhi centered imagery of architecture. The mimicry of the red sandstone and marble buildings in Delhi and Agra resulted into a plain plastered look ignoring the local tradition of brick and terracotta. However, this apparently modest Mughal building actually contains far greater geometric and spatial complexity referring to the precise proportion and intricate ordering system of the Mughal buildings in the west. Although the volume remains monolithic, the homogeneous space of the Sultani Mosque was replaced by distinct spatial cells of diverse geometric configuration in the Mughal Type.

The principles of large scale ordering of Mughal architecture was demonstrated in the planning of few palatial complexes in Bengal. According to Catherine Asher the most picturesque example of this could be the Khoja Anwar-I-Shahid complex in Burdwan (late 17th Century) [9]. Others are Shah Shuja's Palace in Rajmahal (1640) and the incomplete fortress of Lalbagh in Dhaka.

Being the latest of these three examples, Lalbagh Fort is probably the most ambitious project undertaken by the Mughal Prince Azam in Bengal. The construction of the fort was undertaken by Prince Azam in 1678. Subahdar Shaishta Khan continued with the construction, when the Prince was recalled to Delhi in 1679 and he (Shaishta Khan) was reappointed as the viceroy. In 1684, Iran Dukht (Bibi Pari) the beloved daughter of Shaishta Khan passed away. She was buried within the complex and a grandiose tomb was erected impromptu over her grave. In 1688 the construction of the fort was ceased for some unknown reason. It was left deserted when Shaishta Khan was called back to Delhi in 1689. The decade long history of the megaproject was shelved indefinitely with his departure and the fort remained incomplete to date. The reason of the abandonment of such a project remained ambiguous to the architectural historian, albeit the existence of several myths and speculations. The popular conjecture, which is accepted by some historians claims that the Subahdar considered his daughter's death inauspicious and hence stop the construction. However, according to the Mughal administrative system, Subahdar was an employee of the Empire, who was accountable to the Emperor. Although he enjoyed certain extent of autonomy, he had little authority to interfere or to stop a project that was undertaken by a prince, for his personal interest. On the other hand, when the fort was under construction at the eastern part of the empire, the south-western border was under insurgency. Emperor Aurangajeb was in constant war with the Marathas, Sikhs and with Rajputs for several years. Prince Azam was recalled and resources from all the provinces were channeled to Delhi to meet the cost of the war, which certainly stopped the supply of resources needed to carry on such a grand activity in Bengal. This might be the reason why none of the successors of Shaishta Khan further endeavored to revive this project.

3.1 Architecture of the Complex

The existing part of the fort covers around 18 acres of land which was originally situated by the river of Buriganga. The organization of formal gardens, pools and gateways, enclosure and various buildings like tombs, mosques and pavilions in an axial relationship within the complex, demonstrated the typical Mughal concept of planning (Figure 1). The fort was long considered to be a combination of three buildings: the mosque; the tomb of Bibi Pari; and the Diwan-i-Aam, comprising two gateways and a portion of the partly damaged fortification wall.

Within the complex, the mosque was the earliest structure dated back to 1649. However, the present compound was probably built on the foundations of an earlier site.

There is considerable empty space within the walls, and no residential quarters are apparent too. The structures in this Lalbagh Fort compound as well as the axial layout, adhere to the true imperial Mughal idiom. The appearance of the audience hall closely follows that of the Sangi Dalan in Rajmahal (Figure 2), as well as the viewing pavilion in the Agra Fort. Bibi Pari Tomb is modeled on that of Shah Nimat Allah in Gaur, which in turn is inspired by the tomb of Itimadud-Daula in Agra. However, the placement of Bibi Pari Tomb adjacent to the audience hall is quite out of place, perhaps yet another architectural difference in Bengal under Aurangzeb, moved away from the earlier regal Mughals. Although the tomb reputedly contains the remains of Shaista Khan's favorite daughter, Bibi Pari, that does not explain the unorthodox location of the tomb.

Recent excavations carried out by the Department of Archaeology of Bangladesh, however, revealed the existence of other structures, either 26 or 27 in numbers, with elaborate arrangements for water supply, sewerage, roof gardens, and fountains.

The complex coined the name 'Lalbagh Fort' because of its huge fortification walls and gateways. However, the master plan and the layouts of the buildings that still exist suggest little or no similarity with the other Mughal forts either in Bengal or any other parts of India. The elaborate of defense system, the intricacy of the entrance and the layering of the fortification walls to protect the emperor's residence, of the forts in Agra, Lahore and Delhi, all are absent in this complex. The architecture and master plan does not even correspond to the other forts nearby, e.g. Sonakanda, Hajiganj or Idrakpur. However, the layout of the gardens and water features following the typical Mughal *Chaharbagh* concept, the pavilion like audience hall (*Diwan-I-Aam*), Tomb, Mosque and the terraced garden along the river side resemble closely to the Mughal gardens or the tomb complexes. The term 'Lal Bagh', meaning 'tulip garden' in Farsi, also suggests this complex to be more like a garden or entertainment area for the royalties than a defensive structure. As the tomb was later added by Shaishta Khan as an improvisation of the design, we could conclude that originally it was not planned to be a tomb complex. There were no traces of any palatial residence or living quarters other than the *hammam* attached to the audience hall, which suggests that the complex was never used for overnight staying during its life time. There could be a provision for residences or the prince and his families, however it was never realized and we could only speculate its existence. The incomplete nature of the structure, obscured history and its destruction through time offer little evidence to draw any conclusion from it. Hence to understand the purpose of this building and its possible planning we need to compare the existing ruins with other Mughal complexes in South Asia.

The most interesting feature of Lalbagh fort is its water supply system. The fort was built near to Buriganga River. According to the old map of Dhaka Buriganga River was supposed to be nearer to the fortification wall of Lalbagh Fort. Therefore, in order to drive the water from the river into the fort, a water wheel, also known as the water tower was built near the bastion at the southwest corner. It was probably moved manually by manpower. The water wheel brings the water from the river into the fort to two main channels: a channel leading towards the mosque, and a channel along the fortification wall in roof top garden. However, since Lalbagh Fort is a huge complex, there is also an assumption that there might be more water towers along the wall.

Similar to other Mughal gardens, water pressure system was used to run water around the garden of Lalbagh fort. This involves the distribution of water from a higher level to the lower level. From the roof top garden, water will be distributed to the ground level through a water sheet known as *chador*. This *chador* is a unique feature of the water system whereby it produces soothing sounds which will create different moods to the listeners. Later, the water will be channeled to the entire fort, including Diwan-i-Aam and Bibi Pari Tomb. This distribution was simply using terracotta pipes.

At the east of the fort there was a huge Water Reservoir which functioned as a Ballast Tank. This was where the water from the river would finally be collected. Once this reservoir was full, the force from this point would push the water back in a very high pressure that would make all the water fountains in the fort function.

Apart from that, there is also a probability that there was another water wheel near the South Gate which functioned to bring water directly to the Water Reservoir. This would help to speed up the water filling process in the reservoir. Apparently, it will then return to river.

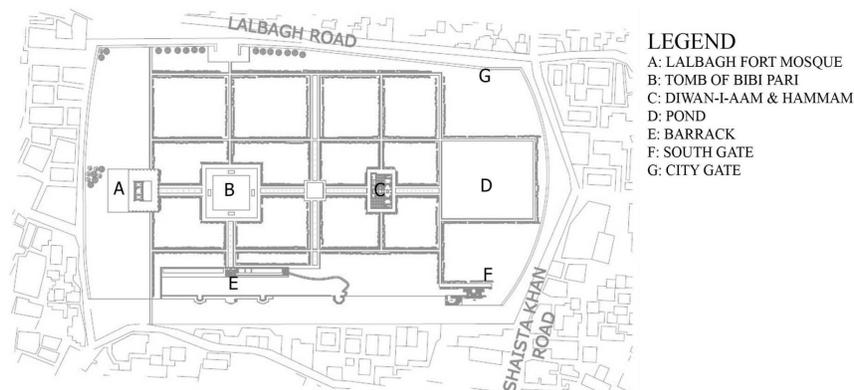


Figure 1: Plan and aerial view of Lalbagh Fort showing the three major structure of the Diwan I Aam, Tomb of Bibipari and the Mosque, Dhaka (Source: Unpalished Long Report of the Heritage Studies 2011 by IIUM Students, Dhaka Team)

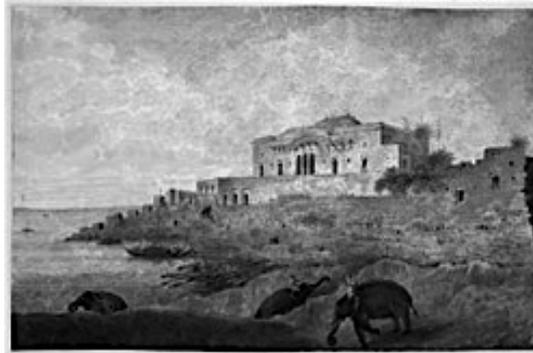


Figure 2: Watercolor of a hall from Sultan Shuja's palace in Rajmahal, (Source: British library online Gallery)

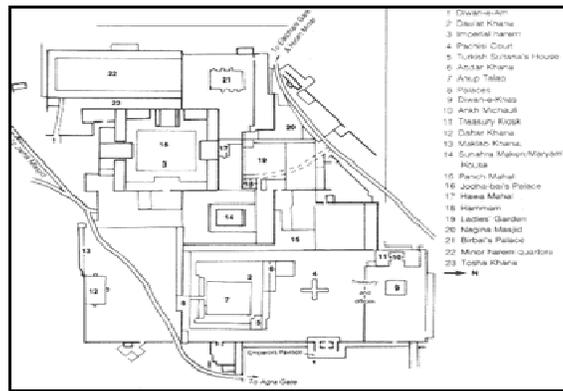


Figure 3: Plan of Fatehpur Sikri, Agra (Source: Grover, S. 1980)

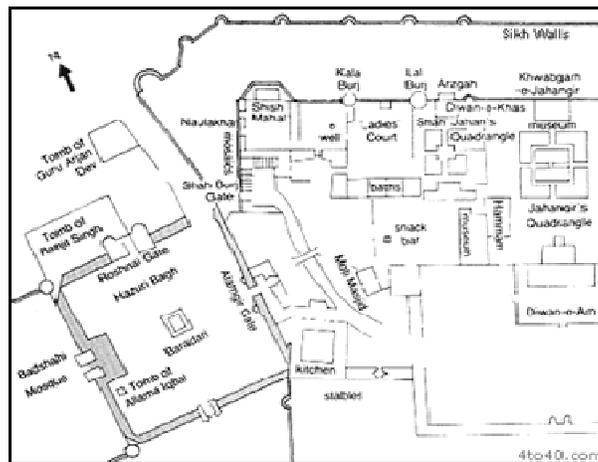


Figure 4: Plan of Lahore Fort, Lahore

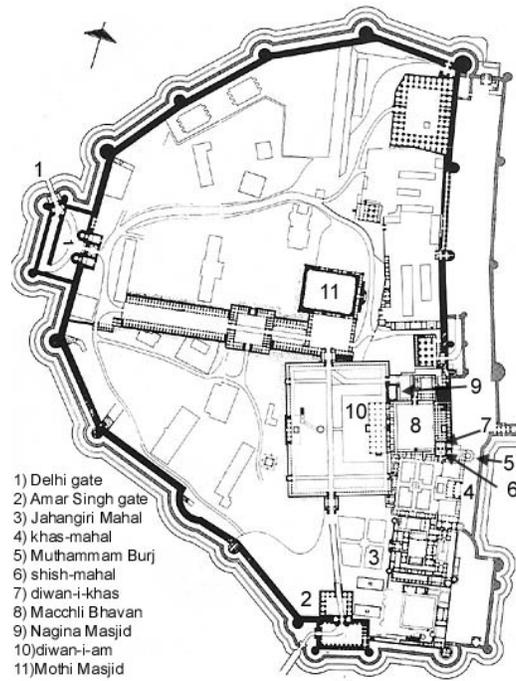


Figure 5: Plan of Agra Fort, Agra (Source: cis.nctu.edu)

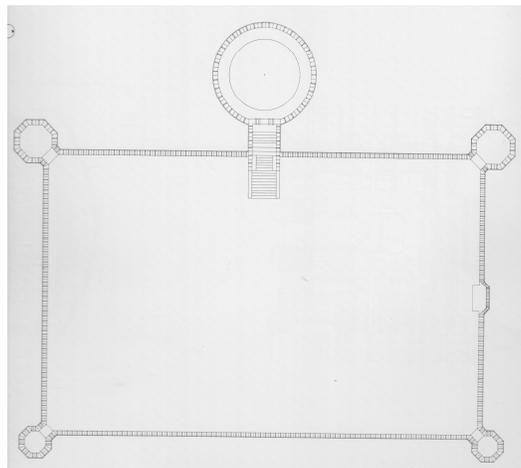


Figure 6: Plan of Sonakanda Fort; one of the three major river forts in Bengal.
(Source: Ashraf, K, 1997)

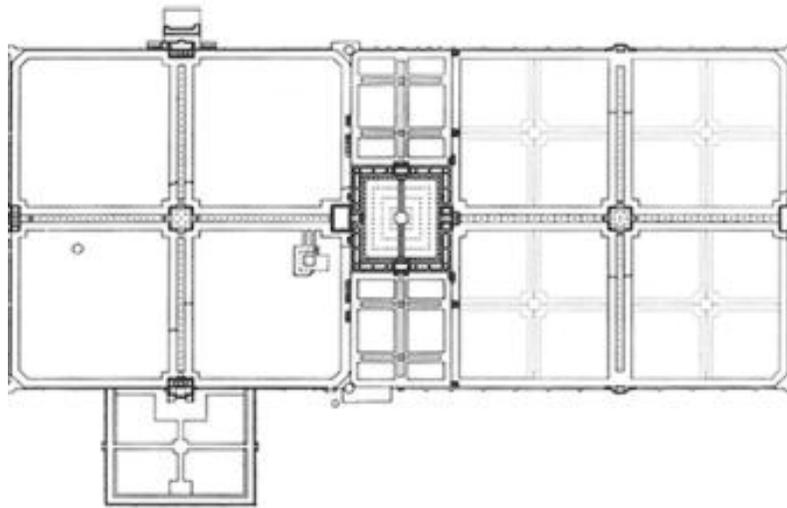


Figure 7: Plan of Shalimar bagh, Lahore (Source: Grover, S. 1980)

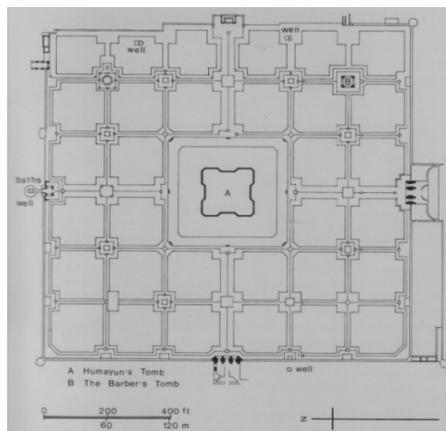


Figure 8: Plan of Humayun's Tomb, Delhi (Source: Grover, S. 1980)

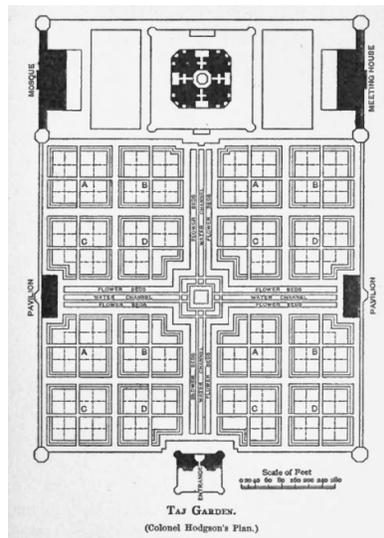


Figure 9: Taj garden showing charbagh typical pattern (Source: Brown, P.)

4.0 MUGHAL GARDENS

Mughal gardens are heavily influenced by the Persian concept of Chaharbagh, typically featured pools, fountains and canals inside the gardens. On their first arrival, the Mughals were a bit apprehensive towards the landscape of India as it lacked the fast-flowing streams, green pasture and the colourful flowers and fruits of central Asia. According to Babur, the first Mughal emperor,

“Hindustan is a country that has few pleasures to recommend it... The people have... no ingenuity or mechanical invention in planning or executing their handicraft works, no skills or knowledge in design or architecture... no grapes or musk melons, no good fruits, no ice or cold water... There is an excessive quality of earth and dust flying about. But a convenience of Hindustan is that the workmen of every profession and trade are innumerable and without end.” [10]

Hence they were eager to build gardens for their pass time and remembrance of their heartland.

Although, the founder of the Mughal Empire, Babur, expressed his passion for chaharbagh in his memoir ‘Baburnama’, the concept of Chaharbagh was actually imported from Persia by Mughal emperor Humayun and practiced widely across the Mughal territories in India. This concept is basically demonstrate a symbolic representation of the paradise on earth with colourful garden, flowing water channels and strategically located pavilions within it, based on the Qur’anic depiction of paradise.

“Allah hath promised to believers men and women gardens under which rivers flow to dwell therein and beautiful mansions in gardens of everlasting bliss.”
(9:72)

The Rambagh garden Agra is thought to be the first chaharbagh garden in South Asia. The highly disciplined geometry and the emphasis on axuality and symmetry in planning make the difference between the Mughal gardens of South Asia and their Central Asian predecessors.

The Mughals were obsessed with symbolism and mysticity of Sufism Islam and incorporated this into their gardens in many ways. The standard Quranic references to paradise were in the architecture, layout, and in the choice of plant life, but more secular references, including numerological and zodiacal significances connected to family history or other cultural significance, were often put beside. The numbers eight and nine were considered auspicious by the Mughal and can be found in the number of terraces or in garden architecture such as octagonal pools.

Mughal garden design derives primarily from the medieval Islamic garden, although there are nomadic influences that come from their Turkish-Mongolian ancestry. A scrutiny of the major Mughal gardens in South Asia would illustrate the features of a typical Mughal garden, which can aptly be described as a walled off and protected landscaped area with its rigidly formal design (Figure 6, 7 and 8). The inner space contains the elements that a man finds most pleasing in nature. It's essential features included running water (perhaps the most important element) and a pool to reflect the beauties of sky and garden; trees of various sorts, some to provide shade merely, and others to produce fruits; flowers, colourful and sweet-smelling; grass, usually growing wild under the trees; birds to fill the garden with song; and pleasant cool breeze.

In most of the cases the centre of the garden, where the two major axes intersected is highlighted either by the most important structure, pavilion or by the large water features, most probably depicting a symbol of the centre of the universe in cosmological descriptions. The garden is usually divided into several quadrants each having their own axes of symmetry and having an interesting feature at the intersections of the axes. Although rigid, a strong sense of hierarchy of spaces can be noticed in their planning. The pavilions in the Mughal gardens are probably the reminiscences of the Turkish-Mongolian elements of tents, carpets and canopies reflecting nomadic roots. As tents indicated status in these societies, so wealth and power were displayed through the richness of the fabrics as well as by size and number, the hierarchy of the sizes, shapes and locations of the pavilions in the Mughal Gardens is a reflection of this social order.

5.0 MUGHAL FORTS

Generally Mughal forts in Indian subcontinents can be divided into two major categories; the border outpost and the palace fort. Usually the border outposts were designed with heavy walls, gateways and residential provisions for the soldiers; mainly a huge ground accommodating series of tents. However the palace forts or fortresses in the cities were acted as the administrative centre of the province or the city. They also worked as royal residences. Hence other than the fortification they have different buildings within the compounds like, Diwan I Aam (Audience Hall for Common People), Diwan I Khas (Hall for the Nobles), residence of the king, residence for the females, mosque and other ancillary facilities. In terms of planning a typical palace fortress features series of courtyards with intricate system of walls, each having its own function like court for public, court for royalty, court for ladies etc. The fort usually work as citadel with all kinds of function accommodated within it, like granaries, stables, prisons, and soldiers' barracks so that when under seize, it can function independently without having any connection with the city for several months. The defensive walls were generally very high and heavy and the entrances were designed intricately to defend the enemies as these forts were usually worked as the last line of defense. Cannons were employed on the fortification walls and on the watch towers (*Burj*) and series of moats with water encircles the whole complex for defensive purpose as we could see in Agra, Lahore or Fatehpur Sikri forts (Figure 3, 4 and 5). The planning of the Mughal forts is highly in contrast with the planning of the Mughal gardens. Although certain forts have their own gardens inside the fortification wall, the axial and symmetrical planning of the Mughal gardens usually is replaced by an intricate system of multiple axes and courtyard to avoid the direct access of the enemy to the royalty. Along with the fortification and the strength of the army inside the architectural design, planning of circulation and detailing contributed significantly on defense system of a Mughal fort.

The Mughals also built a few palace forts in Bengal, but none of them attained the stature of the standard palace forts seen in north India. The palace forts at Jinjira (Keraniganj) and Lalbagh (Dhaka) both are such a ruinous and incomplete condition these days that it is almost impossible to compare them with the type which the Mughals developed in their imperial capitals.

However, the tradition of erecting forts was not new in Bengal. Literary evidence demonstrates the existence of numerous mud-forts in Bengal [11]. The unique geographical and climatic condition of the delta is the main reason for the emergence of this kind of structure. For exactly the same reason, other kinds of forts were not or could not be constructed. As Bengal was accessible by rivers, the strength of Bengal's forts depended predominantly on natural defenses of river and canals than their fortified walls. In consequence, 'water fort's at the bend or different strategic points of the rivers was very common in Bengal. In terms of planning the 'water fort' is basically a fortified area with simple geometry, mostly rectangle with huge watch tower along the river to keep an eye over the river (Figure 6). Usually soldiers used to reside in the tents within the enclosed ground. The watch tower usually was equipped with weapons like cannon, bows and arrows as the main defense.

Due to scarcity of stone, forts in Bengal were usually build with mud or bricks. Almost all pre-Muslim forts of Bengal were mud-forts. However, with the passage of time these have turned into mounds. So far as ancient and early medieval Bengal is concerned it is very difficult to reconstruct the history and architectural pattern of the forts due to extreme scarcity of structural evidence. The excavations at Mahasthangarh in Bogra district revealed that Pundranagara, the earliest fortified city of Bangladesh, was provided with a natural defense by the river Karatoya and other measures of ancient fortifications, such as mud-walls. In Mahasthangarh, one finds all the distinctive features of an ancient city fort in Bengal. The rectangular plan of the city is common and is widely observed over the entire terrain of Bengal. The devices developed through the ages in Bengal have exerted immense influence on the medieval forts and fortifications introduced by the Muslims. The forts and fortifications of medieval Bengal were seen as exemplary and many later forts have grown out of the synthesis of the two main sources, the pre-Muslim tradition of the land, and the art of building forts brought by the Muslims.

A comprehensive study of the origin, growth and development of medieval fort architecture in Bengal makes it clear that it did not reach its climax in the Mughal period. The ideal type of fort building was built during the time of the independent sultans. The achievement in the field is best reflected in the full-fledged example of the citadel of Gaur.

The three consistent components of medieval forts in Bengal were walls, towers, and gates. In general, the architectural features of Mughal forts follow previous patterns. It is evident that in an unfamiliar geo-physical environment, the Mughals took necessary defensive measures and evolved river forts. The forts of Hajiganj, Sonakanda and Idrakpur are good representatives of the type of river forts built by the Mughals to defend their capital city of Dhaka from Portuguese and Magh raids. The river forts marked a fusion of the defensive requirements of the Mughals and the physiographic peculiarities of Bengal. Unfortunately planning and architecture of Lalbagh does not comply with either typical Mughal for or the river forts developed in Bengal.

6.0 DISCISSION AND CONCLUSION

Although termed as fort, the true nature of Lalbagh does not served the purpose of the fort. In one hand the high defensive walls were no match of the intricate layering of the Mughal defense system in Agra or Dehi, and on the other form the details of the walls and the watch towers it seems that the fort was sited by the river Burignaga not for defensive purpose but mainly to draw the water from the river. The incomplete nature of the complex further poses a long list of questions regarding its original master plan. The comparison of the planning with the other Mughal gardens shows similarities to certain extent that also answers some of the question. Form the comparison of the different Mughal gardens and forts as well as from the historical facts it could be said that Lalbagh might be designed originally as an administrative complex. However, the hot and humid weather of Bengal, lead them to design this administrative centre within a garden settings to provide comfort for the

royalties. It also justified the addition of the *Hammam* with the Diwan I Aam. Another possibility was that the whole complex might be designed as palaces within the garden setting, but due to the unexpected disruption the residential quarters were not complete. This assumption is substantiated if the planning of the complex is compared with the typical Mughal garden of *Chaharbagh*. Usually in *Chaharbagh* garden the centre of the complex is occupied either by the main pavilion or by the main water body. The location of the main tank of the Lalbagh on the eastern side of the complex, however on the central axes of the main gateways suggest the possibility of the reflection of the plan in the eastern side, which remain incomplete (Figure 10). This reconstructed plan suggest, Diwan I Khas and residential quarter in the eastern half of the master plan and an elaborate terraced along the river.

Whatever, the original plan was, the perplexity is the unique feature of the architecture of this Mughal monument. In terms of type this is unique. It neither completely complies with the Mughal forts, nor with the typical Mughal garden. It might be new type and first of its kind, however the sudden interruption of the construction of the ford and its abandonment buried the possibilities of the new types to be evolved under its soil.



Figure 10: Possible original master plan of the Lalbagh fort considering the symmetric concept of *Chaharbagh*. (Source: Reconstructed plan by the 3rd year Architecture students of IIUM, during their Heritage Studies Course in 2011.)

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This research combines extensive literature survey and limited fieldwork. Author have visited and examined the case studies during the Heritage Study Field Trip of the third year students of Architecture program of IIUM in April 2011. Although short, the trip was a success because of the whole hearted efforts of the students and the staffs of the Kulliyah of Architecture and Environmental Design and IIUM. Along with the documentations, interviews were carried out with different local experts to understand the context, culture and society, traditional architectural practices and construction methods of the particular region. The drawings and other visual materials that were analyzed for this study were collected mainly by the students of 3rd year Architecture, IIUM. The primary visual documents were thoroughly studied and analyzed by

the author in Malaysia along with theoretical review. This paper is based mainly on the resources in hand and data collected by the students during their two weeks field work. Hence it is not targeted to posit any assumption at the end. Rather it attempts would highlight some of the aspects to ponder that might instigate necessary potential for a discourse.

REFERENCES

Abul Fazl Ibn Mubarak, *Ain-I-Akbari*, English translation, by H. Blochmann and Colonel H. S. Jarrett, 1873 – 1907. The Asiatic Society of Bengal, Calcutta.

Aiterya Arnyaka, a Hindu scripture composed between 500BC-500AD

Asher, Catherine B, "The Mughal and Post Mughal period", in *The Islamic Heritage of Bengal*, ed. George Michell , UNESCO, 1984.

Banglapedia, National Encyclopedia of Bangladesh (copyright 2006). *Mosque Architecture*. Retrieved May 20, 2011 from: <http://www.banglapedia.org>.

Fleet, J.F. *Corpus Inscription Indicum*, Vol II, p 8

Gibb, H.A.R. trans. (1929), *Ibn Battuta Travels in Asia and Africa (selections)*, London: Routledge

Grover, S. (1981). *The Architecture of India Islamic*. New Delhi: Vikas Publishing House Pvt Ltd

Les voyages de Fracoise Bernier (1656-1669), edition Integrale sous la direction de Frederic Tinguely, Paris, 2008

Nathan Mirza, *Baharistan-I-Ghaybi* , tr. By M. Borah, Guahati, 1936.

Tavernier, Jean Baptiste, *Travells in India*, Reprint (London ed. 1889) Asian Education Service , New Delhi, 2001

