

Reclaiming the Lost Architectural Heritage Sompur Mahavihara: Through Conjectural Restoration

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ABSTRACT

 Sompur Mahavihara, presently known as Paharpur vihara is the second largest Buddhist vihara on the subcontinent and one of the most important archaeological sites in Bangladesh. This Buddhist monastery, situated in Naogaon district was established when Buddhism attained its peak in Bengal under Dharmapala, second king of Pala dynasty in 8th century. But the mystery of its morphology is unknown. Little study has been done to reveal its actual form. As this monastery is important in the archaeological history of Bengal, an investigation is required to know what the central shrine and the monastery looked like and for morphological evaluation from the previous temples. This essay has several objectives. It is an attempt to comprehend the form of the central shrine and its morphological development from previous examples of the Buddhist monasteries; to restore the disjointed link in relation to the formal evolution of the central shrine of the Paharpur vihara; to find the relationship between the central shrine of the Paharpur vihara and other contemporary Buddhist developments; and finally to suggest a conjectural restoration of Paharpur vihara with its central shrine to reveal its actual form.

Keywords: *Paharpur, Vihara, Buddhist Temple, Conjectural Restoration*

INTRODUCTION

A number of monasteries were established during the Pala period in ancient Bengal. Paharpur Mahavihara is remarkable among them and prospered for about four centuries. It was destroyed, along with the other major centers of Buddhism in India, by Bakhtiyar Khilji during the fighting with the Sena dynasty around 1300 CE (N. Ahmed, 1966, p. 73). Historical evidence shows that Buddhist religious structures have gone through several architectural developments from stupa to temples and pagodas. Paharpur Vihara is indicative of the most important phase of architectural development of Buddhist religious structures in Bengal. Archaeological excavations of Paharpur reveal that the remains consist of monastic cells and a central shrine for

prayer. The main monastery of Paharpur is cruciform in style, introducing a new style of architecture to ancient Asia (monastic-asia.wikidot.com).

According to the reference of UNESCO's international campaign, Paharpur is included in the World heritage list. So the preservation of Paharpur Mahavihara is extremely important. As Paharpur was excavated in a dilapidated condition, its actual form can't be revealed. Therefore a conjectural restoration is attempting to comprehend the actual form of Paharpur's central shrine and vihara through the analysis of contemporary Buddhist developments of 8th century CE. Conjectural restoration is not a unique idea. It has been used many times by researchers to revive the form of historically important structures. Previously, several conjectural

restorations of Paharpur central shrine and vihara had been made. This study is attempting to reveal the ambiguity of the arguments of previous research based on a justification of form to generate a conjectural restoration of Paharpur Mahavihara. A detailed study of Paharpur Mahavihara is discussed in the following sections.

OBJECTIVE OF THE ESSAY

- The main objective of the essay is to restore the disjointed link in relation to its formal evolution of the central shrine of Paharpur Mahavihara.
- The intention of the paper is also to find out the relationship of the central shrine of the Paharpur Vihara with other contemporary Buddhist developments.
- To suggest a conjectural restoration of Paharpur Vihara with its central shrine to reveal its actual form.

METHODOLOGY

The study has been carried out by several methods. A survey of literature has been done to comprehend the Buddhist philosophy, socio-political and religious context of Buddhist development and the morphological evolution of Buddhist temples and monasteries. Comparative analysis has been done with contemporary and later structures of Buddhist philosophy of that time to reveal the actual form of the central shrine and the vihara of Paharpur. A physical survey has also been conducted to understand the site circumstances, surroundings and formal condition of the central shrine and vihara. The study process is summarized in the figure 1:

BACKGROUND / CONTEXT

Rise of Buddhism in Subcontinent

In India, the republican institutions were strong in the 6th century BCE. This enabled a rise of heterodox sects against the orthodox religion dominated by rites and rituals. Among them the most successful was Buddhism whose impact on Indian society was

remarkable. But under the patronization of Ashoka Buddhism gained its full prominence, Buddhist philosophy was materialized with the establishment of numerous stupas, temples and monasteries.

The religion founded by Buddha was destined to become a major influence on architecture not only in India but also in Srilanka, China, Tibet and Southeast Asia. Although Buddha had not prescribed any particular architectural setting for worship, his disciples establish shrines to give permanent form to the religion. The first shrine was created after the death of the Buddha, when his cremated remains were divided by his followers and placed in ten locations associated with his life and teachings. To mark these places, a simple mound of rubble and earth known as a 'stupa' was erected over the relics, in a manner comparable to traditional village memorials or Chaityas, where the ashes of deceased leaders were placed in a mound often located on the outskirts of their settlements. It was this traditional form and placement that served as a genesis of later Buddhist architecture. In time, Buddhist monks settled in the vicinity of stupas to form small monasteries of individual cells organized around open courts. Their rituals included walking around the stupa, which necessitates the establishment of a processional path, remains central to the Buddhist temple design. (Moffett, et al. 2003).

BUDDHISM IN BENGAL

The Buddhist dynasty lasted for four centuries (750-1120 CE) and ushered in a period of stability and prosperity in Bengal. After the establishment of the Pala's empire in this part of the subcontinent, Buddhism flourished in Bengal and Bihar under their patronage (Ahmed, 1966, p. 72). The Palas were followers of the Mahayana and the Tantric schools of Buddhism (en.wikipedia.org/wiki/Pala_Empire). Pala's created many temples and works of art as well as supported the Universities of Nalanda and Vikramashila. Paharpur (Somapura) Mahavihara built by Dharmapala is the second largest Buddhist Vihara in the Indian Subcontinent. The Pala Empire can be considered as the golden era of Bengal.

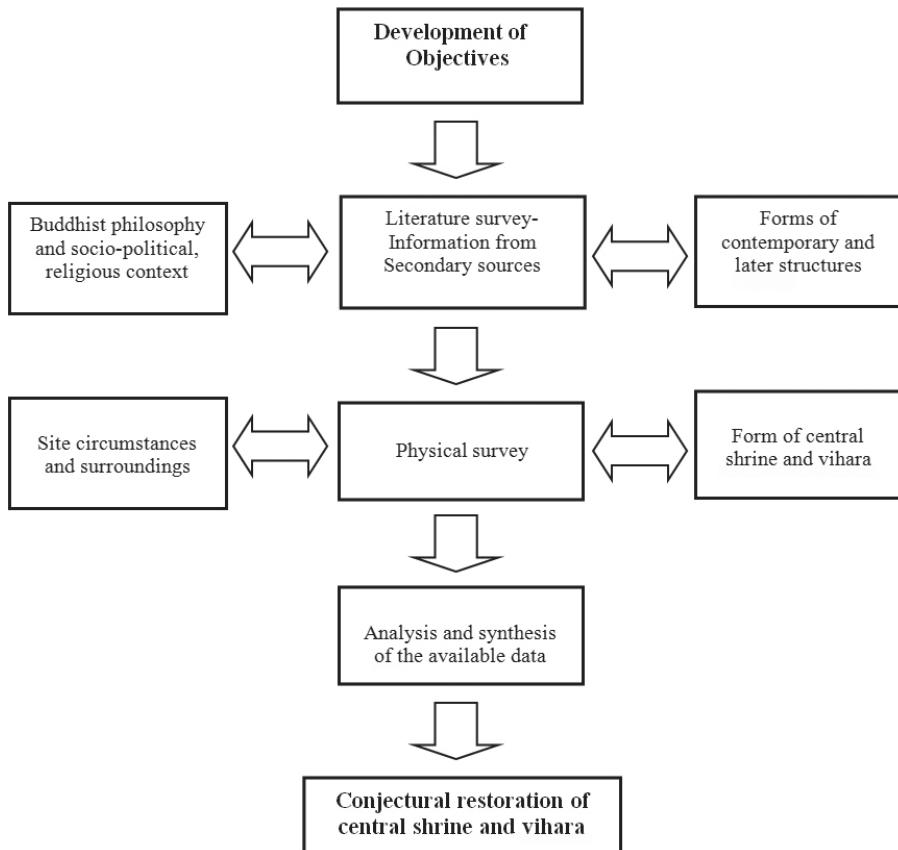


Figure 1:
Summarization of the study process.

From many secondary sources it is evident that the destruction of Paharpur Mahavihara had taken place many times by the foreign rulers. But probably the ultimate destruction of the Mahavihara was done by Bakhtiyar Khilji between 1200-1300 CE as mentioned earlier. Later on this mahavihara might have been damaged many times due to the climatic reasons. Bengal is often flooded by rivers, streams and their contributors. The changing course of rivers and floods has caused destruction to many structures of this region in the past. High humidity and dampness became a threat to the structures. Moreover, the nature of the soil and the climate are mainly responsible for the destruction of many structures. Both conditions encourage growth of wild vegetation which also causes damage to

many structures (Brown, 1965, p. 149). During the excavation of Paharpur mahavihara, the whole area, especially the central shrine, was full of wild vegetation. Moreover, it is also evident that an earthquake in 1897 was responsible for destroying most of the historical monuments of Bengal (bssa.geoscienceworld.org). So there can be many reasons for the total damage of the Paharpur Mahavihara. On the other hand, Pala kings were responsible for the introduction of Mahayana Buddhism in other parts of India, Tibet, Bhutan, China, Myanmar, Cambodia, Indonesia. So the Mahavihara of Paharpur is linked with the contemporary and later developments of these countries, thus giving the authors some clues about its morphology, form and structure.

TIMELINE OF BUDDHIST HISTORY AND MAJOR DEVELOPMENTS ON THE SUBCONTINENT FROM 624 BCE TO THE 12TH CENTURY

624-560 BCE	Birth of Buddha
589-525 BCE	Enlightenment of the Buddha in Bodhgaya. Buddha introduced the world to the Four Noble Truths and commencing his career of teaching the religion he called "Dhamma vinaya".
544-480 BCE	Passing away of Gautama Buddha.
268-232 BCE	Reign of King Asoka in India, who converted to Buddhism and became an important patron of the religion. Asoka established Buddha's dharma on national level, and Buddhist rock-cut architecture, began Hinayana Buddhism and established Hinayana Buddhist viharas and monasteries.
200- BCE	Beginning of Mahayana Buddhism.
100- BCE	Establishment of Great Stupa at Sachi, India.
100- BCE	Buddhism established in Cambodia and Vietnam (150 C.E). Buddhism enters central Asia and China.
3 rd cent. CE	Establishment of Great Amaravati Stupa, Andhra Pradesh, India. Expansion of Buddhism to Burma, Cambodia, Laos, Vietnam and Indonesia.
350-550 CE	Gupta empire, during which Buddhism flourished through the subcontinent.
5 th cent. CE	Buddhist monastic university founded at Nalanda, India. Establishment of Buddhist famous religious structure-Mahabodhi temple at Budh-Gaya, India. Mahayana Buddhism was introduced into Java, Sumatra and Borneo by Indian Immigrants.
7 th cent. CE	Establishment of famous stupa, shrine and monastery at Sarnath, Benares, India. Buddhism flourished in Bengal. Buddhist scholars of Bengal contributed to the development of the Nalanda monastery which was situated in Magadha.
8 th cent. CE	Establishment of Pala dynasty in Bengal, under which Buddhist religious structures reached their peak. Beginning of "Sharvatavatra type", establishment of Paharpur at Rajshahi, Bengal and Vikramashila Vihara at Bihar, India. Establishment of Shalban Vihara, Mainamati in Bengal. Borobudur temple complex built in Java.
11 th cent. CE	Establishment of Ananda Temple at Pagan, Myanmar.
12 th - 13 th cent. CE	The Moslems attacked and conquered Magadha and other parts in Bengal and with the destruction of the Buddhist monasteries and universities Buddhism was wiped out. Establishment of Angkor Wat, Cambodia.

ANALYSIS OF BUDDHIST ARCHITECTURE AND ITS TRANSFORMATION

From the beginning Buddhist architecture has evolved into many forms during the years of development. Therefore, the analysis of Buddhist

architecture for this paper, can be explained in two stages. The first stage studies the evolution of the Buddhist monument from stupa to temple in order to understand its transformation of form and force affecting its alterations. The second stage includes a study of the development of Buddhist shrines and its surrounding cells for Buddhist monks known as viharas.

EVOLUTION OF BUDDHIST TEMPLE: FROM STUPA TO TEMPLE

The stupa is the rudiment of the architectural form of Buddhism. The first appearance of a stupa was hemispherical in form. The plan, elevation, section and total form of stupa were derived from the circle (fig.02). In the centre of this domical mound there is a space left for the receptacle containing the relic of Buddha and a circumambulatory path built into the superstructure. Pilgrims and worshippers used this path to walk around the mound. In the later phase of development the stupa was enlarged to double its

size. The top of hemispherical mound was flattened to make a place for a circular platform from the middle of which rose a three tiered stone umbrella. This was set inside an enclosure of a low stone fence or chhattrayasti. The upper circumambulatory path was introduced and a torana (gateway) was added at the cardinal points. The Stupa at Sanchi is a remarkable example of this type (fig.03).

Eventually as the circumambulatory path was open to the sky, Buddhists decided to build indoor places for worship. So the Chaitya hall was developed. Chaitya halls are covered, rectangular buildings or

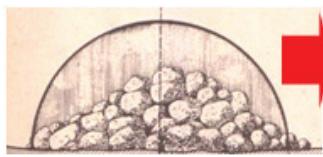


Figure 2: First form of Stupa.



Figure 3: Stupa at Sanchi,
1st century BCE

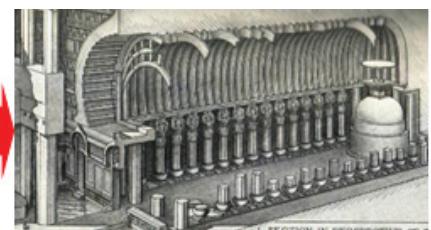


Figure 4: Stupa at rock-cut Chaitya Hall,
Karli, 1st century BCE



Figure 6: Mahabodhi Temple, Bodh-Gaya,
5th century CE

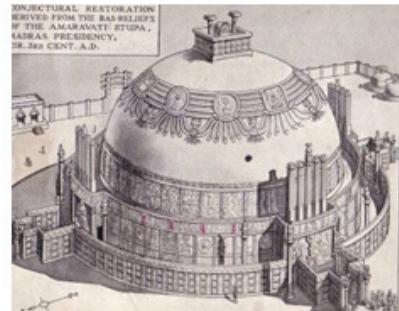


Figure 5: Amaravati Stupa, Madras,
3rd century CE



rock cut caves with a semi-circular wall behind a mini-stupa (fig.04). During the 3rd century CE. a stupa was erected at Amaravati and is probably the biggest stupa in India. This stupa has a hollow core filled with rubble stone and covered with a marble casing richly ornamented with intricate details. The cardinal points of upper circumambulatory path were marked by clusters of free standing pillars or aryakas. The toranas were replaced by stambhas and planted at regular intervals along a lower circumambulatory path (fig. 05).

In the next phase of development, around the 5th century A.D. Mahayana Buddhism had acquired prominence. Emphasis was then shifted to temples that were fashioned after Hindu shrines. Instead of worshipping the stupa, the image of Buddha was venerated (Grover, 1980, p.95). Mahabodhi temple at Budh Gaya (fig. 06) is one of the earliest, remarkable Mahayana Buddhist temples on the Indian subcontinent. Starting in the 6th century A.D., Buddhist temple architecture flourished and continues until today.

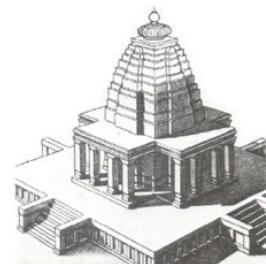
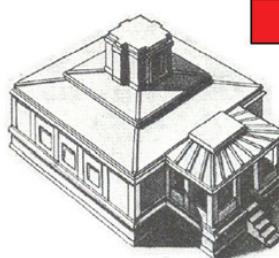
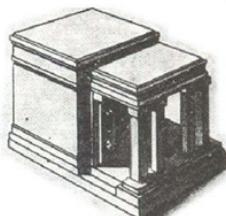
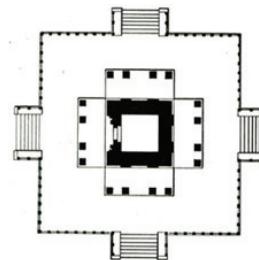
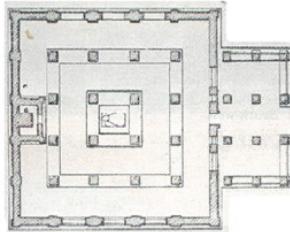
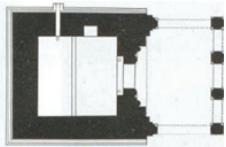


Figure 7: Gupta Temple, 415 CE.

Figure 8: Lad Khan Temple, 450 CE.

Figure 9: Deogarh Temple, 500 CE.

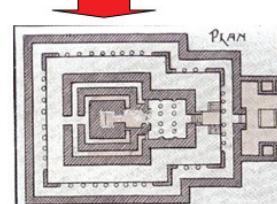
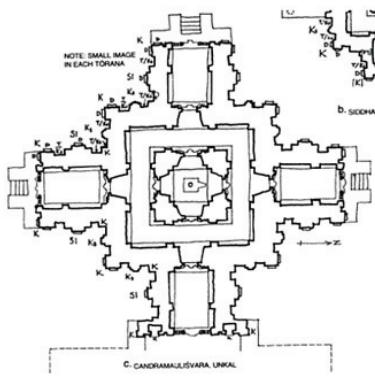


Figure 12: Chandramaulisvara, Unkal 1200 CE.

Figure 11: Vishwanatha Temple, 1000 CE.

Figure 10: Vaikunthaperumal Temple, 710-720 CE.

EVOLUTION OF BUDDHIST SHRINE

In order to identify and comprehend the formal evolution of Buddhist shrines, it is necessary to understand the forms and features of Hindu temples. In its evolution, the Buddhist temple largely adopted the generic elements of Hindu temples. Therefore, the formal evolution of Hindu temple is briefly discussed.

In the early stages of development during the Gupta period, Hindu temples appeared as a sanctum of stone called garbha griha, a flat roofed square chamber, having no opening except the doorway. In front of this was a shallow porch (fig.07) which was enlarged to form a pillared portico in later Gupta structures. In the next phase of development, the small hall was transformed into a large square hall, roofed with sloping stone slabs, as in the example of the Ladh Khan Temple. In the middle of the rear wall of the main hall, a square portion was partitioned to create the garbha griha. The mandapa is a double row, pillared hall with a portico in front (fig. 08). Gupta temples reached their culmination in the Deogarh Temple dating 500 CE. In this example the rudimentary and ineffective convention of a flat roof was eliminated and the upper portion of sanctum

was carried upward in the form of pyramidal tower. The base of the shrine was elevated by being placed in the centre of a square terrace. The most notable feature is the arrangement of the portico. Instead of one, there are four porticos projecting from each side of the central structure with a flat roof supported by four columns (fig.09).

Later, during 700 CE it became the practice to enclose the temple within a rectangular courtyard by a continuous range of cells (fig. 10). The later phase of development includes unification of the sanctum, mandapa and [?] in a row; thus forming an intermediate chamber called an antarala. Leading up to the mandapa was an ardha-mandapa and there was a transept on each side of this central hall known as maha-mandapa. Circumambulatory paths were placed around the garbha-griha, the mandapa and the ardha-mandapa (fig. 11). In this class each has its separate pyramidal roof rising in regular gradation from the lowest, over the porch to the lofty spire over the sanctum. Later, a new plan for Hindu temples was developed and named the "Sarvatobhadra plan". It featured having four doorways, one in each direction and encircled by an enclosure wall (N.K.



Figure 13: Mahabodhi Temple at Bodh Gaya,
5th century CE.

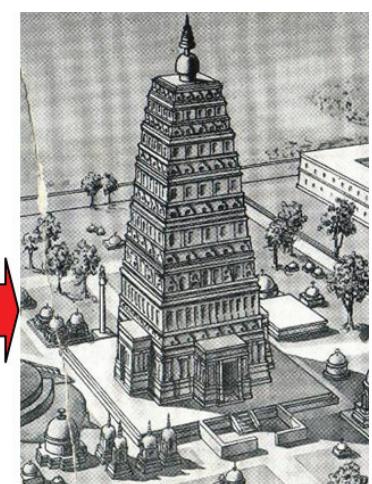
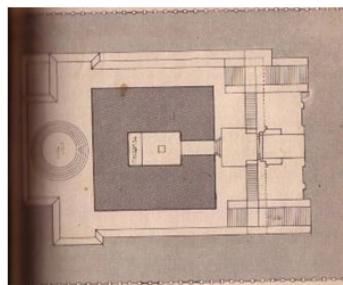


Figure 14: Sarnath at Benaras,
7th century CE.

Singh, Encyclopedia of Hinduism, Volume 7). One of the notable examples of this plan is the temple of Candramaulisvara, Unkal constructed during 1200 CE.

As stated before, Buddhist temples began to flourish after Mahayana Buddhism had acquired prominence. Buddhists took their inspiration from the contemporary Hindu temples during 5th century. For example, the Mahabodhi temple has similarities with the Bhitargaon temple, near Cawnpur; which is the first brick temple having a shikhara (Brown, 1965, p.41). The ground floor of Mahabodhi temple consists of a high and broad plinth, on which rises a lofty pyramidal tower, each section a progressively smaller square. At each corner of the terrace is a turret, a copy on a smaller scale, of the central tower. Corner towers, echoing the shape of the main spire, were built to conform to the Hindu *panchayatana plan of a five-shrined temple*. *The Buddhist temple of Sarnath is another great centre for pilgrims. Sarnath's tower, with its seven receding stories, rises to a remarkable height similar to the Mahabodhi temple. Inspiration for Sarnath was derived from the elongated stupas of Gandhara and Sikkharas' Hindu shrines. To distinguish it from a Hindu temple, a miniature stupa and a harmika pinnacle were mounted at the apex of the pyramid. The four cardinal points are adorned with projected porticos.*

Significant Buddhist developments can be seen in the area of Bengal where Shalban Vihara is located. The plan of Shalban Vihara is unique as it is built roughly on a square and is a monumental edifice arranged around a central shrine. Deep archeological digs of inside and outside cells and of the central shrine reveal four clear periods of occupation from the 8th to 12th centuries CE. Built by the last Deva ruler Sri Bhava Deva; the early period shrine was built on a stupendous scale.

Ringed by an embellished plinth with pointing angles and recessed corners, its plan resembles a Greek cross with chapels built into the projecting arms facing cardinal points. From its size, it is estimated that the structure attained a considerable height. The approach was from the north, leading to a wide ambulatory passage, which surrounded the entire building, accessing the chapels in the projecting arms.

The second building phase saw a complete change in the plan of the shrine with the cruciform shape being replaced by an oblong one, also facing north. It consists of a square entrance hall with a pillared pavilion in the centre and a number of spacious chambers and oblong passages. In the third phase, the oblong plan was retained on a reduced scale. The revealed structure indicates a broad staircase on the north side leading to an entrance hall with a pillared pavilion in the centre. It was connected with the Chaitya hall. The worship chamber, with a tiered pedestal, is on the southern side of the hall surrounded by the pradakshina path. The side rooms also echo the chapels. The remains of the last period were too scanty to give an idea about its original shape.

Paharpur Vihara was built in the same era as the Shalban Vihara and was constructed by Pala King Dharmapala. Dominated by a soaring central shrine, the huge complex is surrounded by 177 monastic cells and includes gateways, votive stupas, minor chapels, a reservoir and a multitude of other structures. It is distinguished by its cruciform shape with angles of projection between the arms. Paharpur's three terraces gradually diminish as they rise with the third terrace containing an antechamber and a mandapa on each face. Portions of the terraced walls are eliminated at each corner of the square. Carved brick cornices, friezes of terracotta plaques and stone reliefs form a complex decoration that adorns the walls. The final shape of the structure is still unknown. Perhaps the centrally placed hollow square on the top terrace gives a clue to the overall conceptual plans for this spectacular structure.

Another contemporary Buddhist vihara is Vikramashila vihara, constructed by Dharmapala during the 8th century in Bhagalpur, Bihar. The Archaeological Survey of India (1972-82) revealed a huge, square monastery with a brick cruciform stupa laid in mud mortar in its centre, plus a library and a cluster of votive stupas. This cruciformed, two terraced shrine is accessible through a flight of steps on the north side. Four protruding chambers, each with a pillared antechamber that has a separate pillared mandapa, are placed in front of the four cardinal directions. The architecture of

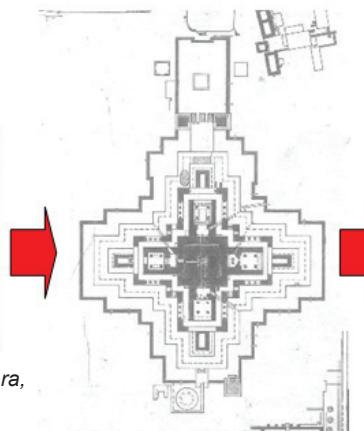


Figure 15: Central shrine of Shalbon Vihara,
7th / 8th century CE.

Figure 17: Vicramashila Vihara
at 8th century CE.

Figure 16: Central shrine of Sampura /
Paharpur vihara, 8th century CE

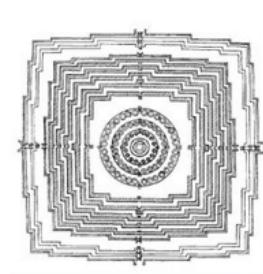
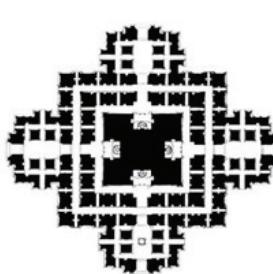
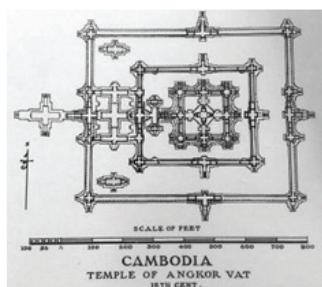


Figure 20: Angkor Vat, Cambodia
12th century A.D.

Figure 19: Ananda Temple at Pagan
11th century CE.

Figure 18: Temple of Borobudur
8th century CE

the stupa and the themes of terracotta plaques of Vikramasila Mahavihara are comparable to Somapura Mahavihara, Paharpur. Both plans are very similar except that the Vikramasila monastery is larger and has fort like projections on its outer wall (vikramshilauniversity.com).

Eventually other Buddhist temples of various forms flourished in South-East Asian countries. The Temple of Borobudur (fig. 18) in Java is a square plan, but its flat lines are interrupted by projecting faces. It has three elevated terraces, which make up the square formation of the building and each is approached by a flight of steep steps through arched doorways. The stupa's general configuration is a low pyramid, but above the third terrace this pyramid becomes truncated to produce a wide flat surface. Here the square system ceases and a circular formation is introduced. Over the square platform are three circular terraces, each diminishing in size, on which rises a series of smaller stupas

The Ananda temple in Pagan is another unique Buddhist development. (fig.19) It is cruciform in shape and its extended porticos reach out to produce four extensive arms, thus converting the whole into a Greek cross similar to Paharpur and Vikramashila central shrines. In addition to the main spire, which rises above the centre of the building, there are other supplementary pinnacles over the angles of the receding roofs and above the porticos. These elements represent two traditions; the central spire is derived from the Indo-Aryan sikhara, while the lower and subsidiary turrets may be termed a pagoda variation of the stupa.

Angkor Wat in Cambodia, is considered to be the largest and most impressive stone Buddhist temple in existence. The immense stone platform of the temple is square and in the centre of it the temple gathers itself up into a towering turreted mass. The interior porticos resolves itself into a square plan of pillared halls with two diametrical corridors crossing the rectangle of the central space leaving four open courtyards, one at each angle. Entrance halls are symmetrically grouped on the wide raised terrace. In the open parts of this terrace, on each side of the entrance halls, small detached shrines have been placed, recalling the Panchayatana planning

of temples. The temple consists essentially of three rectangular galleries rising to a central tower; each level higher than the last.

Many other remarkable Buddhist developments have flourished for many years but in relation to the Paharpur central shrine, those which are discussed above are the most relevant examples. .

EVOLUTION OF THE VIHARA

Along with the Buddhist stupas and temples, another architectural style was developing in other parts of the sub-continent. This took the form of Buddhist monastic establishments. Buddhist rock-cut architecture can be divided into two categories; chaitya halls with monasteries and viharas. Generally viharas consists of large halls and chambers enclosing an open-to-sky court. The viharas are studied for their relevancy to the Paharpur Vihara and focuses on structures from the beginning of the 2nd century BCE to the 8th century CE.

Rock-cut Buddhist viharas in India resolves itself into two distinct movements. The earliest is the Hinayana phase. The viharas of this phase are characterized by the open simplicity of the central hall. This assembly hall was a large square compartment, its space uninterrupted by any formation of pillars or colonnade (fig.21) and had cells opening out from to three interior sides. Here the central hall corresponded to the open courtyard. Most of these Hinayana viharas are single storied, but there is also some evidence of double storied viharas. Eventually during the period of 250 BCE to 450 CE the architecture of viharas followed the "Gandhara" style. The mixing of Romano-Greek and Indian motifs is the embryo of the architectural style which is known as "Gandhara" style. The monastery of Takht-e-Bahi is one of such examples. But this period of development was very short lived.

Next was the development of Mahayana viharas. The Mahayana Buddhist movements at Ajanta and Ellora appear to have begun about the middle of the 5th century CE. Mahayana viharas are characterized by the arrangement of pillars in the main hall. For example, (fig 22, top) the design of four pillars



Figure 21: Example of Hinayana vihara,
Ajanta XII, 2nd century CE

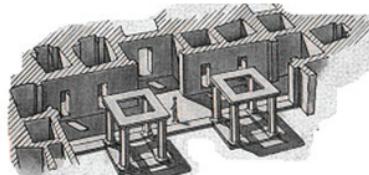


Figure 22: Example of Mahayana
vihara, Ajanta VII and
VI 450 A.D-642 CE

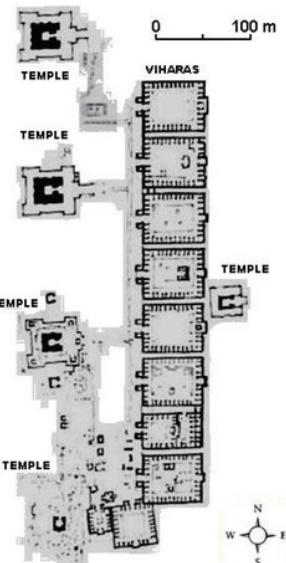


Figure 23: Nalanda University
5th century CE

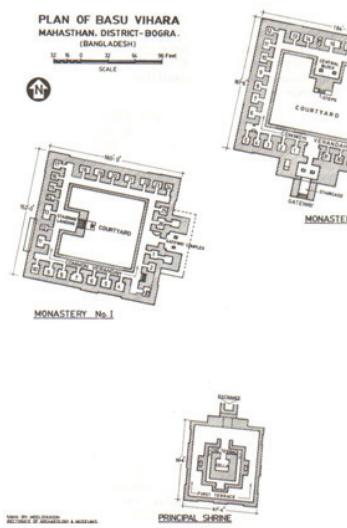


Figure 26: Bhasu vihara,
8th / 9th century CE.

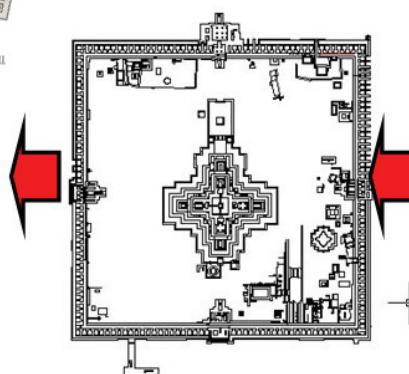


Figure 25: Sampura / Paharpur vihara,
8th century CE.

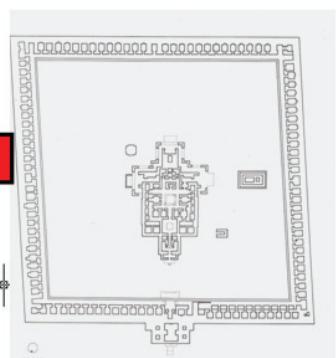


Figure 24: Shalbon vihara,
7th / 8th century CE.

suggests a square shed, occupying the centre of the courtyard. Placement of two such sheds side by side became necessary in a structure of larger dimensions. Later this developed into a colonnade on all four sides, which is a satisfactory and logical system adopted in all subsequent vihara halls (fig. 22, bottom). In the Mahayana phase, two or three storied viharas were prominent in addition to the one storied vihara,

Eventually, from 5th century CE a range of monasteries grew up during the Pala period in ancient Magadha (modern Bihar) and Bengal. Nalanda was one of them. Nalanda was the world's first residential university, it had dormitories for 10,000 students. The viharas of Nalanda used a common layout. The general plan formed a rectangle bounded by an outer cell with an open veranda. The important

feature of this vihara was a collection of smaller monastic blocks arranged in a line on one side with shrines, pavilions, and courts on the other; the two sections being enclosed by walls and thus forming one whole (fig. 23). The temples and monasteries are in two parallel rows, the temple facing east and the monasteries west, the wide space in between is sometimes occupied by shrines. The dimensions and dispositions of rooms within monasteries are almost identical.

Shalban Vihara (fig. 24), Bengal, built during 7th century CE, is the most important of excavated sites. This vihara is arranged in four wings around a central shrine and its single entrance is placed in the middle of the north wing. The single gateway, with its guardrooms and the dreary look of the massive outer wall, has given it the appearance and utility of a citadel necessitated by the increasing wealth of these establishments and the insecurity of the period.

Similar to Shalban is Paharpur (Sompura) vihara. In Paharpur, besides the main gateway to the north, there was a quadrangular subsidiary entrance through the northern enclosure near its eastern end. There was no arrangement of ingress on the southern and western sides, but possibly a small passage in the middle of the eastern block was provided for private entrance. The entire establishment, occupying a quadrangular court, has high enclosure walls. The whole area is connected by a spacious verandah running continuously all around and is approached from the inner courtyard by a flight of steps located in the middle of each of the four sides.

Another mentionable vihara is Bhasu vihara of the 8th century CE; locally known as Narapatir Dhap. It is a complex of two rectangular monasteries and a semi-cruciform shrine of the Post-Gupta period. Monastery 1 is built of burnt bricks set in mud mortar this was roughly a rectangular plan. A series of monastic cells were arranged on the four sides of a square courtyard. Monastery 2 lies to the northeast of Monastery 1 and was broadly similar in plan. Monastic cells are set at the back of a veranda around an open courtyard, access was provided by a single gateway. Many other similarly planned viharas like Sitakot Vihara and Jagaddala Vihara were built during this period.

ANALYSIS OF PAHARPUR MAHAVIHARA

Since the Paharpur monastery was excavated in a dilapidated condition, its actual form can't be revealed yet. But other important Buddhist structures like the central shrine of Vikramashila Vihara, central shrine of Shalban Vihara and Borobudur Temple is a contemporary of Paharpur. Moreover, latter Buddhist developments like Ananda Temple in Pagan and Angkor Wat in Cambodia have some similarities with Paharpur's central shrine. Again the viharas like Nalanda, Bhasu Vihara, Sitakot Vihara have some similarities with Paharpur Vihara. Therefore, these Buddhist developments are analyzed in this paper to surmise the actual form of Paharpur's central shrine and vihara.

FORM AND MORPHOLOGY OF THE CENTRAL SHRINE

In some secondary sources, it has been said that the central shrine of Paharpur has similarities with the temple of Borobudur or Angkor Wat. But in analyzing the form and morphology of the central shrine of Paharpur it is realized that it is similar to the central shrine of Shalban Vihara, Vikramashila Vihara, Kalasan Temple in Java and Ananda Temple in Pagan of 11th century. It is unlike Borobudur and Angkor Wat. Paharpur's plan has a comparable placement of the sanctum with Mandapa and an antechamber at the cardinal points of cruciform like the central shrine of Shalban Vihara (first phase as shown in fig. 28). As the Paharpur monastery was built about half a century after Shalban Vihara and the site locations are close, it may be assumed that Paharpur's design may be influenced by the central shrine of Shalban Vihara. The square lay-out of the monastery, the cruciform plan of the shrine and the terracotta plaques found at both the sites are either identical or strikingly alike (Mainamati, p.11). The central shrine of Vikramashila Vihara, made by Dharmapala, is similar to the design of the central shrine of Paharpur except Vikramashila Vihara is larger and its central shrine has two projecting terraces (fig. 34) while Paharpur's has three terraces (fig. 35).

On the other hand, the plan of Paharpur's central shrine is also similar to the *savatobhadra* type - a square shrine with four entrances at the cardinal points and with an ante-chamber on each side,

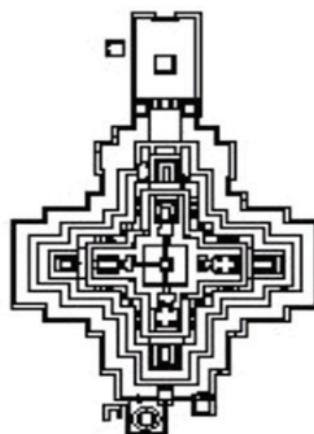


Figure 27: Central shrine of Sompura / Paharpur vihara, 8th century CE

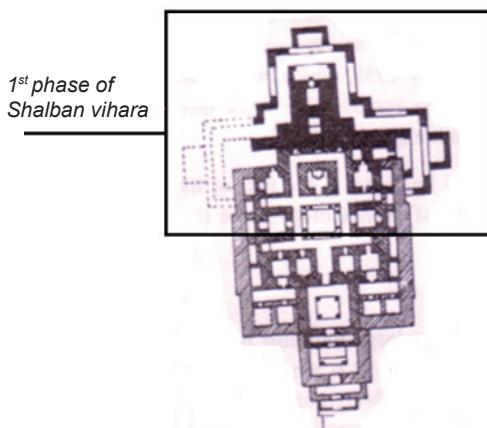


Figure 28: Central shrine of Shalban Vihara, 7th / 8th century CE.

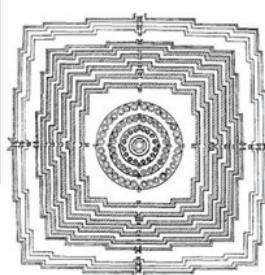


Figure 29: Temple of Borobudur 8th century CE.



Figure 30: Ananda Temple, Pagan 11th century CE

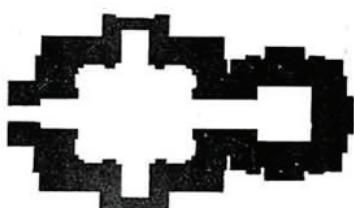


Figure 31: Plan of Mukteswara Temple (Nagara style) 950 CE

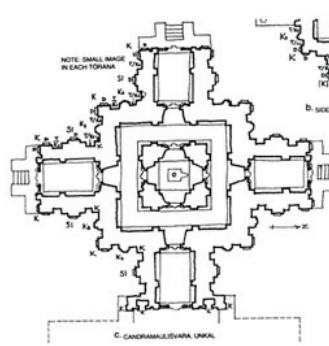


Figure 32: Candramaulisvara, Unkal 1200 CE



Figure 33: Kalasan, Central Java 778 CE



Figure 34:
Cruciform projections of Vikramashila's Central shrine



Figure 35:
Paharpur's central shrine with cruciform projections

chatuhshala griha. In addition to that the shrine also supports the idea of the Nagara style (fig. 31). According to this design, the temple is a square with a number of graduated projections in the middle of each side. These projections give it a cruciform shape with a number of re-entrant angles on each side. In elevation it exhibits a tower gradually inclining inwards in a convex curve. The projections are also carried upwards to the top of the shikhara. As the development of the Nagara style took place from 7th to 13th century CE this style also could have influenced the design of Paharpur's central shrine.

Moreover, the Jaina temples of Khajuraho belong to the Central Indian expression of the Nagara temple style. In addition to that, a distinctive Jaina iconographic motif, seems to have been responsible for inspiring Indian temples, a type that may be found to have significant reverberations in South East Asia (jainology.blogspot.com). A four-faced image, usually known as Chaturmukha or Caumuha, has been a very popular Jaina iconographic theme from early times. Such an image has been described as Pratima Sarvatobhadra in inscriptions from early centuries of the Christian era. It takes of the shape of solid square obelisque with images on each of its four faces or sides. It is important to observe that the Jainas had conceived a four-faced votive object which is naturally and logically expected to be approached from the four directions. The fundamental design of a sarvatobhadra temple admirably suits the needs of a four-faced Jaina image, pratima sarvatobhadra. The name sarvatobhadra for the architectural design

appears to have significant relations with the term sarvatobhadra used for the iconographic motif. The type of shrine with four doors on four cardinal faces appears to have evolved by the Jainas for proper placement of their sarvatobhadra images at a fairly early date. Among the Buddhists, the idea of Jaina sarvatobhadra is expressed in votive temples like Paharpur, Shalban and Vikramashila vihara. In each of them is a shrine surmounted by a sikhara, the cubical block in the lower section having four figures in niches. These votive offerings of Buddhist affiliation echo the motif of the Jaina sarvatobhadra and reproduce the design of a four entranced shrine. The Jaina motif of a four-faced altar appears to have served as the model for imitation by the Buddhists.

In the Ananda temple in Pagan, one finds, a notable example of a four-faced shrine that might have started with the Jainas for the purpose of housing their chaturmukha images. Close parallels to the architectural style exist on Central Java at Kalasan. But since both the examples are dated later than Paharpur it is not unreasonable to assume that this was an original conception, signifying the development of an indigenous style of religious architecture; the synthesis of Hindu and Buddhist elements during the 7th-8th centuries BCE. Additionally, since a large number of shrines with similar ground plan lie buried in the neighborhood of Paharpur and others are known to exist in different parts of the country this style also travelled from Bengal to the South-East Asian countries with the spread of Buddhism. (Mainamati, p.11).



Figure 36:
Mahabodhi, 500 CE.

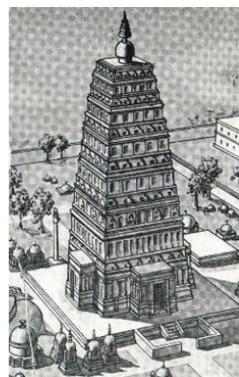


Figure 37:
Sarnath, 700 CE

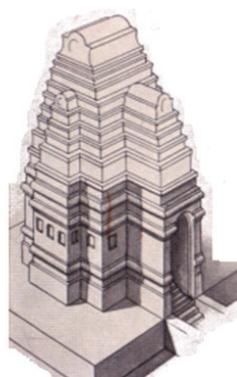


Figure 38:
Bhitargaon, 400 CE

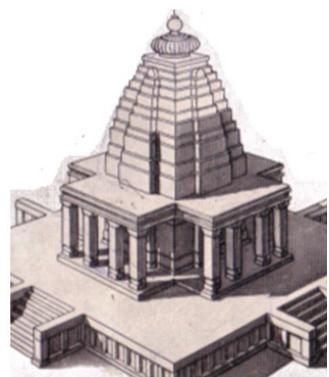


Figure 39:
Deogarh, 500 CE



Figure 40:
Perspective of Ananda temple at Pagan

CROWNING TOWER OVER CENTRAL SHRINE AND THE ROOFS OF MANDAPA

At Paharpur, the huge masonry of the central shrine is an example of a shikhara type roofing attaining a considerable height. The abnormally thick walls of the inner cells are indicative of a huge load of overhead planes. This kind of load on such a small span can only be created by the overhead superstructure of a shikhara style of roofing. The Mahabodhi temple was a well known holy place for Buddhists. Pala King Dharmapala visited Mahabodhi temple several times. So it seems that Dharmapala was influenced by the Mahabodhi temple to build the superstructure of Paharpur Mahavihara (S.M. Akbar, 84). But at the same time it is also observed that the plans of Mahabodhi and Sarnath are not similar to Paharpur, plans of Mahabodhi is square whereas Paharpur have a

cruciform plan. Again the Mahabodhi temple is said to have similarities with the Bhitargaon temple, as one can see a similar type of vast, heavy shikhara on the Mahabodhi as on the Bhitargaon. Again, the planning of Bhitargaon and Deogarh temple show some similarities with Paharpur's central shrine because both have projections in all four sides. The forms of shikharas of Bhitargaon and Deogarh are similar; both have projections from all four sides as shown in fig. 38 and 39. Since the Paharpur temple has similar projections from four sides it might have a similar kind of shikhara, like Bhitargaon and Deogarh. Therefore, the similarity of Paharpur with Mahabodhi is only maintained in the case of the form of Shikhara, not in the planning.

As the planning principles of Paharpur are similar to that of the Ananda temple at Pagan, it can be assumed that there might have some similarities in the roof treatment of the sanctum and the mandapa.

FORM AND MORPHOLOGY OF VIHARA

The raised platform outside the main complex has some exterior cell-like structures in northern and eastern side. The use and logical justification of these cells are not known yet. But these do not seem to be the parts of the original scheme, they might be later additions when some kind of orthogonal supports were needed to retain the walls in their original positions. But according to many other secondary sources, other monasteries like Vikramashila Vihara also have these cells-like structures outside the main complex for the shelter of guests and external students.

The thick wall between the corridor and the cells (fig. 43) reveal that it carried more loads than the other cell walls. It might be that both the cells and corridor were covered and the wall carried the load of both the cells and the corridors. On the other hand, the approach from the cells towards the central shrine is not defined. It seems that the corridor beside the cells might be enclosed by a thick wall on the courtyard side, as no evidence is found indicating the presence of columns along the corridor (fig. 44) but was found at the base of the wall. Except for the northern gateway, the purpose of three cardinal structures is not defined. The plinth of the corridor is much higher than the open courtyard of vihara and steps to the courtyard are only through the gate-like structures placed in the centres of the vihara's sides. Through this planning it seems that monks used to

get down to the courtyard only through these gate-like structures, not from all sides of the corridor, that's why the corridor was enclosed by walls.

The western part of the complex was abandoned earlier. The eastern portion had been in use for a longer span of time and the later developments concentrated on all the three sides except the west (Naqi and Mallick, p. 76). It might be the reason that most of the ancillary structures can be found near the eastern side of the vihara than the western side. Moreover, some secondary data reveals that the vihara of Paharpur might be multistoried but as no evidence of vertical circulation, like stairs, is found, so it can be assumed that the vihara was a single storied structure.

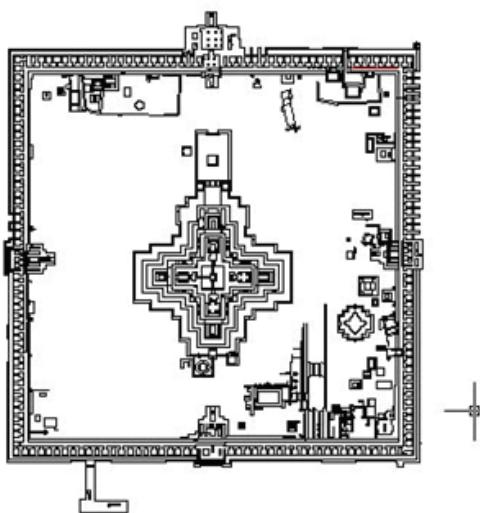


Figure 41:
Plan of Paharpur Vihara.



Figure 42:
Thickness of monastery walls.



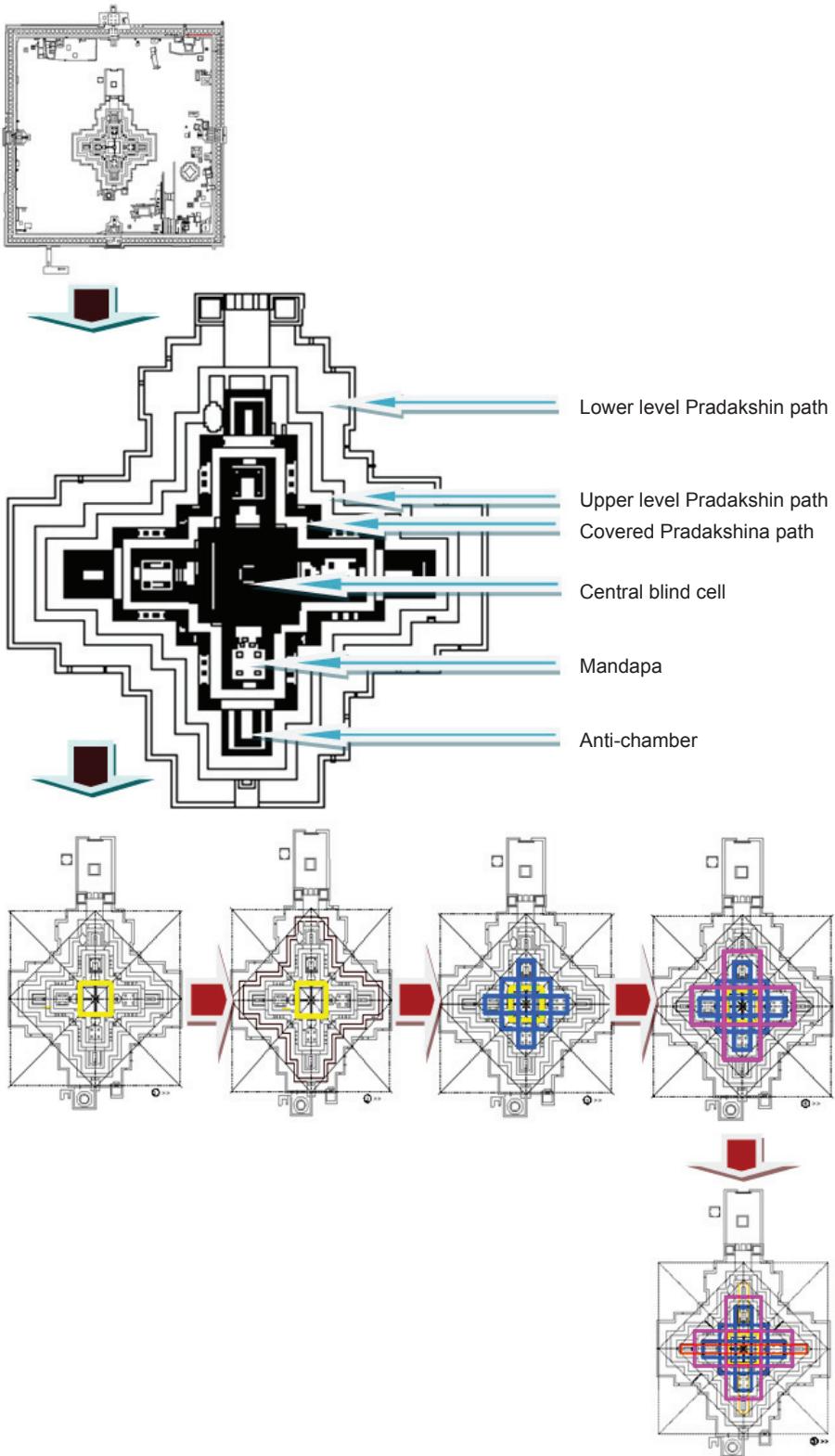
Figure 43:
Corridor between the cells and open courtyard.

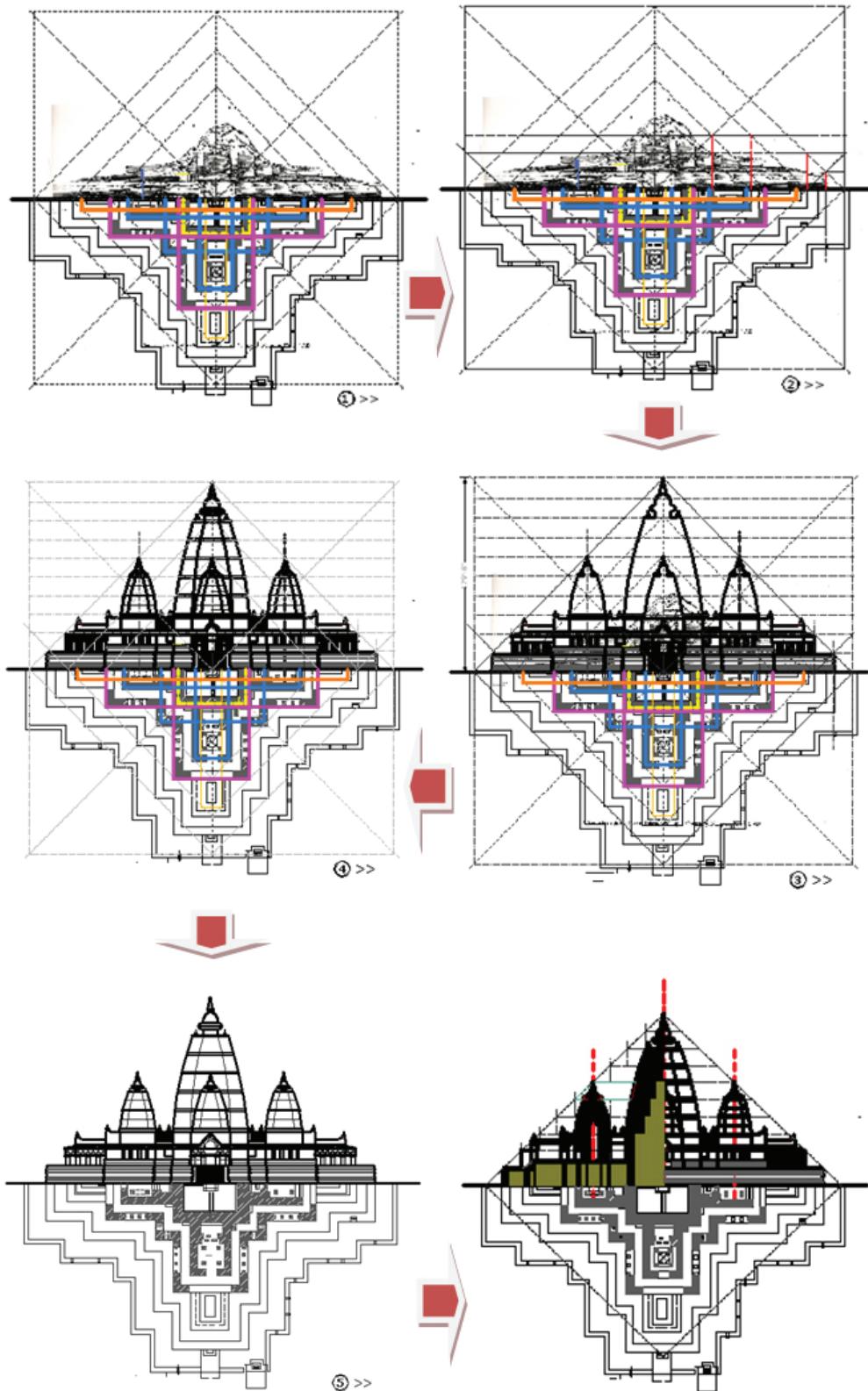


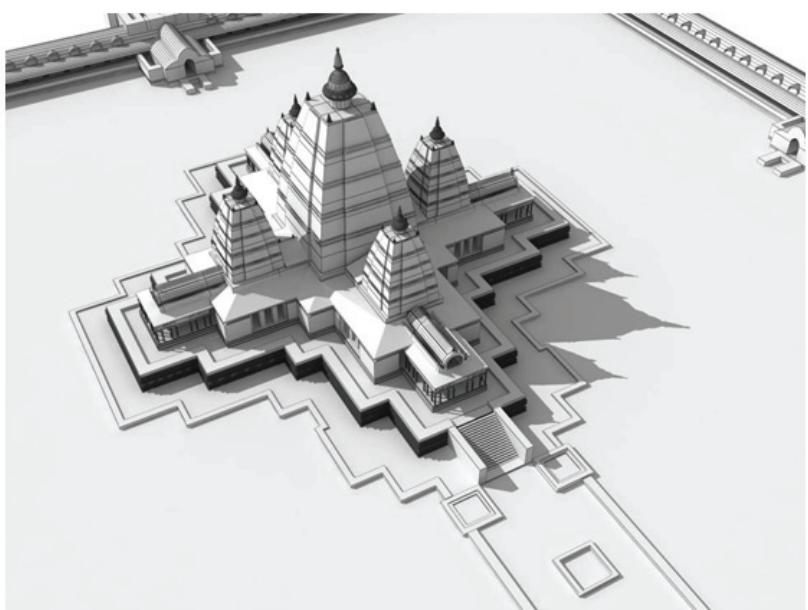
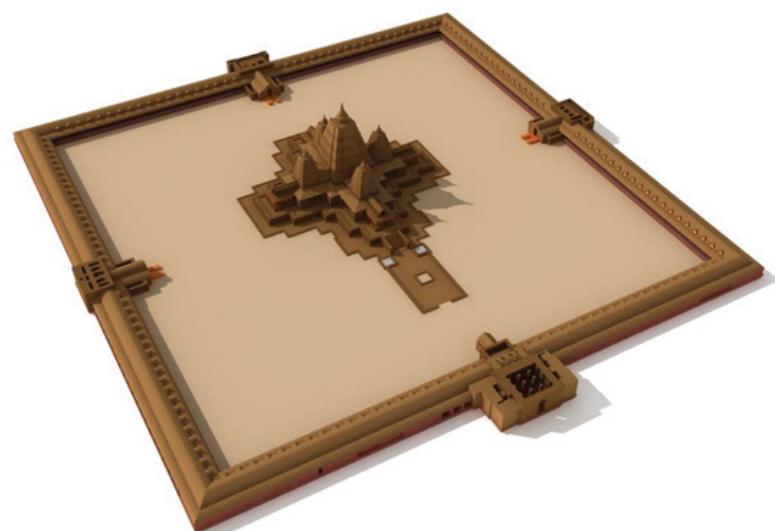
Figure 44:
Exterior cell like structures and open courtyard.



Figure 45:
Vihara of Angkor Wat.







CONCLUSION

Sompur Mahavihara or Paharpur vihara, the ancient Buddhist monument, drew the attention of the architectural historians of the South and Southeast Asia from the discovery of the ruins of the structures at the beginning of the twentieth century, because of their unique architectural features and strategic location. However, the limited amount of archaeological resource, literary evidences and epigraphic records at the disposal of the architectural historians appear as the main constraint. This study is an attempt to generate a conjectural restoration of Sompur Mahavihara by altering these constraints into opportunities that would accommodate different contesting narratives regarding its architecture. It looks into the history in a more dynamic way to reconstruct the lost heritage.

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