

The Designs of Religious Monuments of the Dvaravati, Khmer and Peninsular Regions (Chaiya School) in Thailand

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The study of civilization in Thailand is broadly divided into the Pre-Thai and the Thai periods. The Pre-Thai period covers the 6th to 13th and 14th century A.D. while the Thai Period is from the 14th century A.D. onwards.

In the Pre-Thai Period, the Dvaravati School flourished from the 6th to the 13th century A.D. The Khmer School on the other hand, started from the 6th to the 14th century A.D. This study will also include the Chaiya School of the



Fig.1 Brick stupa/chedi No.1, Dvaravati School. Ban Kok Mai Den, Nakhon Sawan Province, about tenth-11th century A.D. (after the Department of Fine Arts)

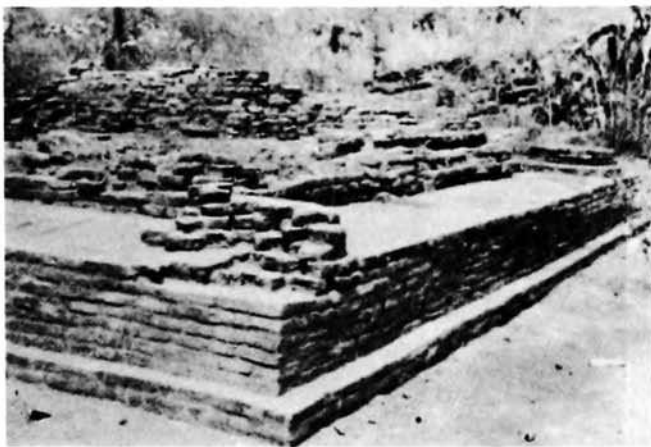
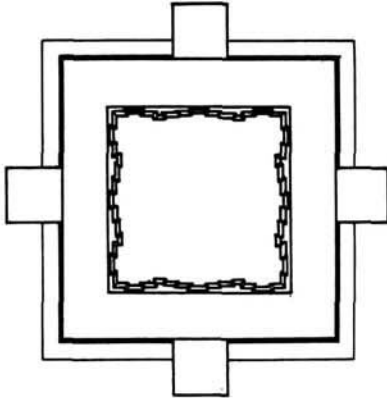


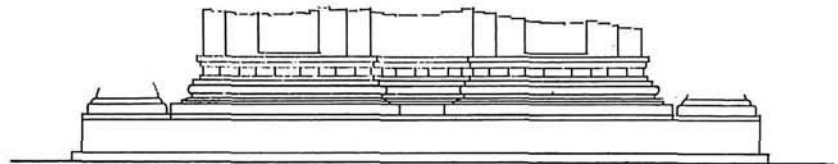
Fig.2 Brick stupa/chedi No.9, Dvaravati School. U-Thong/Suphanburi Province, about seventh-eighth century A.D. (after the Department of Fine Arts).



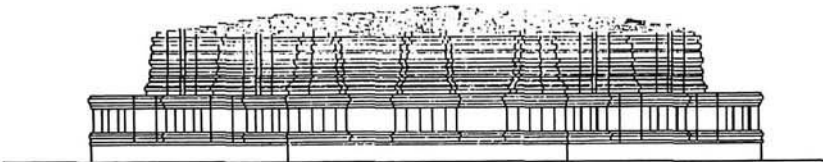
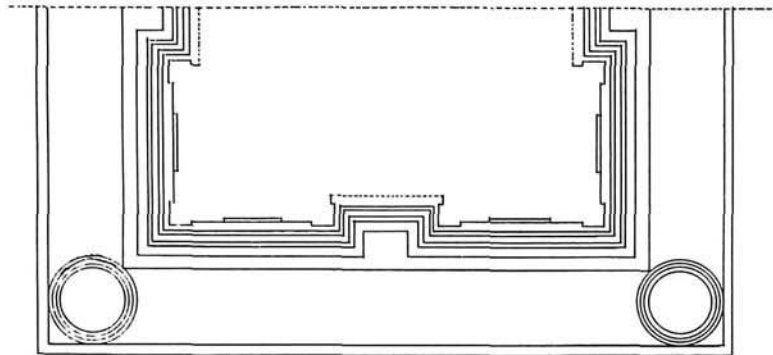
Fig.3 Brick stupa/chedi No.13, Dvaravati School. U-Thong Supanburi Province, about ninth century A.D. (after the Department of Fine Arts).



Plan 1. Plan and elevation of stupa/ chedi No.1. Ban Kok Mai Den, Nakhon Sawan Province, (After Fine Arts Department of Thailand.)



Plan 2. Plan and elevation of stupa/ chedi No.9. U-Thong, Supanburi Province, (After Fine Arts Department of Thailand.)



Plan 3. Plan and elevation of stupa/ chedi No.13. U-Thong, Supanburi Province. (After the Fine Arts Department of Thailand.)

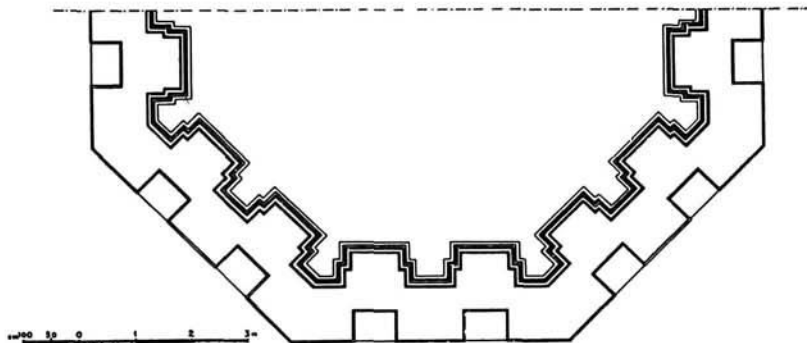




Fig.4 Brick stupa at Wat Chamdevi (Kukut), Lampun Province. Haripunchai/Dvaravati School, 12th century A.D.

Peninsular regions in Southern Thailand.

The Mae Nam Basin was the centre of the Dvaravati School. This school created the Buddhist monuments of the Theravada Sect. Its influence spread to the Northeast, the North and the South of Thailand. The Dvaravati School in the Central Plain received, more or less, a direct influence from India.

Henceforth, this Indian influence developed in Nakhon Pathom, U-Thong/Supanburi, Kubua/Rachaburi, Lopburi, Ban Kok Mai Den/Nakhon Sawan, and other urban or town settlements in the Central Plain.

The Buddhist monuments of the Dvaravati School in the Central Plain, the North and Peninsular regions comprise the *stupa* and the

dharmacakra (Wheel of the Law) on the pillar. There are two types of stupa: one type represents the cosmic symbolism and the other, called the *prasada*, is the terraced type.

Stupa structures representing the cosmic symbolism were built from the 7th century A.D. to the 11th century A.D. Arranged in a standardized manner, their design principles were quite rigid. With regards to its central point and perimeter framework, one can differentiate the stupa plans into two types: the square plan and the octagonal plan.

Square plan stupa structures with their standard design, are normally found in the central plains of Thailand. As to architectural remains, only the plinths and the small portions of the bases are the only ones found nowadays. Judging from these remains, it can be seen that the stupa bases were arranged in steps, before reaching the domes, which were evidently destroyed.

There were four steps from the first bases, approaching from all four directions to the plinth's platform. The elevations of the plinth were then divided by short pilasters into rectangular spaces, so as to be decorated by *jataka* stucco, motifs or other Buddhist iconographic figures.

Small stupa structures were also erected at the four corners. This completes the composition of the stupa as an entire symbolic structure.

The design of the square plan stupa had been rarely developed. In general, only the outline of the base (or including the plinth) had been modified. This was done by projecting and recessing the base's profile. But the outline of the plinth was normally square. (Figs. 1, 2).

The octagonal stupa is another



Fig.5 Brick stupa in octagonal form at Wat Chamdevi (Kukut), Lampun Province, 12th century A.D.

Fig.6A. Reconstructive drawing of Dharmacakra, Dvaravati School. U-Thong/Supanburi Province. Found at the west direction of brick stupa/chedi No.11. About seventh-ninth century A.D. Height 1.10 m. National Museum U-Thong. (after the Department of Fine Arts).

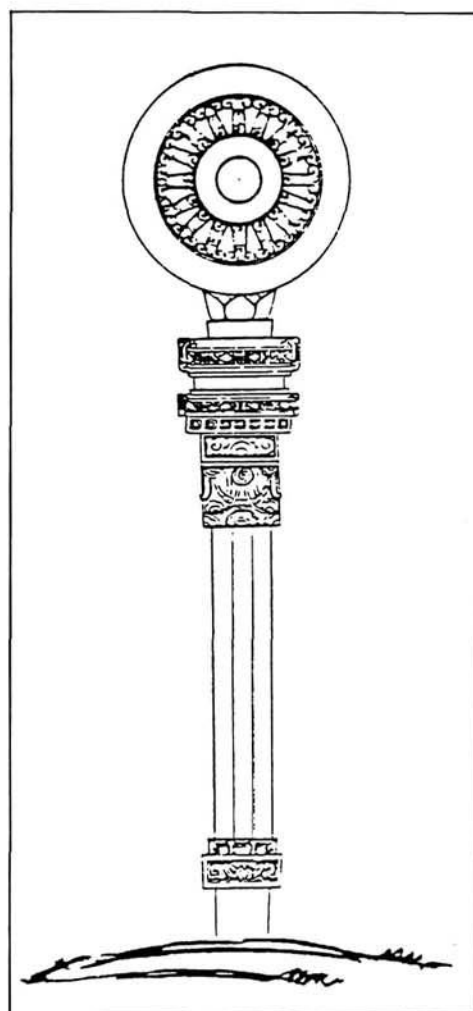
type of stupa, representing cosmic symbolism. The one found in U-Thong is a product of the period from the 9th to the 10th century A.D. This was the time when the Srivijaya influence reached the Mae Nam Basin. However, this stupa in U-Thong or what has been identified as Chedi No.13 shows that only the dual square base was changed to octagonal. The pilaster elements remain the same, with a slight change of pilaster style at the base.

The only octagonal stupa, remaining in perfect condition, is located in Wat Chamdevi (Kukut), Lampun Province. Lampun is known to be the centre of the Haripunchai kingdom from the 9th to the 13th century A.D. The stupa itself, however, dates from the 12th century A.D.

The architectural combination of Wat Chamdevi's stupa's plinth and the summit's base were all developed from the octagonal plan. The summit is bell or dome shaped. On each side of the tall plinth, a niche was formed to house a standing Buddha image. Another large terraced stupa (mountain type) has niches made in a similar fashion. It is located in the same area as the octagonal stupa just mentioned (Figs. 3, 5).

The terraced or mountain type stupa is a product of the Haripunchai School. Again, the only one that still remains, in perfect condition, is the large stupa at Wat Chamdevi (Kukut).

The stupa was intentionally designed as a symbol of Mount





Top left : Fig. 7A. slab type sema stone, Northeast Dvaravati School. Ban Non Khong, Chaiyaphum Province. Note the two carved rows of lotus petals at its base and the two large overlapping petals. This motif probably symbolizes Padamamula or the Brahmanamula symbol. Height over two metres.



Left: Fig.8A. slab type sema stone. Northeast/Dvaravati School. In situ at Chedi Klongkoi Noi, Yasotorn Province. Note the carved stupa relief at its central axis. About ninth century A.D., Height 1.2 metres.



Uppermost: Fig.9 Sema stone, a transition between slab and pillar type, Northeast/Dvaravati School. In situ at Wat Prabat Buaban, Udon-Thani Province. Note the carved Buddhist iconography above its lotus base. Height 1.70 metres.

Above: Fig.10 Detail of the iconographic relief on a Sema stone type, which was formerly a central stone.

Top right: Fig.11. A slab type sema stone carved with the Padamamula motif symbol, Northeast/Dvaravati School. Found at Nakhon Rachasima Province, about eighth century A.D.. Height 1.60 metres, Phimai National Museum.



Sumeru, the main core of Buddhist cosmology. The architectural elements of the stupa comprise the base, the central part which is the tiered cubical five storeys, and the spire. All these were integrated within the square plan framework.

The central part itself was designed in a terracial mountain fashion, that is, by placing five cubes in successive reduction on top of another one. On each side of the cubes, niches were made to house Buddha images in the attitude of reassurance (*abhayamudra*). Each storey of the cubical central part contained 12 Buddha images. Altogether there were 60 Buddha images.

Hence, apart from applying the symbol of Mount Sumeru as a framework of the design, another essential meaning included in the form of the mountain could have been derived from a particular *mandala* (space or boundary) (Fig. 4).

The Buddhist monument of the



Fig.12. A slab type sema stone carved with Brahmanula motif symbol. Northeast/Dvaravati School. Found at Nakhon Rachasima Province, about eighth century A.D.. Height 1.60 metres. Phimai National Museum.

Dvaravati school, known as the Dharmacakra with the pillar, is generally found in the Central Plain, the Peninsular Region, the marginal town of Sithep and Soong Nern district of Nakhon Ratchasima province. The combination of a dharmacakra erected on a pillar symbolises both the first sermon of the Buddha and the Cakravatin's (emperors') cakra in the Indian culture.

Two dharmacakra monuments, complete with components, were unearthed from the sites in U-Thong: at Chedi Nos. 2 and 11 respectively (Fig. 6 A, B).

Stone votive tablets were found at Kubua district and Chainat



Top most: Fig.13. A pillar type sema stone, square in plan, with double lotus petals at its base. It has a squared pillar and a tapered top. Northeast/Dvaravati School, about tenth-11th century A.D.. Height 1.50 metres. Khonkaen National Museum.

Above: Fig.14. The ruined brick base of the Buddhist ordination building at Muang Fa Daed, Kalasin Province. Note that two sema stones still remain at eastern direction (right corner of photograph). Northeast/Dvaravati School. About tenth-11th century A.D.

Top right: Fig.15. The brick prang of Prasat Phumpon, Surin Province. Khmer School, eighth century A.D.



Province. Both were reliefs, depicting the Buddha with a dharmacakra and pillar on his right, and a stupa on his left. This can only possibly mean that the dharmacakra with the pillar is a Buddhist monument. It represents the *cakra* of the *Cakravatin*. And the holy Cakravatin is the Buddha, ruling over other earthly Cakravatins.

The Northeast School of Dvaravati had a different tradition in their building of Buddhist monuments. They erected *sema* stone. And these sema stone are understood by archaeologists as not only Buddhist boundary markers but also stones erected according to the local belief on the upright stone concept. The belief has been existing and traditionally practiced since prehistoric culture.

There are two types of sema : the slab type and the pillar type. Both could have been developed from the 9th to the 11th century A.D.

The slab type sema was designed to represent a lotus petal. At the same time, each stone sema has its own symbol from the Buddhist Universe. When this type of sema is erected in a group to form a sacred boundary, they represent a lotus flower. Thus, a sacred space is created within a lotus flower in bloom (Figs. 7, 8). The main slab type sema is sometimes erected at the centre of the sacred boundary (sema mandala), such as the one found at Wat Phrabat, Buaban site, Udon Thani Province (Figs. 9, 10).

A group of red sandstone semas in the National Museum at Phimai, Nakhon Ratchasima had reliefs which probably depicted symbols of the *padamamula* (the Origin of Life) and *bhramamula* (the Evolution of Life) (Figs. 11, 12). These sandstone semas are believed to have been brought from Non Soong district,

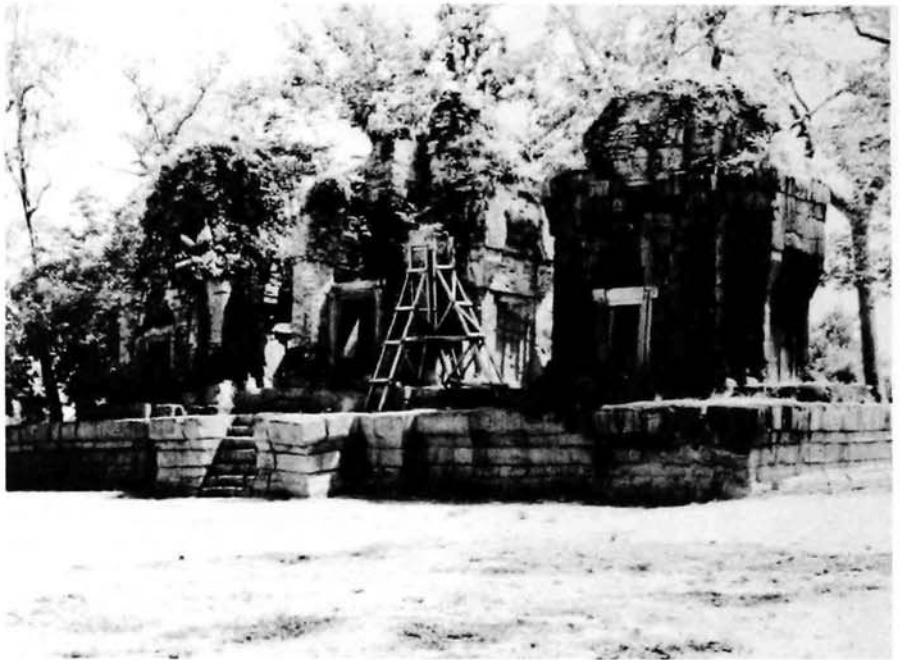


Fig.16. The main tower of Prasat Prang Ku, Srisaket Province. Made of brick and laterite. Middle of 12th century A.D.

Nakhon Ratchasima Province.

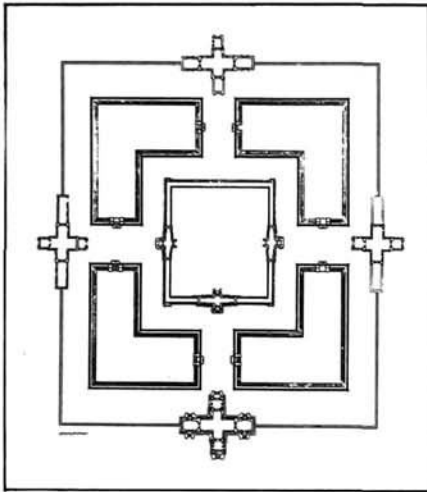
Another type of sema is the

square pillar. It was especially designed to create a sacred boundary. Normally, it is carved with lotus petals surrounding its base in a fashion similar to the slab type. The top of the sema is cut, tapered to form the apex of the pillar.

The square pillar represents a mountain. The symbolic meaning reveals the Buddhist Universe in the form of a mountain, similar to the stupa of Wat Chamdevi. The pillar type sema were erected to form a sacred boundary. They surrounded a building that was then a Buddhist ordination hall (Ubosot). Erecting sacred boundaries around important Buddhist buildings is a normal practice, as can be seen around the ordination hall at the temple of Muang Fa Daed, Kalasin Province. Erected as such, the pillar type sema appear to represent a mountain with ocean rings surrounding the cosmic core (Figs. 13, 14).



Fig.17. Five brick prang of Prasat Sikhoraphum, Surin Province. Middle of 12th century A.D.

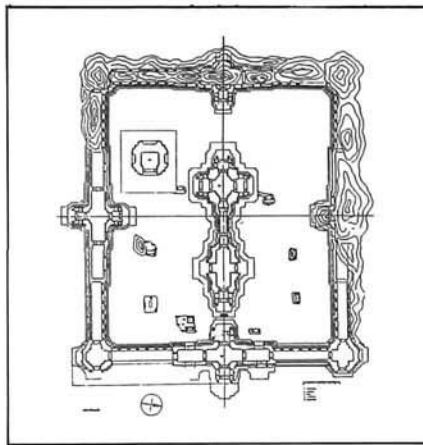


In Thailand, the religious sanctuaries from the Khmer School are mostly Hindu. They are found in the Northeast, East and in the Central Plain of Thailand. The Khmer art influenced the artistic style in Thailand from time to time depending on the central power of the Khmer Empire.

Khmer royal art style followed the Khmer tradition of the "Cakravatin" and his political territory. But the artists in the urban settlements or towns in Northeastern Thailand cultivated their own traditions and expressions through their artistic creations. This simply means that although their art style originated from the centre of the Khmer Empire, it was adapted to the local environment. The architecture of the Khmer School in Thailand, therefore, had developed its own local art.

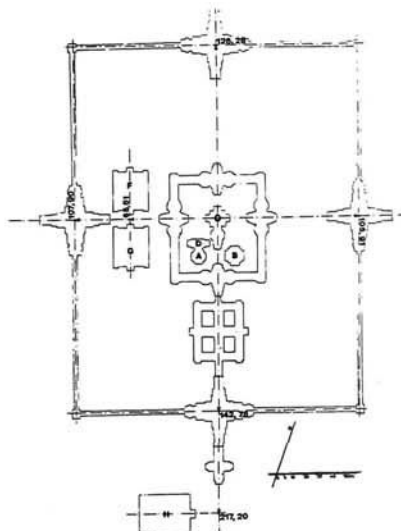
The design principle of these Khmer sanctuaries is genuinely of Hindu origin. The sanctuaries comprise a square mandala with a *bindu* (the most important point) at the central point. A bindu placed at the centre of the main sanctuary or *prang*, makes the whole sanctuary's plan rigidly square.

The Khmer sanctuaries found



Left: Plan 4. Lay-out of Prasat Muang Tam in Buriram Province, showing the gallery and the outer wall as double enclosures.

Above: Plan 5. Plan of Prasat Phanom Van in Nakhon Ratchasima Province.



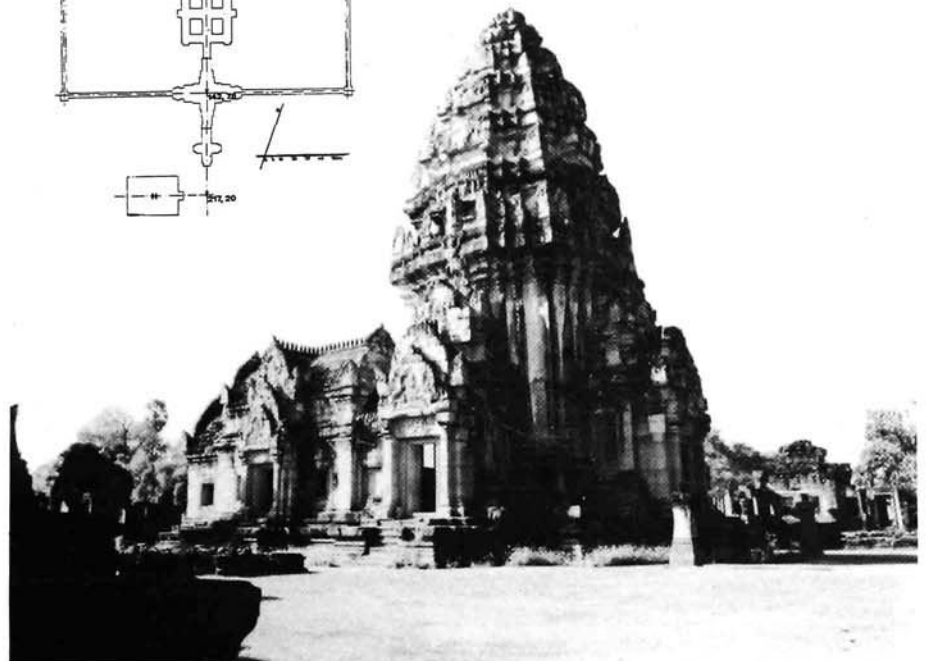
in the Northeast and in the East of Thailand were built during the 8th to the 13th century A.D. These sanctuaries or *prasat* in Thai, can be classified into four groups, according to their functions and building materials.

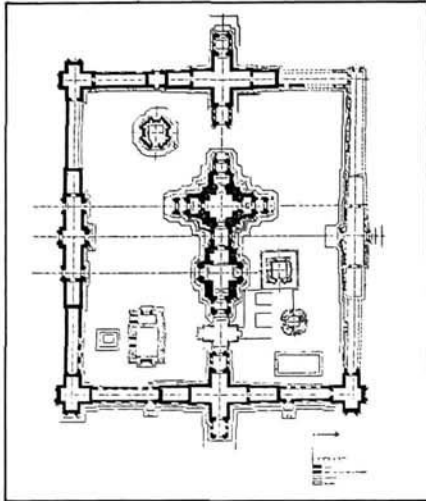
The pre-Angkor sanctuaries are brick towers, or *prang* in Thai. They have square plans and a pyramidal summit. Examples can be found at Prasat Phumpon, Surin Province, and at Prasat Khao Noi, Prachinburi Province (Fig. 15).

Sanctuaries of the Angkorian Periods were laid out in a uniform manner. For example, those dating from the Khleang to the Angkor Wat period (ca. 965-ca. 1175 A.D.) gener-

Left: Plan 6. The general lay-out of Prasat Phimai in Nakhon Ratchasima Province. (After Pierre Pichard, an French expert in Historic Preservation).

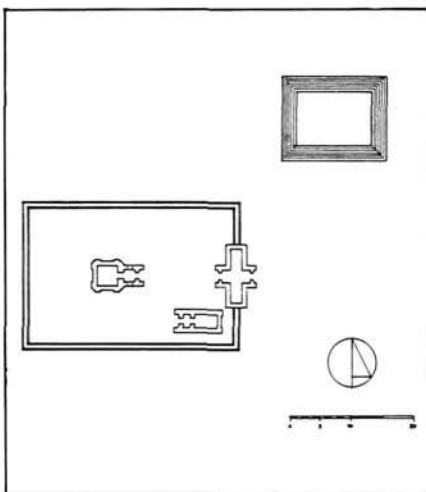
Below: Fig.18. The main prang of Prasat Phimai, Nakhon Ratchasima Province. Seen from a perspective from the northeast corner. Middle of 12th century A.D.





Plan 7. Lay-out of the main sanctuaries and the gallery of Prasat Phanom Rung, Buriram Provinces.

ally had three towers or prang along the north-south axis. Each tower is on a high plinth and usually faces east. One such sanctuary can be seen at Prasat Ban Ben, Ubon Ratchathani province and Prang Ku, Srisaket



Plan 8. Lay-out of Prasat Nong Ku, Roi Et Province. A typical pattern of Jayavarman VII's hospital chapel in Northeast Thailand.

Right: Fig.19. The main laterite prang of Prasat Ku Santarat, Mahasarakham Province. One of Jayavarman VII's hospital chapels in Northeast Thailand. Middle of 13th century A.D..

Province, etc. (Fig. 16).

Another type can be seen at Prasat Sikhoraphum, Surin province. The sanctuary consists of five towers on a low plinth, with the main tower at the centre. The main tower is placed in the middle of the other four, on the east-west axis, similar to the towers at Prasat Muang Tam, Buriram Province (Fig. 17).

Early Angkorian sanctuaries were formerly enclosed by surrounding walls (approximately from the Khleang to the early Baphuon Period). At a later date, they were enclosed by surrounding moats.

During the early days of the Baphuon Period (ca. 1010-ca. 1080 A.D.), stone sanctuaries had their main towers enclosed by galleries. This plan, however, gradually enlarged due to the growing political power of the local government in Northeast Thailand. Prasat Muang Tam in Buriram Province, is an example of a sanctuary with a plan perfectly representing the Hindu

cosmological concept. It seems to be the forerunner of the sanctuaries in the aforementioned type (plan 4).

It is worth noting though, that when the Prasat Phanom Van in Nakhon Rachasima Province was built, about 70 years later, a fresh plan seemed to have been developed.

At Prasat Phanom Van (ca. 1082 A.D.), the lay-out and the plan of the main tower's bindu deviated from the normal matrix. Only the vertical axis was employed to direct the formation of the plan (Plan 5). But around 25 years later, in 1107 A.D. this deviant design developed its peak at Prasat Phimai the bindu was employed to form the main axis of the overall lay-out structure, which included two rows of enclosures. More importantly, the concept of orientation along the North-South cosmic axis was utilized, instead of the East-West axis introduced by the central institution in Angkor. Hence, Prasat Phimai is the only Khmer sanctuary facing the south. (Plan 6,



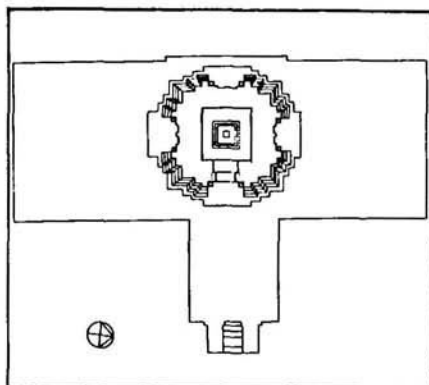


Fig.18).

Prasat Phanom Rung (later part of 12th century A.D.), on the other hand, was designed in the Hellenistic or Khmer Baroque fashion. Here exist the main tower's bindu, the mandapa, (a front room) the vestibule, (a passage connecting the main tower to the mandapa). The *gopuras* (gate) and the surrounding galleries. Apart from these structures, a good number of architectural elements were added. For example, the main tower was constructed more ornately than the original and classical Phimai. (Plan 7).

In the Bayon Period (ca.1180 -ca.1230 A.D.), the building of hospital chapels occurred. They were scattered around the northeast during the time of Jayavarman VII (ca.1181-ca.1121). The design pattern of these chapels was always standardized with laterite as the main building material. The plan comprises a prang, placed centrally and surrounded by a wall. Inside the wall, at the Southeast corner is a library (for collecting the religious text). Outside the wall is a sacred pond, located in the north-eastern direction. (Plan 8, Fig.19).

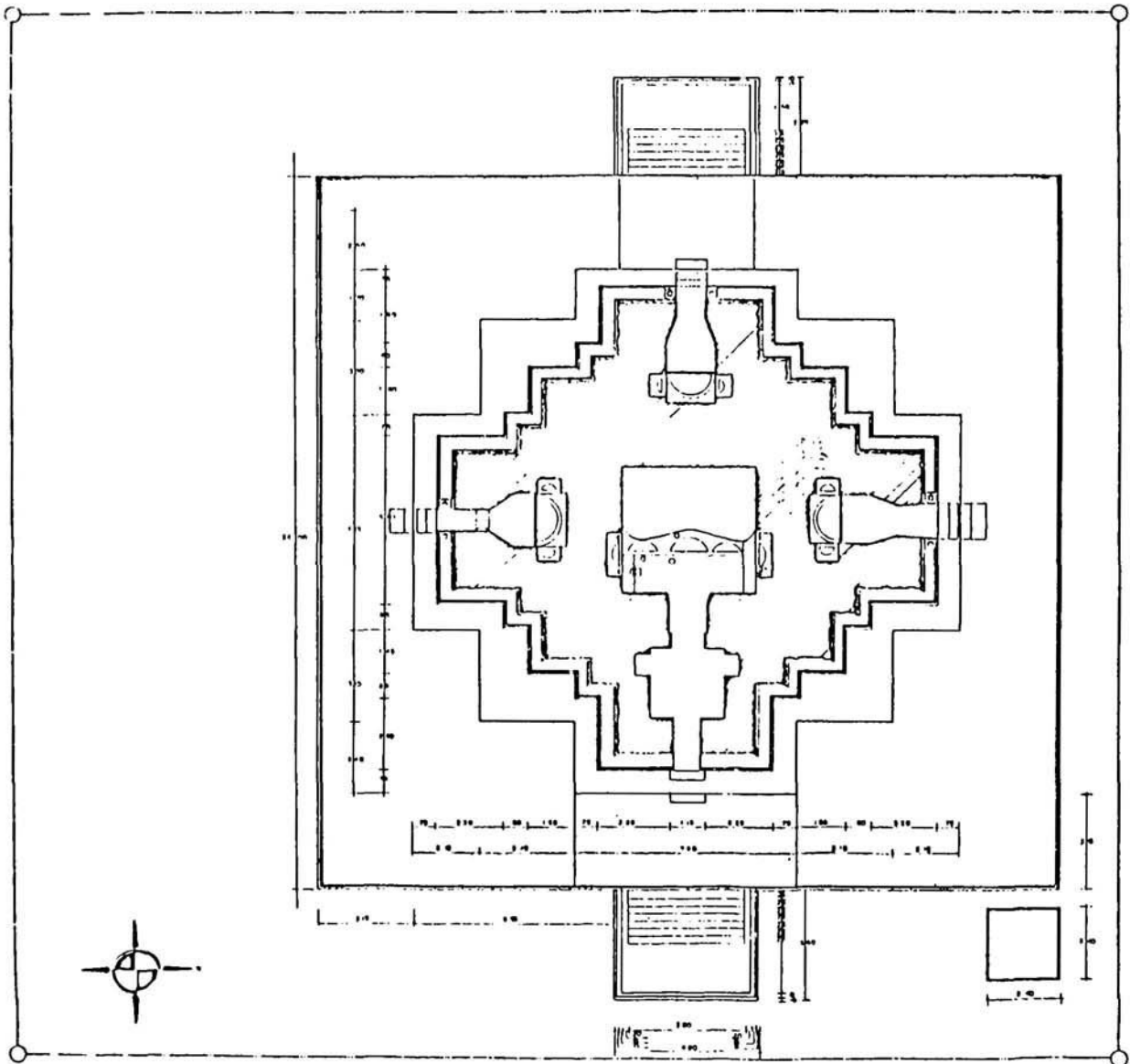
Apart from the aforementioned there is also another type of sanctuary. It has only one main prang, on a high plinth. This type dates from

Left : Plan 9. Plan of Prasat Ban Pluang, Surin Province.

Below: Fig.20. The main prang of Prasat Ban Pluang, Surin Province. The tower is made of gray sandstone and the plinth, with large laterite blocks. Later part of 11th century A.D.

the early Angkorian Period. Brick examples of this type can be seen at Prasat Ban Beng, Srisaket Province (pre-Rup style 947-ca. 965 A.D.), and at Prasat Wat Anant, Surin Province (latter part of 12th century A.D.). As for the stone examples, they can be found at Prasat Ban Pluang, Surin Province (Plan 9, Fig.20) and at Wat Phra That Narai Chengveng, Sakol Nakhon Province. Both date back to





Above : Plan 10. Plan of Chedi Wat Khaew, Surat Thani Province (after The Department of Fine Arts).

Fig.21. Chedi Wat Kaew, Chaiya District, Surat Thani Province. The total structure was built with bricks, then carved into various ornamental patterns. Peninsular Region Chaiya School. About ninth-10th century A.D.



Top right : Fig.24. A. stupa at Wat Sating Pra, Songkhla Province. Probably 14th century A.D..

Left : Fig.23. The five domed stupa at Wat Pra Boromthat Nakhon Sithammarat. * Probably 13th century A.D..

Below : Fig.22. The south elevation of Chedi Wat Kaew. Note that the major architectural components were carved from its own brick structure. The door frame is of composite stone slabs.



the late Baphuon Period (ca. 1050-1080 A.D.). In this type of sanctuary, a moat is usually included in its lay-out to create a simple enclosure around the prasat.

Peninsular or Southern Thailand, by its geographic location, was the middle path of the maritime trade route between India and China. It was a port on the Spice Trade Route. So, in terms of culture, the region was always influenced not only by the Indian culture but also by other dominant art schools. This is revealed by the various art objects, artifacts and architectural components discovered throughout the

peninsular region. But from the architecture's historical point of view, the Chaiya school at Chaiya District, Surat Thani Province shows the greatest influence. The school dates from ca. 9th to 10th century A.D.

The Chaiya School stupas were built in brick. To date three of them still remain. One of them is a stupa at Wat Kaew, known as Chedi Wat Kaew. It is the best source of information for this study.

At Chedi Wat Kaew, the stupa plan was designed according to the mandala of Jina Buddhas' who governed five different regions. The structure is in the form of a cross. In each direction, a room enshrines a Dhyani-Buddha in the direction he governed. An image of *Akshobhya*, for example, was found in the eastern room.

The stupa form and its components developed from a modified plan. The room on each direction is linked together by a rabbeted-angled base, forming an intersection. This was to avoid over-simplification. In so doing, architects of the Chaiya School followed a design pattern of pilasters on each external wall. This type of pilaster might have originated in Cham art in the present-day Vietnam. (Plan 10, Figs. 21, 22).

The plan allowed tiers and recessed spaces at the top. These spaces contain small stupa structures along the stepped terraces until the spire. Examples of these structures can be seen at the Chedi of Wat Phra Borom That Chaiya, or in Indonesia, where they used to be erected.

The development of the Chaiya School architecture might have been short-lived. But its influence on the

stupa design in the Peninsular region is rather great. At the Five Domed Chedi, outside the gallery of the main stupa of Wat Phra Boram That, Nakhon Sithammarat, is a model following the Chaiya school stupa. (Fig. 23). Another one is at Wat Sating Phra, Sating Phra District, Songkhla Province. These stupa structures were all built during 13th-14th century A.D., from the Greek cross plan

with the rabbeted-angled base of the Chaiya School. (Fig. 24).

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