



Travelling Cultures in the First Millennium: Variations in Pre-Angkorean temples

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Abstract

In contemporary Asia-Pacific societies, the notion of travel is often used as a theoretical aid to understand built environments. Theories of migration, cultural interaction and hybridity are employed to explain or speculate on the nature of these societies and their architecture. However, such cultural movement and exchange is nothing new. Since the origins of recorded history cultures in this region have moved, met and exchanged ideas, culture and technology. An example of this is the spread of the Brahmanic/Hindu temple form from India to Cambodia, Java and Champa in the fifth to eight centuries CE. These include some of the earliest brick and stone monuments extant in Southeast Asia, and thus form a pivotal body of evidence concerning the movement of religious, structural and architectonic ideas across Asia. While historical accounts, epigraphic evidence and the overall composition, applied statuary and motifs of the temples in these regions are indicative of strong links, a lack of architectural treatises from Southeast Asia in this period means that specific architectural connections remains the subject of speculation and contestation. This paper will concentrate on the sacred mountain of Phnom Kulen, northwest of Angkor and a key site in the development of the Khmer temple. In their composition and detail the temples at Phnom Kulen indicate the convergence of ideas from India, Champa and Java, as well as the development of indigenous Khmer traditions. Thus they provide evidence of hybridity, cultural and technological exchange that suggest notions of travel and migrancy as eloquently as any contemporary example.

Preamble – To Phnom Kulen

Getting to Phnom Kulen (Kulen Mountain) from Angkor seems at first a straightforward business. Our driver, the smiling Mr. Puot, hasn't actually heard of any temples there, but the mountain itself is familiar to him. We figure that we'll get there and work out where the temples actually are afterwards. The drive is at first uneventful, the road dusty but fairly smooth by Cambodian standards. The only pause is at a concrete shack about halfway to the mountain, where a fee of US \$20 per person is demanded to proceed up the apparently private road beyond. Mr Puot is unimpressed by this toll and indeed, the privatised part of the road markedly deteriorates as it now climbs up the escarpment to the plateau above. At the top it is barely more than a track. It's a good thing that it's the dry season. We drive on through thick secondary forest, the road undulating up and down the ridges to its end, a scruffy collection of souvenir stalls. There are no Western tourists here, though there are a few Cambodian ones. Mr. Puot explains that they have come here to see a large reclining Buddha. Mr Puot is a little surprised that we do not want to see it, but agrees to translate our request to see the mythical temples to the group of men on motorbikes who have gathered around us. Thankfully after saying the names of a few temples aloud, there are some nods of apparent recognition and after some haggling, we are each on the back of a motorbike bouncing up a narrow track into the forest to the temples which are apparently about an hour's ride away.

Three hours later, a slight sense of unease about where we are actually going and what our two riders really have in mind for us, is abated by the arrival at a rough clearing and the sudden sight of a temple. It is the heavily overgrown, but mostly intact, Prasat Thma Dap, a Hindu temple dating from the beginning of the ninth century CE. The appearance of this ruined monument, half obscured by vegetation on the edge of a rough clearing, provides a certain frisson of discovery heightened by the journey to get here. "Are there any landmines?" I ask one of our riders, miming the shape of an explosion. He laughs and we gingerly explore the surrounds of our first Phnom Kulen temple. Our sense of discovery, echoing the history of Western exploration, is of course an illusion. We have arrived on motorbikes. While we peer at the temple one of the riders takes calls on his mobile phone. As we leave for the next temple a little later the apparently impenetrable bush around us clears after a few hundred metres to reveal fields and rural houses.

This account of the authors' visit to one of the temples at Phnom Kulen sheds light on a few aspects of travel, ancient sites and scopic regimes. The present obscurity of the temples, the ruinous state of Prasat Thma Dap, and the far greater importance to contemporary Cambodians of the reclining Buddha on Phnom Kulen indicate the cultural and religious shifts that have occurred over the centuries in this location. The mountain is still sacred, but with an entirely different focus than when Prasat Thma Dap was constructed. However, despite its present neglect this temple was for a brief period, representative of one of the most important architectural sites in Southeast Asia. The purpose of this paper is to consider Prasat Thma Dap and the other temples of Phnom Kulen in this context, and to explore aspects of their architectonic form that might provide further evidence of their importance in the lineage and development of Brahmanic/Hindu architecture in Southeast Asia.

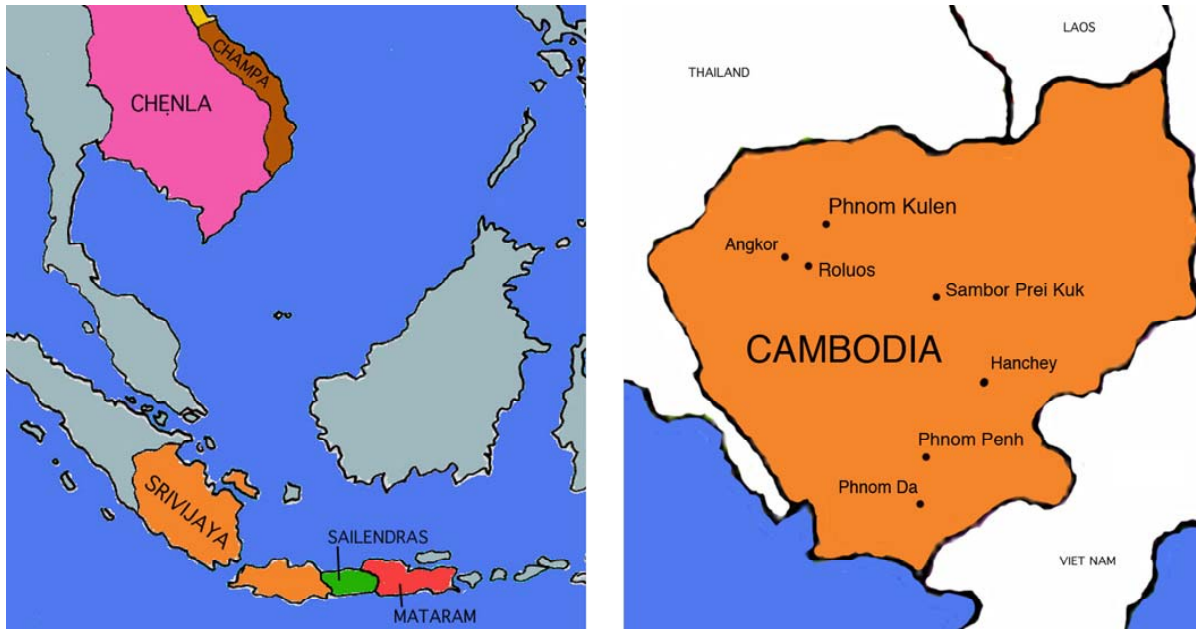


Figure 1. Left: Map of Southeast Asia in 750 CE. Right: Map of Cambodia (images by authors)

The Temples of Phnom Kulen

Phnom Kulen is a massive sandstone outcrop, a flat-topped mountain that rises singularly out of the plains of northwestern Cambodia. Like so many prominent mountains, it has spiritual significance. It is presently devoted to Buddhism, aligned with the country's predominant contemporary beliefs and is today an important site for pilgrimage, the focus of this being the large reclining Buddha mentioned in the anecdote at the beginning of this paper. Historically Phnom Kulen has been identified with Mahendraparvata (Mount

Mahendra), in Indian cosmology the home of Siva.¹ In the dominant Saivite form of Hinduism, Siva is paramount among the gods, and the mountain is both residence and embodiment of his sovereignty. Siva's presence is most spectacularly seen in a river on the mountain in a place referred to as the Thousand Linga. The riverbed is smooth rock, and it has been carved into a carpet of adjoining *sivalinga* of varying sizes, covering the full width of the river for about forty metres in length.

However, hidden in the thick scrub of the Phnom Kulen plateau, are numerous small temples (*prasat* in Khmer). As Chevance notes in his recent survey, twenty four of these have been identified conclusively as pre-Angkorean.² These temples are in varying states of disrepair, at best heavily eroded, and at worst, with only fragments extant.

Of the twenty-four temples on Phnom Kulen, this paper will describe four; Prasat Thma Dap, Prasat Chup Crei, Prasat O'Paong and Prasat Damrei Krap. These represent four of the best preserved temples, and were the subjects of the authors' field survey in early 2007.

Prasat Thma Dap

The basic composition of the Phnom Kulen temples can be seen clearly in Prasat Thma Dap (Figure 2). The temple sits in a small clearing. It sits on a podium and around the edges of the clearing the ground form suggests the remains of a walled precinct. It is a *cella*, a cardinally orientated cubic, brick structure just over six metres in plan on the outside, containing a single internal space. This space is accessed by a doorway on the east of the building. The exterior walls of the building are over four metres in height. Each wall has an elaborately moulded *vedibandha* (lower section), which is elaborated in a series of widening horizontal mouldings from a base level correlating with the floor inside the temple. The central portions of each wall (*jangha*) are plain, giving way around three metres above the base to a foliate frieze, and then an elaborate entablature. The corners of the temple are also defined with slim pilasters, each containing foliate decoration. All of these mouldings are carved into the brick courses, over which can be seen the remains of stucco.

Above the entablature is a tiered brick superstructure. This is in a heavily eroded and overgrown state, so its form is difficult to determine precisely. It rises in a roughly pyramidal form that is articulated into three tiers, each in such a manner as to suggest a smaller version of the temple rising out of the roof of the one below. These 'false storeys' are characteristic of

the Phnom Kulen temples. Its doorway is also heavily eroded on its exterior, though its damaged brickwork portal and corbelled opening above suggest a gabled porch structure. There are false doors centred on the other three faces of the building, each framed by a portal with octagonal pilasters and a lintel adorned with a grinning monster. Each false door has a protruding superstructure which, like the tiers of the roof takes the form of the overall building at a smaller scale. The internal space is also square, though modulated with shallow rectangular niches in the south, west and north sides. The ceiling of the space is corbelled, rising in tiers corresponding with the exterior composition of the superstructure.



Figure 2. Prasat Thma Dap, Phnom Kulen, Cambodia.
From left: View from east, false door on south face (images by authors).

Prasat Chup Krei

Approximately half a kilometre away lies the remains of Prasat Chup Krei (Figure 3). This temple is also stuccoed brick, but is in a more ruinous state than Prasat Thma Dap. Its roof structure has completely collapsed, leaving the sanctuary exposed. The walls are only intact in their lower stages, just enough to allow its overall plan to be discerned. Like Prasat Thma Dap, Prasat Chup Krei is square in plan, though slightly larger. Its entrance also faces east, and each of its other faces also have slightly extruded central sections containing false doors. These doors are framed with circular-section columns, as compared to the octagonal

ones at Prasat Thma Dap. Their overall composition is also much simpler and lacking in detail. Inside, the square chamber is marked by wide niches.



Figure 3. Prasat Chup Krei, Phnom Kulen, Cambodia.
From left: View from south, view from east (images by authors).

Prasat O'Paong

Larger than either Prasat Thma Dap and Prasat Chup Krei, (and the largest of the Phnom Kulen temples) is Prasat O'Paong, about three kilometres away (Figure 4). The whole temple is visibly raised on a podium in the middle of its clearing, though the form of the podium can only vaguely be seen through the vegetation. It is almost eight metres square, and is also constructed of brick. Its walls have shallower modulations than the other two temples, and there are no false doors. Instead a *bhadra* (part-temple form in extruded relief) forms the central part of each wall, framed by its own pilasters. The main body of the wall is otherwise quite undecorated. There are also only a few remnants of the stucco that may have covered this brickwork. Its superstructure, while heavily eroded, follows the same method of articulation as that of Prasat Thma Dap, consisting of three tiers of part-wall/part-roof of decreasing size. The difference is one of proportion as well as size. At Prasat O'Paong, the vertical elements are far more prominent in height, giving the overall superstructure a sense of exaggerated height. Chevance suggests that this characteristic is an attempt to increase the perceived height of the temple by use of forced perspective.³



Figure 4. Prasat O'Paong, Phnom Kulen, Cambodia.
From left: View from east, southeast corner of *vedibandha*
(images by authors).

Prasat Damrei Krap

Prasat Damrei Krap (Figure 5) is considered to be the oldest intact temple on Phnom Kulen.⁴ Unlike the other temples, Prasat Damrei Krap is a tripartite complex, consisting of three brick *cellae* arranged in a row facing east on a single podium and surrounded by an encircling precinct wall of which now only foundations remain. It is perhaps the earliest known example in Southeast Asia of a tripartite temple complex, a configuration found in numerous instances later at Angkor. Only the central tower is complete. Of the flanking northern and southern towers only the lower portions of the walls are intact. In overall format, each of the three towers follows the same configuration as the other Kulen temples, though in the central tower can be seen marked differences in wall and superstructure articulation. The pediment over the entrance is massive and indicates the remains of a barrel-form. The corner pilasters are much more prominent than on the other temples. Each is doubled to form a cluster of three around each corner, with a fourth within the mass of the wall implied by their composition. These clusters are crowned with their own small superstructures which are articulated distinctly from the main tiered roof.



Figure 5. Prasat Damrei Krap, Phnom Kulen, Cambodia.
View from east (image by authors).

The Historical Importance of Phnom Kulen

There are numerous connections between the Phnom Kulen temples and the broader development of architecture in Southeast Asia, and some of these comparisons will be discussed in the following pages. However, firstly a short history of the site is necessary to provide a background to this and an indicator of the site's importance in the development of the Khmer empire.

Prior to the ninth century, Cambodia was divided into competing kingdoms. Of these, two were predominant, the first centred around the city of Isanapura (identified as the temple site of Sambor Prei Kuk in central Cambodia) and the second around Phnom Da in southern Cambodia. Both of these kingdoms were also at different times warring or allied with the neighbouring kingdom of Champa in present-day southern Vietnam (Figure 1). However, more significantly, it seems that both were also under a degree of political influence and control from Java, and it is in relation to this that Phnom Kulen became a place of Khmer royal significance.

According to the epigraphic record, the Khmer king Jayavarman II founded the capital of his nascent kingdom on Phnom Kulen in 802. It remained so only until 812, whereupon the

capital was moved to Roluos, some forty kilometres to the south (and around fourteen kilometres to the southeast of Angkor itself). However while Phnom Kulen was only briefly the royal centre, it marks a time of transition in which Jayavarman II's kingdom went from being a small polity to the most powerful empire in Southeast Asia. Historical explanation of the choice of Phnom Kulen, and its importance in this transition, can be interpreted from a stele found at Prasat Sdok Kak Thom. A translation of part of its text follows;

*St. 70-77: Then a Brahman named Hiranyadama, scientist in magic science, came from the country of Janapada (a province of the kingdom) because the king had invited to make a ritual so that the country of Kambuja was not dependent any more on Java, and that there is nothing any more but one sovereign who was Cakravartin.*⁵

This appears to refer to a ritual in which Jayavarman II led the Khmers to free themselves from vassalage under the rule of Java. While the exact definition of Java in this case is disputed, variously being held to refer to the Sailendras on the island of Java itself,⁶ or more generally to another Malay kingdom (such as perhaps the Srivijaya empire),⁷ it is clear that both the unification of ancient Cambodia and its independence from other powers can be attributed to Jayavarman II's act of occupying Phnom Kulen. By taking control of the mountain, Jayavarman II identified himself and his rule with the authority of Siva, and as the stele relates, with the help of ritual magic he succeeded in impressing this authority on Cambodia as a whole. The 'thousand lingas' of the riverbed on Phnom Kulen remain as a potent record of this authority.

The Relation of the Phnom Kulen Temples to others in Southeast Asia

The basic composition of Phnom Kulen's temple architecture can be seen in earlier examples within Cambodia itself. At Sambor Prei Kuk, whose origins pre-date Phnom Kulen by more than a century, there are numerous brick *cellae* arranged within walled precincts. The authors have described this site in a previous paper.⁸ Slightly earlier than Sambor Prei Kuk are the sites of Hanchey and Phnom Da in southern Cambodia, where as well as brick *cellae* there are rare examples of pre-Angkorean stone *cella*, also currently the subject of the authors' investigations. Characteristics seen at Phnom Kulen – the square plan, the east-facing entrances, the false doors, the tiered superstructures – can be seen in temples at these earlier sites.

Similarly, the form of the Kulen temples can be seen at Roluos and Angkor itself. For instance, later versions of the tripartite arrangement of Prasat Damrei Krap can be seen at Lolei and Preah Ko in Roluos and at Prasat Kravan and Bat Chum, two of the earliest temples in Angkor. The temples of Phnom Kulen are thus considered to constitute a transitional stage between earlier styles of Khmer architecture and the architecture of Angkor itself.⁹ However, comparison of aspects of architectural form have also have been made not just with preceding and subsequent developments in Cambodia, but also with temples in contemporaneous Southeast Asian Brahmanic/Hindu civilisations.

False doors, for instance, are found in both Java and Champa. The development of false doors is discernable in the Dieng Plateau temples of early seventh century Central Java. Developed Javanese examples include Candi Kalasan in Central Java whose construction slightly preceded the Kulen temples. False doors are also found at the eighth century Cham sites of Hoa Lai and Pho Hai. False doors at Pho Hai have been specifically compared to those on Prasat Thma Dap.¹⁰

The use of exaggerated height in the superstructure of Prasat O'Paong to force perspective is also a technique identified in a number of sites in Java, including Prambanan and more overtly in later east Javanese temples such as Candi Singosari and Candi Kidal.¹¹

There are several other comparisons with Cham temples, especially in the case of Prasat Damrei Krap. In particular, Prasat Damrei Krap's portal roof with its outward-curving volutes closely resembles the pediment of the Hoa Lai *cella*. The tripartite layout of the complex is also found at Hoa Lai. Thus despite being far from the borders of Champa, the temple historian Daigoro Chihara has gone so far as to call it the earliest surviving example of Cham architecture, postulating that it must have been conceived by Cham architects or builders.¹² Dumarçay and Royère also identify the clustered pilaster corner treatment at Prasat Damrei Krap as being Cham. To broaden the pattern of resemblance, this is also a motif which they identify at Wat Keo, an eighth century Srivijaya monument at Chaiya as well as being depicted in the reliefs at Borobodur.¹³

The *Cella* and the *Mandala*

However, despite characteristics that can be described as indigenous or intra-regional, the basic *cella* form for Brahmanic/Hindu temples in Southeast Asia can be traced back to India,

and thus comparisons with Indian temples of contemporary or earlier periods is important in developing a full understanding of their formal composition.

However the nature of Indian influence on Southeast Asian societies remains the subject of speculation. While there have been interpretations suggestive of colonisation, these have more to do with the adoption of myths than with historical events, for instance, the similarity between Cambodian and Pallava myths of origin.¹⁴ There appears to have been no military conquest or large-scale migration of Indians, but rather a process by which local rulers adopted Indian cosmological and theological concepts, followed by the adaptation of their local cultures and ideas of royalty to its structures. For this reason George Coedès, the great French scholar of classical Southeast Asian studies, chose to consider the spread of Brahmanic/Hindu culture and religion as Sanskritisation rather than Indianisation.¹⁵ Most historic references to this are vague. For instance Coedès and Jordaan note that the Pasupata Hindu sect was known in Cambodia and Java respectively but this observation requires some interpretation of inscriptions.¹⁶ Sarkar suggests four sources of influence from the fourth to the seventh centuries CE, the most important of which were the Gupta dynasty of northern and western India and the Pallava dynasty of south-eastern India.¹⁷ The authors have undertaken some measurement and analysis of the Gupta temples of Devgarh and Roda in northern India to explore these connections, to be augmented by a similar study of Pallava temples in future. The Gupta temples are also cubic *cellae*, and while constructed in stone they share compositional characteristics with Southeast Asian examples. However beyond their obvious resemblance, the question remains as to what more conclusive correlations might be found.

A key to this may lie in the cosmological origins of the Brahmanic/Hindu temple, and its relation with archetypal form. While there are thousands of variations in form, one way of understanding temples is through their relationship with principles outlined in canonic Sanskrit texts (*shastras*) such as *Mayamata* and *Agni Puranas*.¹⁸ These texts provide sets of prescriptive rules which touch on all aspects of temple construction; site selection, formal types, details, and location of sculptural elements. The architectural elements described by such *shastras* are based on a number of geometric figures known as *mandalas*, and it is through discerning relationships between these cosmic diagrams and temple plans that closer correlations than observations of resemblance between different examples of constructed buildings might be approached. This approach takes as its starting point the

premise that the evolution of the temple embodied a progressive elaboration of this prototypical schema, using a sacred constructive geometry that conveyed the syncretic Brahmanic cosmology.¹⁹ In this schema, Khmer temples, like other examples from the Brahmanic/Hindu tradition, can be considered as abstracted representations of Mt Meru, the originary mountain. Thus, as noted in the earlier description of the Kulen temples, their elements can be seen as corresponding with the three cosmic realms. The first is the podium or platform base, the second is the *cella* (body) and the third is the superstructure-roof.²⁰ This suggests an approach in which the relationships between the conception and construction of temples are analysed through an examination of their geometries. Their relationship to Indian examples might therefore be seen to have a correlation based on mathematical/cosmological proportions.

Embedded in the plan of most early (fifth to eighth century) Indian temples is a ritual grid diagram of $8 \times 8 = 64$ squares (mandala), as prescribed for temple building in the *Brhat Samhita* and other *shastras*.²¹ An example of how this diagram can be the basis of actual temple construction can be found in the work of the archeologist and temple historian Michael Meister. Meister has analysed the composition of monuments of similar antiquity to the Kulen temples in India, as well as in Pakistan and Afghanistan on the opposite edge of the ancient Brahmanic/Hindu world. Working from an understanding of temple construction sequence as well as their ritual underpinnings, he has found the sixty-four square mandala's dimensions correlate closely to the constructed dimensions at the level of the *vedibandha*, (which corresponds with the level of the sanctuary threshold rather than through the *jangha*, or main body of the wall, where an architect might normally measure a building's plan). After testing this premise on a number of examples, Meister has come to the conclusion that the horizontal dimensions of the *vedibandha* provide for a set of proportional relationships that relate to *shastra* prescriptions.²² Furthermore, he shows how the horizontal profile of the *cella* depends on the number of offsets and the proportional relationships between each offset based on the subdivision of the sixty-four square grid.²³

Meister's research has shown that in the spread of Hindu architecture to the West, up unto the eighth century the sixty-four square mandala was incorporated in the setting out of temples. In these correlations, Meister has surmised that more than being a ritual diagram for the groundplan of the temple, this mandala was used also for the actual planning of temple construction until the ninth century. The plans of the fifth century Gupta temple at Devgarh is

an example of this. Of course, while the *shastras* may have been prescriptive, a multitude of interpretations and variations were possible within the canonical rules. Indeed, the ambiguous relationship between strict canon and subtle experimentation presents many challenges in relating the idealized geometry models to extant temples.²⁴ This point is clearly made by Indorf in her elaboration of the work of Kramrisch and Hardy in exploring the composition of temples.²⁵

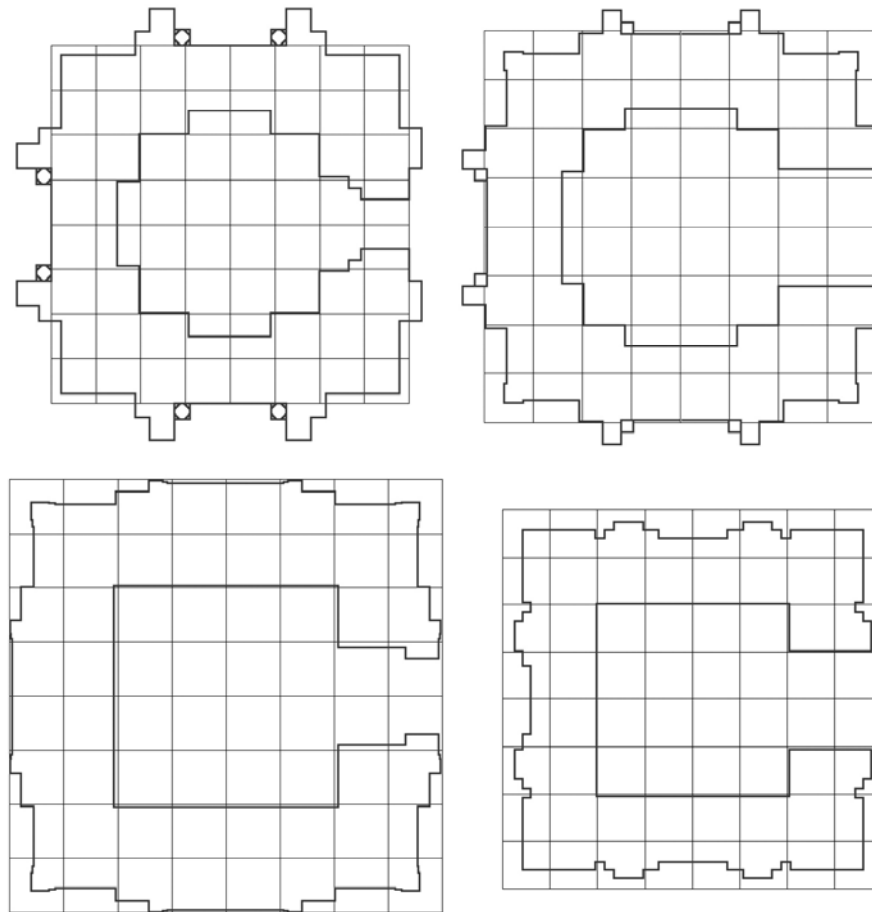


Figure 6. Top Left: Prasat Thma Dap, Top Right: Prasat Chup Krei
 Bottom Left: Prasat O'Paong, Bottom Right: Prasat Damrei Krap
 (northern *cella*) all plans at base of *vedibandha* and superimposed 64
 square mandala (diagrams by authors).

This raises a number of interesting questions for Southeast Asian temples. Their spread from the fifth to eighth centuries, is contemporaneous with the temples that Meister describes, even though there are very few direct textual or epigraphic references to sacred diagrams found at temple sites in Southeast Asia.

With this proviso, the authors' measurements of Prasat Thma Dap, Prasat Chup Krei and Prasat O'Paong appear to demonstrate a broad correspondence (Figure 6). In each case, if a sixty-four square grid is overlaid on the *cella* plan, a correlation can be discerned between the dimensions of the interior space, the external measurements at *vedibandha* level and the mandala grid. Determining whether there exist closer correspondences between offsets in the layouts of these temples will require further analysis, but initial results suggest that this might be possible. For each of these plans, the relationship of internal spaces to external walls can broadly be seen to correlate to inner sixteen and outer sixty-four squares respectively. To be more precise, on Prasat Thma Dap and Prasat Chup Krei the outer square appears to align with the false doors on each external face, and on Prasat O'Paong with the pilasters of each face's *bhadra*, though due to the adjustments to the temple plans required by the eroded state of the monuments, these alignments cannot yet be taken as definitive. The authors' measurements at Prasat Damrei Krap do not yet indicate any such a correspondence, but this also needs further investigation.

Temples and Projective Geometries

The process of measurement in order to discover aspects of the underlying geometry of temples requires a certain suspension of the vision-based sensibility that an architect naturally brings to fieldwork. The primacy of the visual, of trying to comprehend a building through consideration of its visual characteristics, needs to be suspended in favour of what Robin Evans might refer to as other means of projection.²⁶ Evans' thesis is that we are used to looking at buildings through projecting them as images, to applying a projective geometry to them that provides us with a particular type of understanding. In this he argues, architecture in its Western development has moved from concerns about the intrinsic geometrical properties of objects, to a geometry based on perception of objects. As the authors have noted in an earlier paper, the process of understanding the principles behind temples through measurement of their form might be likened to the opposite of the stereotomy described by Evans in his discussion of geometry, in particular in his description of the *trait*.²⁷ The *trait* is a series of graphic instructions for cutting stone into complex forms, a non-representational means of projection from drawing to building. It does not look anything like the architecture that can be constructed from it, yet it contains its geometrical basis. Evans describes the *trait* as an orthographic but not visual projection of geometry conceived to construct architecture. The mandala can be more directly projected onto a temple plan, but it is similarly not intended to be representational.

As Kramrisch reminds us, the problem with visually perceiving a Hindu temple is that we are looking at the outside of an idea that has been conceived from the inside.²⁸ Following on from this, the detail and decoration that we view are manifestations of cosmological principles that are also generated from within. The mandala provides us with a possible starting point for understanding this. Its proportional relationships set rules that arguably have been used to generate actual temple plans, but they are not themselves plans. The geometry that generates the temple form is projective in the sense that it projects a geometrical representation of cosmology into three dimensions, but it is not projective in the sense of an image. At Phnom Kulen, we have the physical remains of the temples as a starting point. We do not know what drawings or diagrams, if any, were used to represent their construction. We have only a generalised connection with similar temples from which connections have been made with *mandalas* and other cosmological/geometric diagrams.

Therefore we need to be wary of claiming too much meaning in correlation. The geometry of a temple can only tell us so much. Meister has surmised after his investigations into Indian temples, that from around the ninth century onwards temple plans were generated from reference to earlier temples, with the mandala maintaining a ritual, but no longer a geometrical significance.²⁹ In Southeast Asia Dumarçay has similarly argued that traditions of temple design have derived primarily from the development of built examples as models, regarding some lineages of temples as essentially being successive models of the same monument.³⁰ Even in the measured correlation between a temple's measurements and the sixty-four square mandala, there remains a gap. The nature of this gap lies in not knowing how and why such a diagram was used in the construction of a Khmer temple, or whether the philosophy and cosmology embedded in the diagram is also embedded within its walls.

Thus following the surety of measurement are no definitive statements about the place of the Phnom Kulen temples in Southeast Asian and Brahmanic/Hindu architectural history but instead a series of possibilities concerning the movement of ideas, people, techniques and traditions in South and Southeast Asia. If a temple is in Cambodia, and the corresponding diagram is Indian, what kinds of cultural, linguistic or philosophical translations may have been at work to derive one from the other? Were Indian *sthapathis* (temple architect-priests) involved? Or were the architects Khmer, working with such diagrams as received working documents. And if so, did they work with them within the ritual traditions that have been recorded in India on the subject? Were they instead following the diagram accurately in the

manner of architects, but with application of their own second-layer meaning? Or, following Dumarçay's reasoning, was the nature of their modelling more derived from previously constructed examples as models. The appearance of compositional elements found in Java and Champa (and not necessarily in India) further complicates (or enriches) the picture.

What becomes increasingly clear is that the Phnom Kulen temples represent key monuments in the evolution of a Khmer architectural lineage, that while derived from the archetypal Brahmanic/Hindu *cella*, this lineage also constantly being adapted and hybridised according to influence from elsewhere in Southeast Asia. Notions which are currently used to explain twenty-first century cultural interactions; hybridity, in-betweenness, authenticity, can be seen through the study of these buildings to be ancient happenings. The establishment of the architectonics of these attributes through measurement, photogrammetry and comparative modelling will assist in tracing more closely how architectural ideas travelled around ancient Southeast Asia.

Endnotes

¹ George Coedès, *The Indianized States of Southeast Asia* (Canberra: ANU Press, 1968), 100.

² Jean-Baptiste Chevance, *L'Architecture et le décor des temples du Phnom Kulen, Cambodge* (Paris: Université Paris III – Sorbonne Nouvelle UFR Orient et Monde Arabe, 2005), 39.

³ Chevance, *L'Architecture et le décor des temples du Phnom Kulen, Cambodge*, 119.

⁴ Henri Parmentier, *L'Art Khmer Primitif*, 2 volumes (Paris: Publications de l'Ecole Française d'Extrême-Orient, 1927; Boisselier, 1956; Chevance, 2005).

⁵ Translation from Khmer in Chevance, *L'Architecture et le décor des temples du Phnom Kulen, Cambodge*, 23.

⁶ Coedès, *The Indianized States of Southeast Asia*, 100.

⁷ P.Y. Manguin, 'Etudes sumatranaises I. Palembang et Sriwijaya: anciennes hypothèses, recherches nouvelles (Palembang Ouest)', *Bulletin de l'Ecole Française d'Extrême-Orient*, 76 (1987).

⁸ David Beynon and Sambit Datta, 'Celebrating the Generation of Architectural Ideas: Tracing the Lineage of Southeast Asian Temples', in *Celebration: Twenty-first Annual Conference of the Society of Architectural Historians, Australia and New Zealand*, Napier (2005), 50.

⁹ Daigoro Chihara, *Hindu-Buddhist Architecture in Southeast Asia* (Leiden: E.J. Brill, Leiden, 1996), 77-78.

¹⁰ Chevance, *L'Architecture et le décor des temples du Phnom Kulen, Cambodge*, 183.

¹¹ Chevance, *L'Architecture et le décor des temples du Phnom Kulen, Cambodge*, 123.

¹² Lawrence Palmer Briggs, 'The Ancient Khmer Empire', *Transactions of the American Philosophical Society*, 41: 1 (1951), 87; Chihara, *Hindu-Buddhist Architecture in Southeast Asia*, 177-178.

¹³ Jacques Dumarçay & Pascal Royère, *Cambodian Architecture Eighth to Thirteenth Centuries*, (Leiden: E.J. Brill, 2001), 45.

¹⁴ R.C. Majumdar, *Kambuja-Desa or An Ancient Hindu Colony In Cambodia* (Philadelphia: Institute for the Study of Human Issues, 1980), 19.

¹⁵ Coedès, *The Indianized States of Southeast Asia*, 16.

¹⁶ Coedès, *The Indianized States of Southeast Asia*, 113. Roy Jordaan, 'Candi Prambanan: An Updated introduction', in Roy Jordaan (ed.) *In Praise of Prambanan* (Leiden: KITLV Press, 1996), 69.

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