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Candi, space and landscape : a study on the distribution, orientation and spatial organization of Central Javanese temple remains

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CHAPTER 7

The religious compound: spatial arrangement of Central Javanese religious complexes

In the previous chapters, we have discussed two aspects of Central Javanese architectural space, i.e. temple location and orientation. In the coming chapters, we will pursue our exploration of the structure of space during the Central Javanese period by focusing on architectural space. In chapter 7, we will assess the question of how buildings are actually arranged within temple compounds. After presenting the different existing types of spatial arrangements found in Central Java, I will discuss their distribution, possible correlations with the results of our study of location and orientation, and underline some factors that might account for the existence of these various types. Finally, on the basis of a detailed observation of some complexes, I will show how certain elements of the architectural space might relate to conceptual space, embodying different spatial concepts – some of them already discussed in the previous chapter: the centre, the axis, the rear, the boundaries of the sacred ground.

Typology of Central Javanese temple compounds according to their spatial arrangement

The majority of Central Javanese religious sites count only one building. It is nevertheless usual to see Hindu-Buddhist shrines combined with one another to form religious compounds. In Central Java, 49 such complexes have been identified, ranging in size from 2 (e.g. Cebongan) to 249 buildings (*candi* Plaosan Lor). Nevertheless, due to the poor state of preservation of most temple remains, the total number of buildings on a given site is frequently impossible to determine. It is therefore likely that some of the shrines that are nowadays standing alone were once part of a larger temple group and that some religious complexes included more buildings than we think. Furthermore, it is sometimes difficult to determine which structures belong to a single group and which do not. As I shall show below, Central Javanese religious complexes are not always exemplars of formal organization and symmetry, as Loro Jonggrang and Plaosan Lor might lead us to suppose. Moreover, some temples, although located only a few hundred meters from one another, may not show any physical resemblance that would allow archaeologists to be certain that they originally belonged to a single religious site.

Central Javanese religious compounds are usually organized around one or two main temple(s).¹ Beside the main shrine(s), temple complexes may include various secondary structures: secondary shrines, *stūpa*, *pendopo* terraces or enclosure walls. None of these structures are mandatory: their number and arrangement vary considerably, creating both large-scale concentric compounds, and small-scale sanctuaries comprising only a couple of buildings.

Small scale sanctuaries: alignment and opposition

Small-scale religious complexes are organised along the principles of alignment and opposition, i.e. that structures are built in a row and/or facing one another.

¹ The “main shrine” is here either the shrine at the centre of the compound – in the case of concentric temple complexes – or, more simply, the largest building of a given group.

In some religious complexes the buildings form a single a row. Their number may vary from 2 (e.g. Dawangsari) to 7 (Setan). Sometimes the buildings are (roughly) of the same size (Dawangsari, Gedong Songo V, Gedong Songo VII, Jetis, Mantup, Ngaglik, Risan, and probably Banon), but a sense of hierarchy may also be introduced (Figures 25 and 26). In the latter case, the group is built around one (Cebongan,

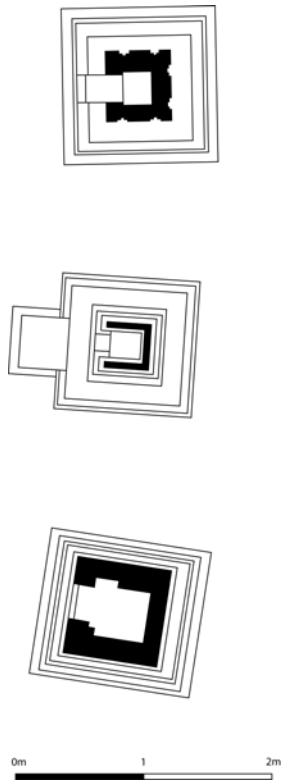


Figure 25: Mantup



**Figure 26: Ngawen
(Perquin 1927: pl. I)**

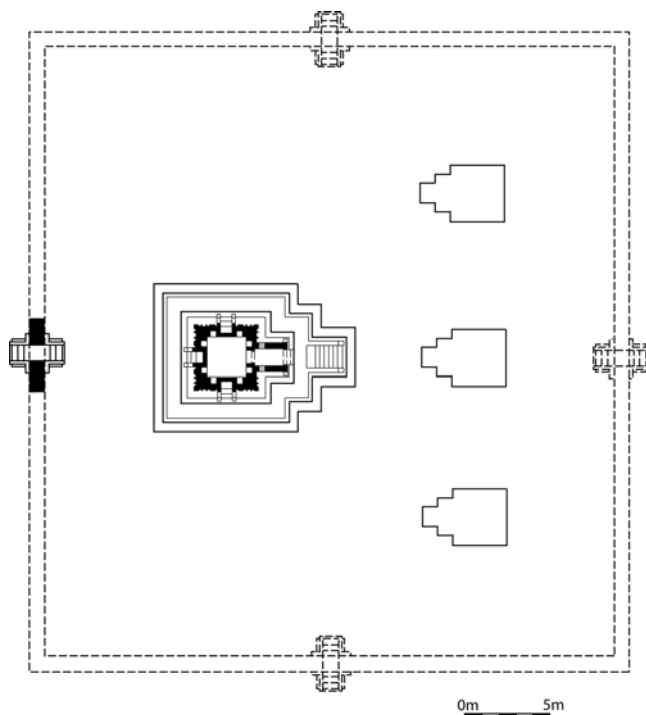


Figure 27: Merak

Gampingan, Gedong Songo VI, Palgading, Setan,) or two main structures (Ngawen Mendut).²

In other small-scale religious complexes the accent is on the notion of opposition, their main temple(s) facing secondary shrine(s). At Arjuna, Gedong Songo II, Jetis, Puntadewa and Srikandi,³ each temple faces a smaller, oblong shrine. At *candi* Gunung Wukir, Ijo, Merak, Morangan⁴ and Sambisari, the main temple faces a row of three secondary shrines (Figure 27).⁵

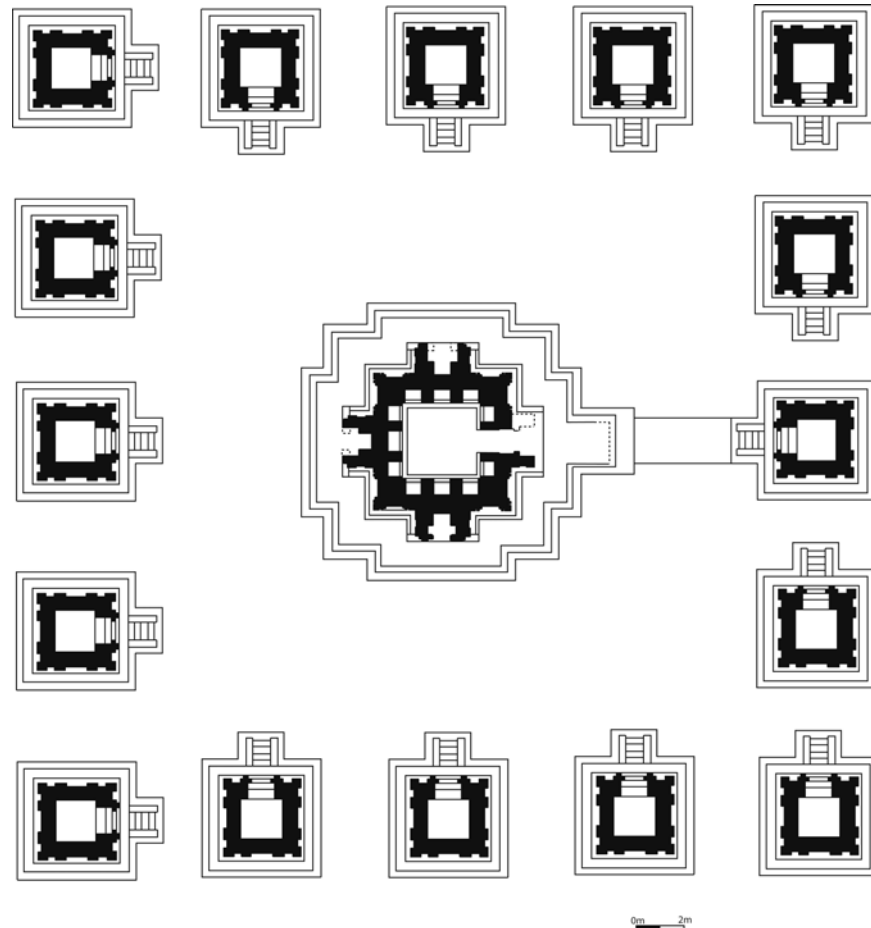


Figure 28: Lumbung

² This is a reference to the original state of *candi* Mendut, at a time when the complex was made up of two brick buildings of similar dimensions: the temple discovered within the present *candi* Mendut, and a temple located in the northern part of the compound, the remains of which were identified at the beginning of the 20th century (Brandes 1903c:76-77).

³ To this group must be added Gedong Songo III, which is also composed of one main temple facing an oblong shrine – but in this case a secondary shrine has been added to the north of the main temple.

⁴ Only two structures are visible today at *candi* Morangan: the main temple, facing west, and one secondary shrine, located northwest of the main structure and facing east. Due to the position of the remaining secondary shrine, however, it is highly probable that the compound was once composed of four structures (a main temple facing three secondary buildings). Unfortunately, it has not been possible to carry out further excavations to the south and east, due to the presence of modern roads and houses.

⁵ The central shrine is oblong at Sambisari and Ijo.

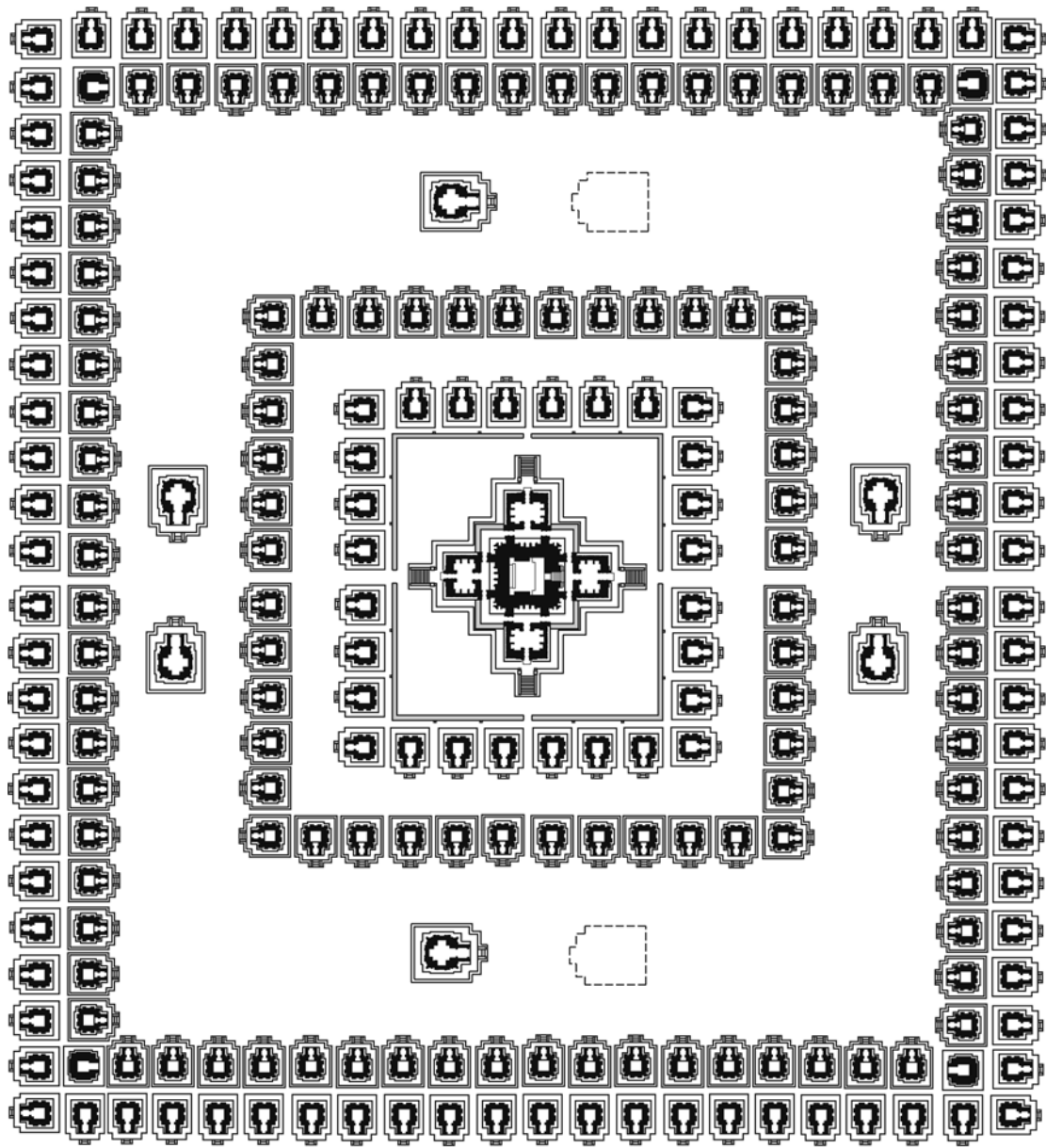


Figure 29: Sewu

Large-scale complexes: centrality, axuality and organic growth

Besides small-scale sanctuaries, Central Java also has some fine large architectural compounds. Their organization may 1) focus on a centre, 2) follow an axis, 3) seem to have evolved at random. To the first type of large-scale compound belong *candi* Kalasan, Kalongan, Loro Jonggrang Lumbung, Plaosan Kidul, Plaosan Lor and Sewu. All these temple complexes are organized along a concentric pattern: the main temple(s) are surrounded by (a) row(s) of secondary structures. Kalasan is the simplest version of this type of spatial arrangement: the main temple is surrounded by a single row of 52 *stūpa*.⁶ The complex was once surrounded by an enclosure wall, the remains of which have been found to the northwest, east and west; although its

⁶ Although ashes and fragments of clothes were found within some of these *stūpa* (Bernet Kempers 1954:29), they should not be compared to *stūpa* housing the ashes of deceased monks and kings as

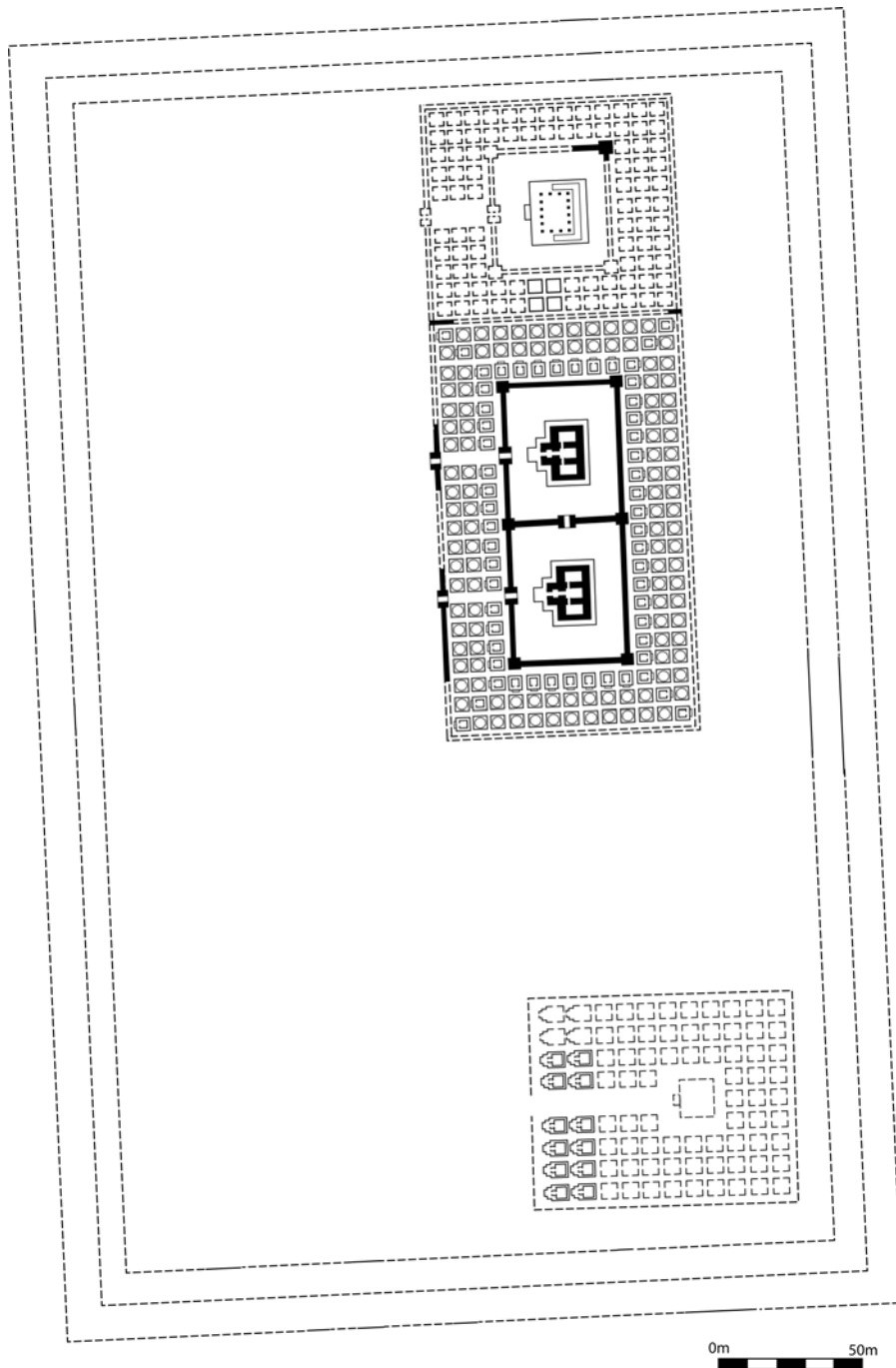


Figure 30: Plaosan Lor and Plaosan Kidul

commonly found in mainland Southeast Asia. The *stūpa* of *candi* Kalasan were all conceived at the same time. The 52 structures were planned together and do not correspond to a progressive addition of reliquaries for the ashes of the dead. If they once contained human remains, this is probably a secondary use and not an essential part of their initial symbolism. In my opinion, stone caskets and other remains found within the *stūpa* should more correctly be compared to *peripih*. On *peripih*, see Ślaczka: 2007.

entrance has not been identified (Stein Callenfels 1929b: 8,137-138). According to Van Stein Callenfels, the wall was probably similar to the low fence around the main temple of *candi* Sewu.

Candi Lumbung, though modest in dimensions, is a slightly more complicated compound. It consists of a central temple surrounded by 16 secondary shrines (Figure 28). In most concentric compounds there is a balance between east, south, west and north facing shrines, but this is not the case at *candi* Lumbung where only one structure faces west.

Candi Sewu (Figure 29), like Kalasan and Lumbung, also makes use of concentric rows of buildings, but on a very extensive scale. The compound includes a main temple surrounded by a first enclosure, four rows of secondary shrines and one or two further enclosure walls. The inner enclosure is a low fence with four entrances, the

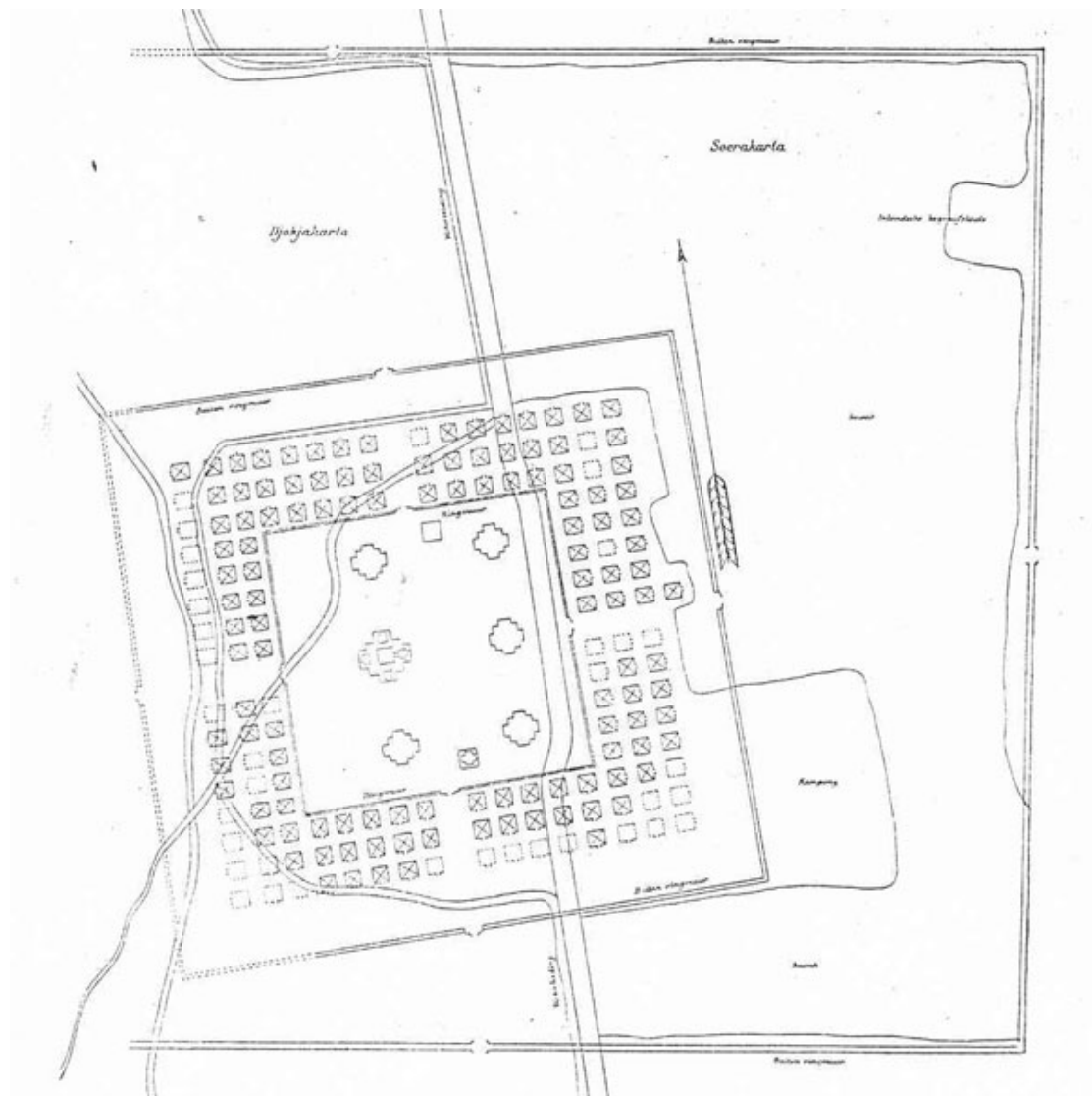


Figure 31: Loro Jonggrang

largest being on the eastern and western sides. The first, the second and the fourth rows of secondary shrines respectively count 28, 44 and 88 outward looking structures (8, 12 and 22 on each side). The third row is composed of 80 inward looking shrines. The main temple and the four rows of secondary structures were once surrounded by an enclosure wall. In the space between the second and third rows of secondary shrines, along the axis of the compound, four pairs of shrines have been built, facing each other two by two.⁷ In 1983, remains of another wall, perhaps part of a third enclosure, were discovered 103m to the east (Anon, Hatmadi 1992:61).

Candi Plaosan Kidul, Plaosan Lor and Loro Jonggrang are built around the same principle (a centre surrounded by several rows of secondary buildings), with a few differences. At Plaosan Lor (Figure 30), the concentric rows have been adapted to a rectangular plan. At Loro Jonggrang (Figure 31) they surround a groups of main shrines, the organization of which is similar to small-scale sanctuaries.

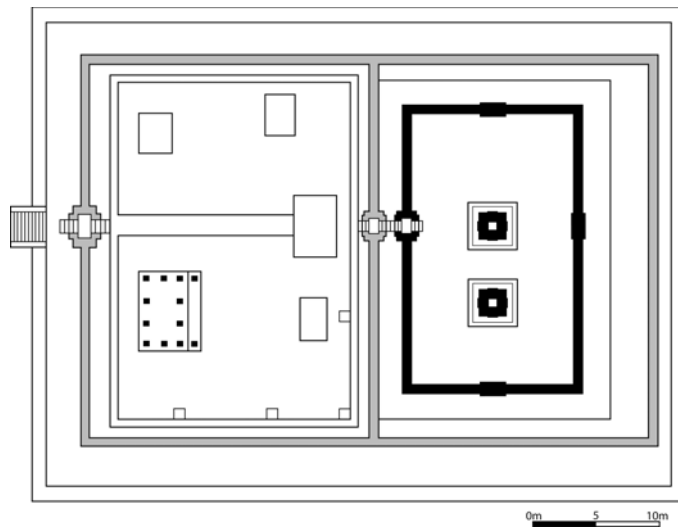


Figure 32: Barong

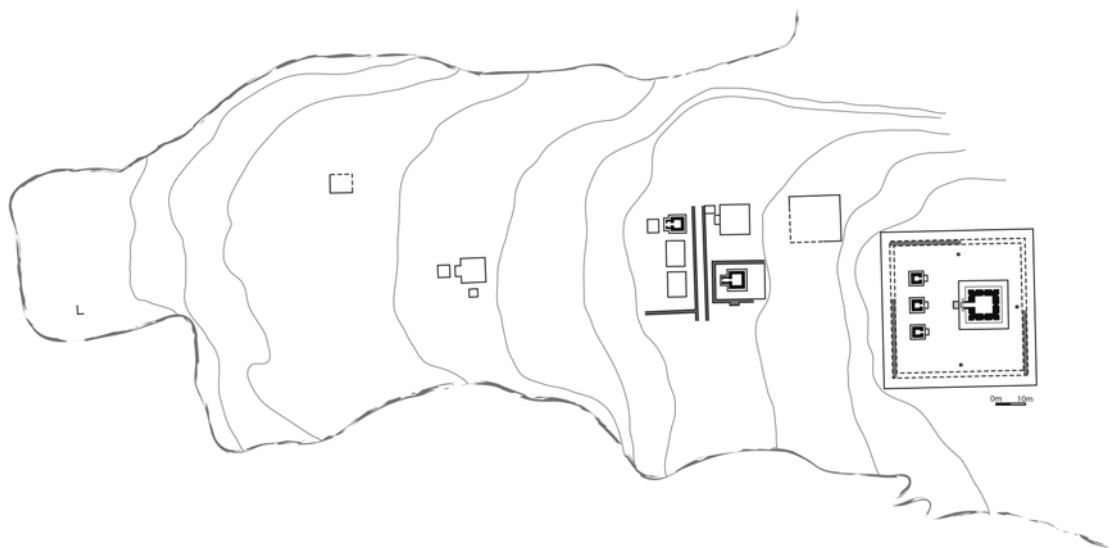


Figure 33: Ijo

⁷ In fact, to the south and to the north, no remains of the eastern shrines were found. This absence of any remains is hardly imputable to the state of preservation, and it is more probable that these shrines were never built.

The second type of temple compounds, which includes only *candi* Barong and Ijo,⁸ present a completely different spatial arrangement. There is absolutely no trace of a centred organization; rather, they are stretched along an east-west axis. This is not the only characteristic that these temples share: both are built in the same area (on the dry hills of Mount Pegat-Ijo), on a hill slope, and are terraced sanctuaries.

Candi Barong (Figure 32) stands on a high terrace, topped by an enclosure wall and divided into two courtyards. The only access to the compound is a *gopura* pierced in the western wall. The western courtyard is occupied by the foundations of various buildings, the organization of which does not follow any geometrical pattern. Directly in front of the *gopura*, a paved path leads to the remains of a stone terrace, situated at the rear of the western courtyard. The visitor would have had to go across this terrace before entering the second, eastern courtyard.

The eastern courtyard is almost entirely occupied by a high, rectangular terrace, edged by an enclosure wall and accessed *via* a double *gopura*. On the northern, eastern and southern sides of the enclosure, there are false doors instead of true gates. These suggest that, even though it actually faces west, the sanctuary was symbolically opened towards the four directions. Within the enclosure stand two small square structures without any entrance.⁹

Like *candi* Barong, *candi* Ijo is organized along an east-west axis (Figure 33). It is composed of a series of terraces set onto the hill slope and housing several secondary shrines and *pendopo* terraces. The main temple is located on the topmost terrace. The spatial organization of the lower terraces does not seem to follow a pre-established pattern. Buildings are neither evenly distributed nor in line with the main sanctuary. The lowermost part of the compound preserved is organized like a small-scale Hindu sanctuary, with a larger building facing a smaller one. The uppermost terrace shelters four structures: a main temple turned to the west, and a row of three secondary shrines facing it.¹⁰

Finally, the third type of large-scale temple compound is represented by Ratu Boko, Dieng (Figure 34) and Gedong Songo. All formal organisation appears to be absent. It is certain that taken separately, all the smaller units comprising these religious complexes are organized (following the usual pattern for small-scale sanctuaries at Dieng and Gedong Songo), but the relationships between the different units seem loose or, at best, unplanned. At these three sites, one searches in vain for the perfect centred plan of Sewu or the succession of terraces and courtyards that gives Barong and Ijo a framework in which to develop.

The site of Ratu Boko (Figure 35) consists of three compounds: the western, the eastern and the southeastern. The western compound is composed of three terraces sustained by a huge retaining wall and accessed *via* a monumental gate located on the western façade. On these terraces are scattered various remains, mostly stone bases for open pavilions. In contrast, the eastern compound consists of two man-made caves

⁸ See also above, p.142.

⁹ *Candi* Barong shows obvious signs of later transformation. The terrace was originally smaller: remains of an older sustaining wall are visible a couple of meters north of the present edge of the terrace, partly buried under the stones. Modifications most probably altered the whole compound. It is indeed likely that the *gopura* of the lower enclosures, which are today to the north of the axis, were originally at the centre of the western façades. It is however impossible to determine whether these changes are due to rebuilding or to changes of plan during construction.

¹⁰ As noted earlier, the central secondary shrine is elongated, while the others are square.



Figure 34: Dieng

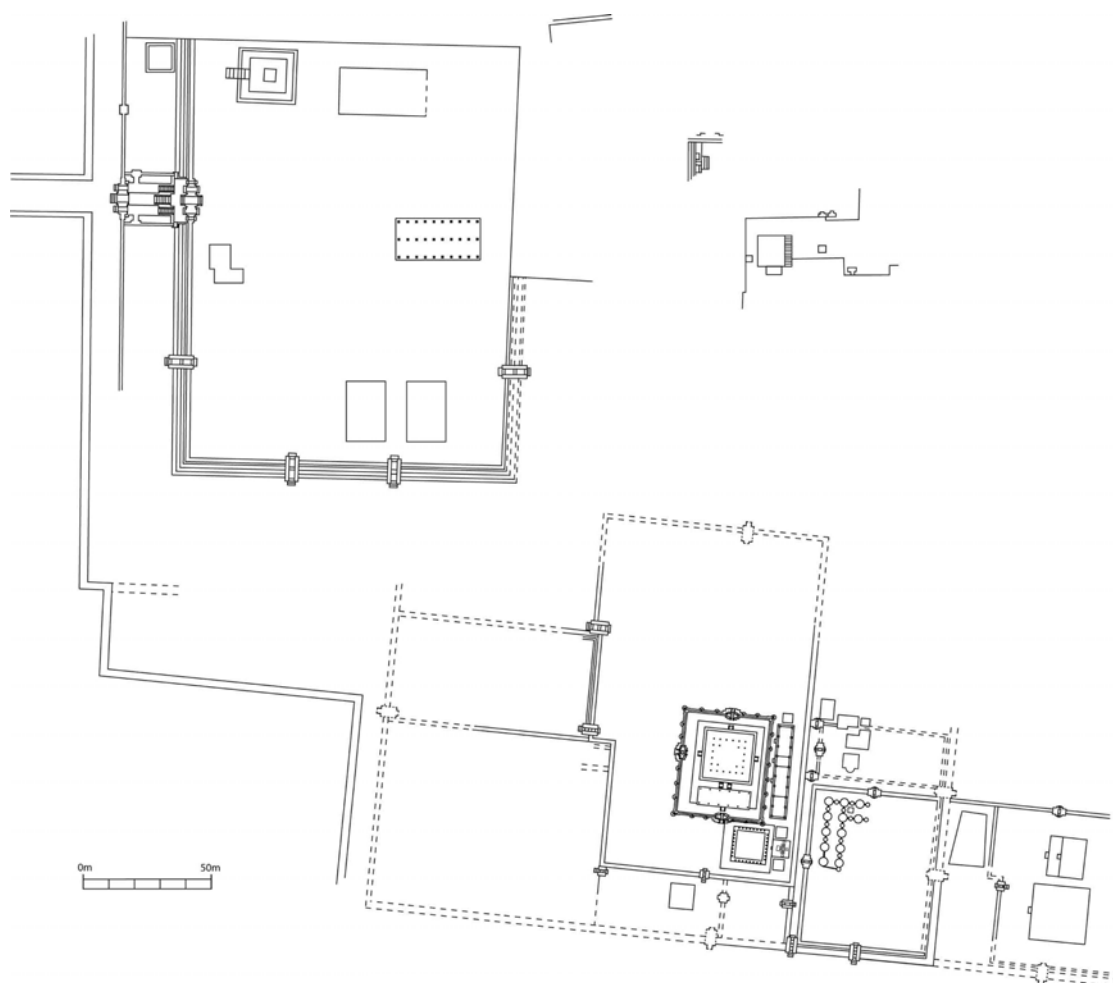


Figure 35: Ratu Boko

– probably meditation caves – and a few unidentified walls. The southeastern compound is certainly the widest and the most complex. It is composed of at least nine courtyards, scattered on various levels and housing numerous remains of *pendopo*, enclosure walls, gates, pools, bases and water tanks.

It is obvious that the present state of Ratu Boko is the result of the long architectural history of the site. The site was already in use during the second half of the 8th century¹¹ and continued to be inhabited up to the 14th-15th century A.D. (Asmar, Bronson 1973; Miksic 1993-1994; Degroot 2006). An inscription testifies the originally Buddhist character of the compound,¹² but another inscription – dated on palaeographic grounds to the mid 9th century –¹³ tells us that (part of) the site was later devoted to the cult of Śiwa. Furthermore, traces of modification of the terrace south of the *pendopo* and the moving of the miniature *candi* give us evidence that the site underwent further transformation during the 9th century (Asmar, Bronson 1973). It is therefore beyond doubt that Ratu Boko was of particular importance and that, whatever its role was, it was crucial enough for both Hindu and Buddhist dignitaries to want to establish themselves on this dry plateau. In fact, since it is the only site in this area that shows such a continuity of occupation and to have clearly been a place of worship for both Buddhists and Hindus, it might have been around this site that the settlement of the whole area developed. The attraction of a place of particular religious importance would have brought other religious communities into the district, their needs stimulating trade and lay settlements in the surrounding fertile plains.

A rather disorganised spatial arrangement, probably resulting from a similarly long occupation, is visible at Dieng (Figure 34). This high plateau, located at 2000m above sea level and surrounded by impressive volcanoes, is dotted with remains of terraces and temples. Many more ruins were once visible, but today only 8 temples and half a dozen foundations remain. At the centre of the plateau stands the Arjuna-group, while at the foot of the mountains can be found *candi* Dwarawati (to the east-northeast of Arjuna), *candi* Gatotkaca (to the south-southwest) and *candi* Bima (to the south-southeast). The shrines gathered around *candi* Arjuna form a heterogeneous group. Not only are they different in plan, but also in orientation; Arjuna and Srikandi being turned slightly to the northwest, while the axis of Sembadra and Puntadewa deviate a little to the southwest. Moreover, the latter shrine is certainly not in line with the others. In the case of Dieng, inscriptions,¹⁴ archaeology¹⁵ and stylistic analysis of the ornamentation of the various shrines¹⁶ suggest that the irregular organisation of the site is linked with a long period of occupation.

¹¹ Abhayagiriwihāra inscription (792-793 A.D.). See Sarkar 1971-1972: n° 6a.

¹² Abhayagiriwihāra inscription. See Sarkar 1971-1972: n° 6a.

¹³ The Rudra inscription. See Wisseman Christie 2002-2004: no 54; Setianingsih 2002:nr BG1410a)

¹⁴ An inscription (Dieng IV) dated 1210, is reported to have been found on the Dieng plateau. See Nakada 1982: 116-117, n° 194.

¹⁵ Remains of an earlier building have been found under the pavement of *candi* Puntadewa and traces of rebuilding have been noticed during excavations at *candi* Arjuna and Puntadewa. See Dumarçay 1993:59.

¹⁶ E.B. Vogler (1949, 1952, 1953) and R. Soekmono (1979), among others, have proposed the existence of several successive phases in the architectural history of Dieng. For Vogler, there was a first building phase, comprising the old Dieng style (c. 650-760 A.D.), of which no structures remain. It was succeeded by a new Dieng style (c. 760-812 A.D.), represented by *candi* Arjuna, Semar and Gatotkaca. *Candi* Puntadewa would therefore belong to the period c.838-c.898 A.D, while Sembadra and Srikandi would have been built after 928 A.D. Soekmono offers a different chronology. He also differentiates between an Old Dieng style (c. 650-730 A.D.) and a new Dieng style (c. 730-800 A.D.).

A similar hypothesis is valid for Gedong Songo, where – as shown above – the orientation, plan and dimensions of the shrines lead us to suppose that the main temples of Gedong Songo III, IV and VI are the earliest, while Gedong Songo I is a later structure.¹⁷

Distribution of types of temple complexes: chronology, region, function and religious affiliation.

We have shown that, on the basis of spatial arrangement, one can classify Central Javanese temple compounds into five types. Why such a variance? In the following paragraphs, we will examine a series of factors that may have had a decisive influence on the choice of a spatial arrangement, namely chronology, possible regional trends, differences in function and religious affiliation. I will show that the chronological and regional factors played a minor role, while function and religious affiliation were probably what led the architect to opt for one or the other type of spatial arrangement.

Although the chronological framework for Central Javanese architecture is limited, there is nothing to sustain the hypothesis of an evolution going from the simple, single temple to the concentric complex: *candi* Lumbung and Sewu, both concentric compounds, are also considered as early temples (Table 30). The only possible correlation between spatial arrangement and chronology would associate sanctuaries built along an axis (Barong, Ijo), with a later date – but two temples are of course not sufficient for satisfactory correlation statistics.

Table 30: Complex types and chronology

<i>Spatial arrangement</i>	<i>Early period (up to c. 830 A.D.)</i>	<i>Late period (after c. 830 A.D.)</i>
<u>Small-scale complexes</u>		
In a row	Mendut	Ngawen
Facing one another	Dieng*, Gedong Songo*, Merak.	Ijo*, Kedulan, Morangan, Sambisari
<u>Large-scale complexes</u>		
Concentric	Kalasan, Lumbung, Sewu.	Loro Jonggrang, Plaosan Lor, Plaosan Kidul
Along an axis	-	Barong, Ijo
Organic	Dieng, Gedong Songo II-VI, Ratu Boko (early phase)	Gedong Songo I, Ratu Boko (late phase)

- no temple in this category * parts of a large-scale complex

If the different types of spatial arrangement were a matter of regional trends, we would have more or less clear geographical clusters. Is it the case? Small-scale temple compounds are found in the north as well as in the south. Their greater number in the south simply reflects the general distribution patterns observed in chapter 4: the south is also the richest in number of remains. Organic compounds are found only in three places, two in the north (Dieng and Gedong Songo), one in the south (Ratu Boko). Concentric compounds and complexes organized along an axis are however found exclusively in the south.

To the Old Dieng style, he attributes *candi* Arjuna, Semar, Srikandi and Gatotkaca, while *candi* Puntadewa, Sembadra and Bima would date from the second building phase.

¹⁷ The place of Gedong Songo II within this schema is uncertain. It is clearly different in plan and dimensions from Gedong Songo I, but is not similar to Gedong Songo III, IV and VI.

If we compare this with our conclusions about general distribution, natural environment and orientation, we can indeed notice that large-scale temple compounds are not found merely in the south or in the north, but in zones that have already been pointed out as demarcating themselves from the others. Gedong Songo, Ratu Boko and Dieng share a mountainous location, not really suitable for wet-rice cultivation and a westward orientation. The three sites also have a particularly long period of occupation and have known several building phases, which certainly explain the lack of a clear pattern in their planning. It is highly probable that these places developed more or less organically from an original (small) core of buildings, contrary to concentric sanctuaries, which were obviously entirely planned from the beginning. Similar features are shared by Barong and Ijo, the only two terraced sanctuaries of Central Java. As for concentric complexes, they are not found all over southern Central Java: they are clustered in the Prambanan area, an area which was most probably an important religious centre at the eastern border of the Central Javanese kingdom. The correlation between specific types of temple complexes and specific places – rather than a whole region – would back the hypothesis that variation in spatial arrangement matches a religious function, not a regional architectural school. The natural environment around Ratu Boko, Dieng and Gedong Songo could designate them as meditation places for ascetics and/or pilgrimage places.¹⁸ This hypothesis is actually confirmed in the case of Ratu Boko, given the existence of meditation caves on the plateau and the association of the *pendopo* terrace with the meditation monasteries of Sri Lanka.¹⁹ Unfortunately the data is too limited to speculate further about the relation between spatial arrangement and function.

The fact that the religious background influenced spatial arrangement is confirmed by a comparison between types of temple complexes and religious affiliation. Sanctuaries where one main building faces one or several secondary buildings is apparently exclusive to Hindu architecture (Table 31). Besides, even though both Hindu and Buddhist religious compounds make use of alignment, Buddhist buildings are slightly over-represented in the survey: among the 16 compounds with such an arrangement, 7 are Buddhist. Given that, in Central Java, there are far more Hindu remains than Buddhist ones, we may conclude that the organization of temples in a single row was more common in the case of Buddhist sites than in Hindu compounds. As for the large-scale complexes, the organic ones²⁰ or those organized along an axis are Hindu; concentric compounds being largely Buddhist.

¹⁸ The possibility that the Dieng plateau acted as an important pilgrimage place could explain the existence of the numerous *pendopo* built in the neighbourhood of the temples of the Arjuna group. Given that this plateau is not suitable for rice cultivation and could not support a large permanent population, the *pendopo* could have been built to accommodate pilgrims visiting the site on a short-term basis. Besides, a long building history, with numerous additions and transformations, is quite a common feature of pilgrimage places. Unlike village shrines, which are usually of small dimensions and are used almost exclusively by local villagers, pilgrimage sites have a significance that goes beyond the strictly local scope and they tend to attract more devotees, coming from more distant places, the wealthiest visitors financing renovation and new constructions, others making smaller donations and leaving *ex-voto*.

¹⁹ See Miksic 1993-1994.

²⁰ At the exception of Ratu Boko, but we have already mentioned that this site shows both Buddhist and Hindu elements.

Table 31: Complex types and religious affiliation

<i>Spatial arrangement</i>	<i>Buddhist compounds</i>	<i>Hindu compounds</i>
<u>Small-scale complexes</u>		
In a row	Dawang Sari, Gampingan, Mendut, Ngaglik, Ngawen, Palgading, Risan.	Banon, Barong*, Cebongan, Gedong Songo V-VII*, Jetis (Cangkring), Mantup, Setan,
Facing one another	-	Arjuna*, Gedong Songo II-IV*, Gunung Sari, Gunung Wukir, Ijo*, Jetis (Ngemplak), Kedulan, Lawang, Merak, Morangan, Ngempon, Puntadewa*, Sambisari, Singo, Srikandi*
<u>Large-scale complexes</u>		
Concentric	Kalasan, Lumbung, Plaosan Lor, Plaosan Kidul, Sewu.	Loro Jonggrang
Along an axis	-	Barong, Ijo
Organic	Ratu Boko ²¹	Dieng, Gedong Songo, Ratu Boko

- no temple in this category * parts of a large-scale complex

Architectural space and conceptual space

Another way to address the issue of the meaning of the various types of temple complexes is to question the perceptions of space they convey. Concentric compounds, shrines facing one another and terraced sanctuaries particularly show contrasting spatial arrangements, which induce a different perception of the architectural space and a different approach to the temple compound.

The centre and the axis in concentric temple complexes

It is redundant to say that concentric compounds put the emphasis on the centre. The conception of a space centred around a focal point and extending outwards is in line with Indian cosmogony, as expressed through the image of Mount Meru standing as an *axis mundi* and through the numerous Buddhist *maṇḍala*. Numerous publications have already explored this symbolism, in Javanese and Southeast Asian temple architecture.²² I would like to take another approach and try to understand how the spatial organization of the temple compounds may have guided the sight and the movement of a devotee entering the sacred ground.

When the shrines stand alone or in a single row, the devotee is free to approach them from the front, and the temples are visible from far away. This is also true of most of the large Buddhist concentric sanctuaries: the access to the main temple is direct, *via* east or west, which is the favoured axis. So, even the centred compounds present elements of axiality. At Sewu (Figure 29), the preference for the east-west axis is transcribed into the architecture through the slight asymmetry of the temple plan. The northern and southern entrances to the inner courtyard are indeed narrower than their eastern and western counterparts. Besides, between the first and the second enclosure, only the eastern and western pathways are clearly identifiable. The

²¹ Buddhist and Hindu structures are found on this site. It seems that the site was originally Buddhist; Hindu elements were introduced later on.

²² See, for example, Filliozat 1954; Chihara 1996: 25-47.

ambiguity of the (almost) centred plan of *candi* Sewu is apparent in the number of E/W facing shrines in relation to the number of N/S facing structures. In the outer row, there are 24 shrines turned to the east and west, while only 20 face north or south. This difference cannot only be explained by the fact that the corner shrines are east and west facing, but also because the complex is actually not square. It is strictly a rectangle, the long sides of which face east and west. The passage from the square plan of the main *cella* to the rectangular plan of the second courtyard is gradual, each element of the ground plan (the inner courtyard and the four rows of shrines) being slightly more elongated as one goes from centre to periphery.

At Plaosan Lor, the rectangular plan dominates the whole compound (Figure 33). The spatial impulse is given by the main temples themselves – two rectangular structures built on a north-south axis. The general organization of the temple complex is similar to that of *candi* Sewu, although adapted to an obviously rectangular plan, but without the presence of a true courtyard between the rows formed by the secondary structures. The twin temples are surrounded by an enclosure wall. Outside this first enclosure there are rows of secondary structures (outward looking shrines, and *stūpa*). The corner shrines open to the east and west, and not to the south or north. The rectangular shape of the compound emphasizes a north-south axis, while its entrance, on the west, underlines the importance of the east-west axis. While Sewu's plan is obviously centred, Plaosan's is not. Although the rows of secondary structures bring an element of centrality, the inner courtyard – and the twin temples themselves, with their entrances only on the west – provides clear evidence of axiality. Furthermore, Plaosan Lor is located, together with Plaosan Kidul, in the rear section of a wider enclosure.

Approach to Hindu temple complexes

In Buddhist compounds, the approach to the *cella* is always straightforward. In concentric temple complexes, the apparent centrality of the ground-plan is counter-balanced by a slight emphasis on the east-west axis. In most Hindu complexes, however, the devotee cannot approach the central shrines directly from the east or the west: the secondary shrine facing the main temple obstructs the passage. This arrangement is of course reminiscent of the bull shrines of Indian temples.²³ However, the impression one gets is quite different. In the Hindu temples of India, Śiva's bull is housed in an open *mandapa*. The presence of this open pavilion supported by pillars does not totally obstruct the view of the main temple, but it forces the visitor to turn away from the *cella*, and initiates the movement of *pradakṣiṇa* around the shrine. In Central Java, the visitor coming from the front entrance does not face an open pavilion. He is literally stopped by a wall: he must turn away from the east-west axis to be able to get even a glimpse of the central shrine. At Loro Jonggrang (Figure 31), for example, the blind rear wall of *candi* Nandi prevents the visitor from even having a glimpse of *candi* Siwa.

This particular spatial arrangement could be seen as a Central Javanese variation on a Hindu tradition. I would nevertheless like to express two possible other explanations that do not necessarily exclude one another – nor the Indian influence.

²³ This arrangement could also be compared to the dance hall found in front of certain Hindu temples, such as the Sun temple at Konarak. However, in the latter case, the pavilion is open in the four directions and there is thus a possible passage along the main axis, leading through the hall to the main temple.

Firstly, the fact that the visitor is impeded by a blind wall makes one think of the architecture of Balinese houses. Immediately behind the entrance to the courtyard containing the pavilions of a traditional Balinese house, there stands a high, blind wall. Its function is said to prevent evil spirits from entering the family compound – as evil spirits are reputed to be unable to turn.²⁴

Two temple compounds suggest another possibility; namely that the east-west axis was not always the main access to the temple compound. In Central Java, very few enclosure walls are preserved, and even fewer gates. Although traces of such walls have been discovered at many sites, they are rarely sufficient to determine the position of the original entrances.²⁵ Furthermore, very few have been found in association with temple compounds presenting the arrangement described above (shrines facing one another). We are left with just four workable examples, namely *candi* Ngempon, Sambisari, Loro Jonggrang and Arjuna. Ngempon does not tell us much about the use of the temple ground, since the poor state of preservation of the enclosure does not allow us to see whether one gate was favoured above the others. At *candi* Sambisari, although the four gates were originally similar, it appears that the northern gate of the inner courtyard was closed at some point (*Mengenal candi Sambisari*: 8).²⁶

At Loro Jonggrang (Figure 31), excavations carried out in 1926 brought to light two walls running north from the second to the third enclosure, which were thought to be the remains of a pathway. Similar traces were also found to the south of the second enclosure, while nothing was reported to the east and west. Even though it is true that the western part of the original enclosure was probably destroyed by a change in the course of the Opak river, a north-south pathway nevertheless tallies very well with the organization of other Hindu-Buddhist remains in the neighbourhood. Temple remains are indeed visible to the north²⁷ and south²⁸ of Loro Jonggrang, but not to the east.²⁹ The presence of the pathway suggests that the main access to Loro Jonggrang was probably along its north-south axis rather than through the eastern gate. If this is true, then visitors to the temple compound would have entered not *via* the back of *candi* Nandi, but *via* the northern or southern gate, so that their view could embrace *candi* Siwa and (almost) all the other structures within the central courtyard.³⁰

²⁴ A more pragmatic interpretation would be that it prevents anyone from peeping inside the inner courtyard, which is the explanation sometimes given for a similar system found behind the gates of modern Javanese *kraton* (B. Arps, personal communication: 2007).

²⁵ Traces of enclosure walls have been discovered at 27 sites: Arjuna (Dieng), Banyunibo, Barong, Dukuh, Gunung Sari, Gunung Wukir, Ijo, Kalasan, Loro Jonggrang, Lumbung (Klaten), Mendut, Merak, Ngempon, Pawon, Plaosan Kidul, Plaosan Lor, Puntadewa (Dieng), Ratu Boko, Sambisari, Sampangan, Sari, Selogriyo, Sewu, Sojiwan, Srikandi (Dieng), Tinjon and Wadas. All the entrance gates are preserved at Arjuna, Loro Jonggrang, Ngempon, Sambisari and Sewu. The latter is Buddhist and has a completely different spatial arrangement. See above, p. 137.

²⁶ At *candi* Sambisari, although the four gates were originally similar, it appears that the northern gate of the inner courtyard was closed at some point (*Mengenal candi Sambisari*: 8). One can further note that the gates are not precisely at the centre of the enclosure wall. The western gate is slightly shifted to the south, the northern gate to the west, the eastern gate to the north and the southern gate to the east.

²⁷ *Candi* Bubrah, Lumbung and Sewu.

²⁸ Gatak, Kalongan and Sojiwan.

²⁹ The Opak River has damaged the western part of the compound, so that it is impossible to know whether there were once structures in that area.

³⁰ The two small *candi* Apit, located near the southern and northern gates, do not close the access to the inner courtyard, since they are built slightly to the east of the entrances – however they do obstruct some of the view. They may perhaps be understood as protecting the north-south axis – and the main entrances – from evil spirits. These structures are unique to Loro Jonggrang.



Figure 37: Gedong Songo

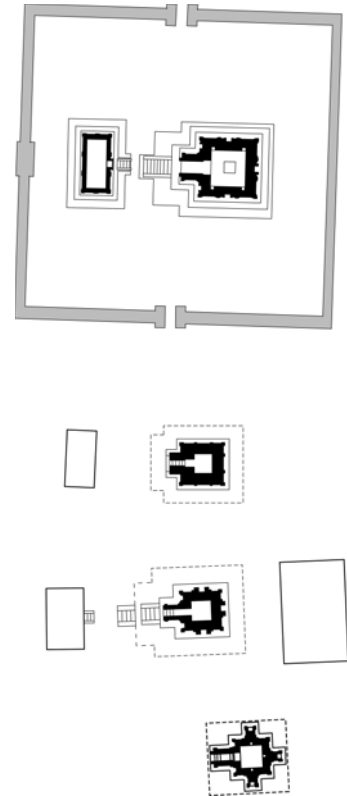


Figure 36: Arjuna group (Dieng)

The only place where the preference for a north-south access to the temple compound is beyond doubt is *candi* Arjuna (Figure 36). Its enclosure wall is in fact interrupted by two entrance gates and one false gate. The false gate is located to the west (that is to say in front of the main temple and at the rear of the smaller *candi* Semar), while the entrance gates are placed along the north-south axis.

At Gedong Songo, although no enclosure wall is preserved, the natural approach to the temple group is also *via* the south, as the temples are scattered on the southern slope of Mount Ungaran (Figure 37).³¹

Anthropology may help us to widen our frame of analysis and interpretation. In east Sumba, where the main axis of orientation is upstream-downstream and the secondary one is head to tail (of the island, as seen by its inhabitants), villages usually have four gates – the main ones being located on the north-south (upstream-downstream) axis. Houses, however, face either east or west (head or tail). Indeed, even though benevolent powers are said to enter (and leave) the village through the main gates, harmful forces are also thought to use them as entry points as well. Hence, altars are found near the village gates, and houses face the rising or setting sun rather than the upstream direction (Forth 1981:52).

This paradox between the orientation of individual buildings and that of the settlement as a whole transpires in many Central Javanese temple compounds. Dieng, Gedong Songo and, to a lesser degree, Loro Jonggrang, are for example composed of

³¹ Entrance to the individual temple groups is *via* north or south.

east/west facing buildings arranged along a north-south axis, so that the compound as a whole appears as a rectangle, the short sides of which face north and south.

These examples demonstrate that one should not be too quick in transposing Indian approaches of ritual space to Java and that, in this domain at least, small details can mean a world of difference. In the lack of local textual sources on the subject and further comparative material, it is however impossible to determine whether one of our tentative explanations – simple variation around an Indian tradition, will prevent evil spirit from entering or importance of the north-south axis – is at the origin of the presence of a closed pavilion in front of most Hindu temple complexes.

A peculiar case: candi Lumbung

One Buddhist temple compound appears to share a feature with Hindu sanctuaries: *candi* Lumbung. This temple complex, though modest in dimensions, is a slightly complicated compound, the tendency to centrality of which is toned down by the arrangement of the secondary shrines. The complex consists of a central temple surrounded by 16 secondary shrines (Figure 28). In most concentric compounds there is a balance between east, south, west and north facing shrines, but this is not the case at *candi* Lumbung where only one structure faces west.

The consequence of this organization is a unique dynamic in which the apparent unity inherent to concentric organization gives place to a multiplicity of spatial concepts. The importance of the ‘rear’ is stressed – through the presence of five rear shrines. So is the concept of centrality – 14 out of the 16 subsidiary shrines are turned toward the main temple. The orientation of these secondary shrines is quite peculiar. One would expect that they would all be turned inward (or outward), but the architect chose a different option. Whereas 14 shrines are turned inward, two shrines of the eastern row face the central secondary shrine of the same row, rather than the main temple. Furthermore, the importance of the central shrine of the eastern row is underlined by the existence of a small stone pathway linking it directly to the main temple. Nevertheless, the opposition between the main temple and the central shrine of the eastern row reminds one of the spatial arrangement of certain Hindu temples. Due to this organization, it is unlikely that *candi* Lumbung housed an iconography similar to that of *candi* Sewu: the *buddha* would have required an equal treatment – as it is the case at Sewu. At Lumbung, only one shrine faces west and it seems very unlikely that a pantheon would have comprised 5 *buddha* in *varada-mudrā*, 5 in *bhūmisparśa-mudrā*, 5 in *abhaya-mudrā* but only one in *dhyāna-mudrā*.³² Rather, the architectural composition suggests that the pantheon of Lumbung involved a relation between one main principle (expressed through the main temple) and an inferior but complementary principle (expressed physically through the shrine facing the main temple).³³ The whole compound was surrounded by an enclosure wall (or fence), the remains of which were found in 1920 (Bosch 1920: 79).

³² I pre-suppose here an organization similar to that of the inward facing shrines of *candi* Sewu. In the Indian context, the *buddha* in *dhyāna-mudrā* would of course be located in the west.

³³ Not being an expert of Buddhism, I don’t have any precise proposition of identification for these complementary principles. For the divinities housed in the other subsidiary shrines neither.

The sacred and the rear

We have so far examined concentric compounds and sanctuaries composed of a main temple facing one/three secondary shrine(s). Let us now focus on *candi* Barong and Ijo (Figures 32 and 33). As we have seen earlier, these temple compounds present a completely different spatial arrangement.³⁴ In both cases, there is absolutely no trace of a centred organization; rather, they are stretched along an east-west axis. This is not the only characteristic that these temples share: both are built in the same area (on the dry hills of Mount Pegat-Ijo), on a hill slope, and are terraced sanctuaries.

What is especially interesting in the spatial arrangement of both Barong and Ijo, in comparison with what we have seen at Sewu and Loro Jonggrang, is the shift of focus from the centre to the rear. The most sacred part of the temple compound is no longer its geometrical centre, but the rear – and uppermost – section. Barong and Ijo are not geometrical representations of the universe like Loro Jonggrang or Sewu. They do not correspond to the Hindu-Buddhist conception of a central mountain – Mount Meru – surrounded by concentric seas and mountain ridges. From an architectural point of view, the buildings are stretched along an east-west axis. From the point of view of the visitor, it seems that the stress is here laid on the path to be travelled and the goal to be reached.

This type of organization bears similarities with the terraced sanctuaries of the Austronesian megalithic traditions found in West Java, such as Gunung Padang and Pangguyungan (Bintarti 1981), as well as with East Javanese sanctuaries, such as *candi* Sukuh, the temples on Mount Penanggungan and, to a lesser extent, Panataran.³⁵ It is difficult to tell whether this type of plan is indicative of the date or the function of the temples in question. Does the plan of *candi* Ijo and Barong resemble the spatial organization of certain megalithic complexes and of East Javanese sanctuaries because the temples date from the same period, because they share a similar function or because they represent an older system of orientation? At Ijo, the absence of any geometrical organization of the lower terraces, as well as the variety of buildings, may suggest that the temple was in use for a long time and that its present form is the result of decades of construction. Its location, away from the fertile plain, in an area of little suitability for housing farming villages, distinguishes *candi* Ijo from many other Central Javanese temple remains. It is possible that – in common with Ratu Boko, Dieng or Gedong Songo, with which it shares many features – it might have been a pilgrimage place or a site devoted to ascetic practices.

Delimiting the sacred ground: boundary and central stones

In Central Java, the architectural space was structured by the relative position of main shrines and secondary shrines, enclosure walls and *gopura*, but not only: in six cases, the most sacred part of the temple compound was also marked out by boundary stones. These small, *lingga*-shaped stones have been found *in situ* at *candi* Gebang, Gunung Sari, Gunung Wukir,³⁶ Ijo, Loro Jonggrang, Sambisari and Selogriyo.³⁷ In all

³⁴ See also above, p.132.

³⁵ Panataran is also extended along an axis, even though it is not on a slope and is thus not a terraced sanctuary. Nevertheless, there is at Panataran a similar association of sacred/rear (Klokke 1995)

³⁶ I do not know the original position of the sole boundary stone found at Gunung Wukir, as it is not mentioned in the excavation report (Bernet Kempers 1938: fig. 26). However, according to the photograph, it was located in a corner, probably the northeast or northwest, as only these were still visible in 1938.

cases, they were placed within the innermost enclosure – if any. It is remarkable that this rule is valid for Loro Jonggrang as well and that the rows of subsidiary shrines are thus out of the sacred ground delimited by the boundary stones.

The pattern that emerges from the remaining boundary markers is that they were usually 9 in number (Table 32). They were located on the cardinal points and intermediary points of the temple ground. Thus, they marked the centre, the corners and the middle of the sides of the inner courtyard, corresponding to the zenith, northeast, east, southeast, south, southwest, west, northwest and north. They divided the sacred space into 4 squares of identical dimensions.

Table 32: Position of the preserved boundary stones

<i>Site</i>	<i>Centre</i>	<i>NE</i>	<i>E</i>	<i>SE</i>	<i>S</i>	<i>SW</i>	<i>W</i>	<i>NW</i>	<i>N</i>
Gebang		x		x		x		x	
Gunung Sari	x	x	x	-	-	-	-	-	-
Ijo	x	-	x	-	x	-	x	-	x
Loro Jonggrang	x	x	x	x	x	x	x	x	x
Sambisari	x	x	x	x	x	x	x	x	x
Selogriyo	-	-	-	-	-	x	-	x	-

x preserved - not preserved

The case of *candi* Gebang is somewhat different (Figure 38). Four boundary stones have been found here, respectively in the northwest, northeast, southeast and southwest. In contrast to other temples, the area within the boundary stones is not square but rectangular. It is puzzling that although the temple was protected by a thick layer of earth and mud, only four boundary stones were discovered. It is possible, however, that these relatively small and light stones may have been washed away by a flood or *lahar*. More puzzling is the rectangular shape and the fact that the distance between the northwestern and northeastern stones is roughly half the distance between the northwestern and the southwestern ones – a similar observation is valid for the southwestern-southeastern stones and the northeastern-southeastern ones. This leads us to a natural hypothesis: we might be dealing with only half a compound rather than with a complete sanctuary. The second shrine would have had to be located to the east of the actual *candi* Gebang and would have faced west. There is however not the slightest trace of such a building. Loose stones found in front of Gebang and down to the river might belong to another building, but equally to an enclosure wall. I do not have any explanation for this, but it is also possible that a second shrine was intended but never built.

In the other cases, the boundary stones appear to trace a large square on the ground, stressing its most significant points (the centre, the corners and the centre of each side) and obviously conveying the concept of a space revolving around or radiating from a central point. One would expect, that the central stone corresponds with the main shrine, just as, in Buddhist compounds, the geometrical centre of the inner enclosure fits with the main *cella*. It is however not the case. The most striking element in the position of these boundary stones is indeed, as underlined by previous research (Dumarçay 1986), that the geometric centre of the sacred ground, as materialised by the central stone, does not correspond with the position of the main shrine (Figure 39). It is systematically located immediately south of the entrance staircase of the main temple, which is thus shifted to the northwest or to the northeast

³⁷ Loose boundary stones have also been discovered at Duduhan, Gunung Pring, Mulungan Wetan, Nglimut, Pucanggunung and Tampir.

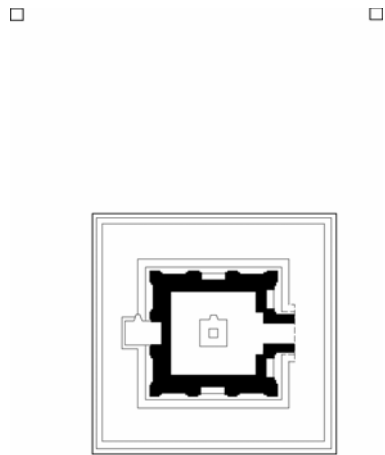


Figure 38: *Candi Gebang*

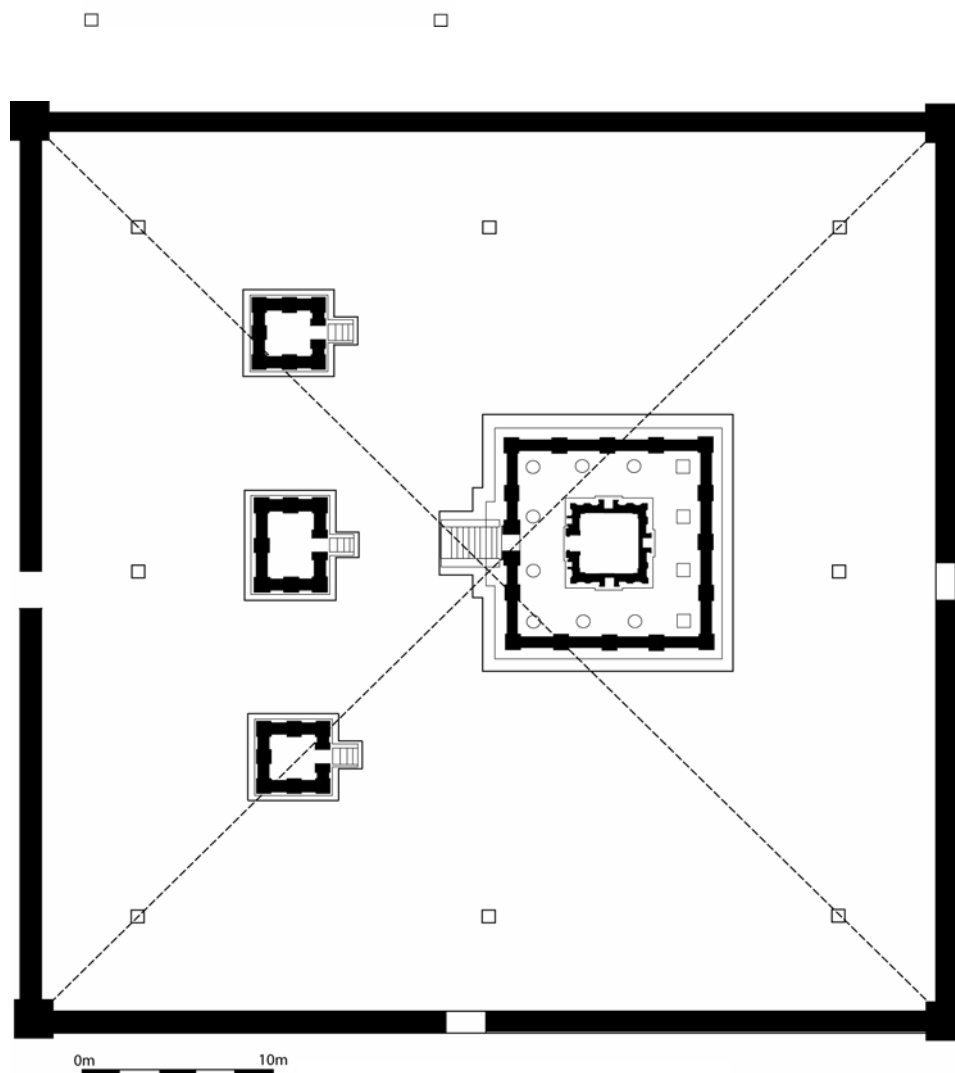


Figure 39: *Candi Sambisari*

of the courtyard (depending on the direction, east or west, that it faces).

For Dumarçay, this displacement was necessary for practical considerations: the architects needed the central stone to remain free of construction so that it could serve as a reference point during the building process (Dumarçay 1993:52-53). In my opinion, this explanation is quite unlikely: once the peripheral boundary stones were in place, there was no particular technical reason to keep a central marker. Any two boundary stones could serve for triangulation.

I would like to emphasize that the relative position of the main *cella* and the central boundary stone results in part from the spatial arrangement specific to Hindu temples in Central Java. The Hindu religious compounds where such boundary stones have been discovered are composed of two rows of buildings facing one another. In order to create a balanced ensemble, it is logical that the north-south axis of the compound runs through the central space, in between the two rows of buildings. This avoids the need for shrines to be cramped in the eastern or western part of the courtyard. Nevertheless, as we can see at Loro Jonggrang, it was important that the central temple was located nearer to the centre, so that the north-south axis is actually closer to the shrines of the western row than to the buildings of the eastern row. However, the central boundary stone, which marks the intersection of the north-south and east-west axis, remains outside the main shrine.

The shift of the main temple to the north is more difficult to explain using aesthetic principles or practical motivations. Further, I personally do not know of any Indian temple where the main *cella* is not on the central axis of the temple ground. Although a shift to the rear is common in India,³⁸ the main axis of the temple, as far as I know, usually corresponds to the axis of the surrounding courtyard. This shift of the *cella* to the rear, however, is also known from Khmer architecture of the Angkorean period.³⁹ So, the main *cella* of the Preah Khan of Angkor (late 12th century) is clearly located to the northwest of the geometric centre of the religious compound. This type of spatial arrangement is thus not specific to Java. Further research in comparative architecture would be required in order to determine if it originally came from India or if it is a purely Southeast Asian tradition – and whether it might be a Javanese influence on Khmer architecture. It is possible that – rather than deriving from Indian temples themselves – the use of placing the main shrine to the north of the east-west axis may derive from a similar interpretation of Indian textual tradition.

In the absence of any reference to this problem in Javanese inscriptions or (later) texts, it is impossible to know why the centre of the temple ground has been so carefully avoided and why the main temple is always in the northern half of the sacred enclosure. As this tradition does not seem to result from any technical requirement, its origin may perhaps be derived from religious belief.

As noted above, it might, for example, originate from a specific interpretation of Indian texts. When referring to the *vāstupuruṣa*, Indian treatises on architecture

³⁸ The Hindu temples of India usually have an extra room in front of the *cella*, called a *maṇḍapa* in South India, or *mukhaśālā* in North India. The result is that their ground plan is elongated rather than square. To create space to house this additional room, the *cella* is shifted to the rear.

³⁹ Unfortunately, information about the spatial arrangement of pre-Angkorian temple compounds is scarce, as are accurate plans. Therefore, I do not know if the shift of the main *cella* to the north was already a trend of pre-Angkorian ensembles such as Sambor Prei Kuk. It is thus difficult to interpret the phenomenon. Was it a typical Javanese custom that was passed on to later Khmer architects? Or was it from the start a common feature of both Javanese and Khmer building traditions?

usually describe the position of its head, limbs, trunk, heart, veins etc. The Spirit of the site is considered responsible for good and bad fortune and one must avoid tormenting it during construction (*Mayamata* 7:50-56). In the description of settlements, the *Mayamata* states that there are 6 places where there should be no temples or buildings, namely the heart of the Spirit of the site, its bones, the stakes, the lines (of the diagram), their intersections and the empty spaces at the corners (*Mayamata* 9:86). It was perhaps the desire of Central Javanese priests and architects not to torment the Spirit of the building that made them choose this peculiar spatial organization. It does not, however, explain why temples were systematically shifted to the north but never to the south.

Given that temple plans are all intended as an image of the *vāstupuruṣa* and as a geometrical diagram of the universe, it might be that Indian and/or local conceptions of the world also played a role in the conception and planning of religious compounds. Mount Meru is certainly the centre of the universe according to the Indian Hindu-Buddhist cosmology. However, if one considers this cosmology from a human perspective, it should be located to the north, because the island on which human beings are believed to live (*jambudvīpa*) is indeed often depicted as lying to the south of the mountain of the gods.

The shift of the central building of Central Javanese temple compounds to the northwest (or northeast) could refer to both beliefs, unless further studies in Indian art or Balinese architecture open the way to new interpretations of Central Javanese architecture.

Conclusion

With this chapter, we have started to address the structure of the architectural space, leaving behind questions related to the occupation of the territory and the relationship between temple and natural environment, which was the focus of the previous chapters.

Our aim was to describe the different types of spatial arrangements of buildings within temple complexes and to try to understand the factors at work behind their variance. We have identified two types of small-scale temple compounds (buildings in a row and buildings facing each other) and three type of large-scale ones (concentric, organized along an axis and organic). A study of the relative distribution of these types according to their chronology, location and religion has shown that the choice for one spatial arrangement or the other was in great part influenced by function and religious affiliation. So, organic compounds could be associated with meditation/pilgrimage places away from village settlements. Similarly, complexes composed of one main shrine facing one (or three) secondary shrine(s) seem typical of the Hindu architectural tradition (whatever the date and the location). In this type of spatial arrangement, the approach to the main temple is indirect, since one has either to turn around the secondary shrine to see the façade of the main shrine, or to enter the compound via the north-south axis. As for concentric arrangements, they seem to have originally been linked to the Buddhist architecture of the Prambanan area –with the exception of the Loro Jonggrang complex. In the latter case, the concentric rows of subsidiary shrines do however not surround a central, main shrine, but a group of buildings arranged in a typically Hindu manner, the main shrine facing a row of three secondary buildings.

Difference in spatial arrangement of the buildings is not the only thing that distinguishes Buddhist from Hindu architecture, as we will see in the following chapter, dealing with the ground-plans of the shrines.