This article will discuss brick temples at two little known sites. A couple of years ago, I gave a talk in Ahmedabad attended by Professor M.A. Dhaky and, among slides of dozens of temples, showed an image of one of the temples in question, from Kalayat, Kaithal District, Haryana. This was the only one that Dhaky did not know – a good reason to make it the starting point for a contribution to this volume. The other site is some 500 km to the south-east of Kalayat, at Nasirabad in Sitapur District, Uttar Pradesh. Both sites belong to the era when northern India was dominated by the Pratihara dynasty, and both in different ways fill gaps in our knowledge of the Nāgara tradition of temple architecture (see Map).

As well as publishing the unpublished and filling in knowledge, this paper will consider the question of how the material used for the construction of a temple affects its design. Architects trained in the modernist mould value form that follows technique, but Indian temple
architecture largely disappoints their expectations as it is representational. Its masonry forms present an imagery, albeit ever more abstracted, depicting the architecture of a celestial palace, and originating in wooden construction. One might imagine that, once a tradition of masonry temples is established, its brick exemplars would be indistinguishable from their stone counterparts. The designs of the temples discussed here, however, do reflect in varying degrees the nature of the material from which they are built.

The construction of these temples consists of thick walls with an inner core of irregularly shaped bricks bedded in mortar, and outer skins of regular bricks with tight, dry joints. As with stone temples, coursing is all horizontal, with corbelling to achieve the curve of the śikhara (spire). The exterior skin was carved \textit{in situ}, then plastered, and doubtless...
painted in heavenly colours of which we can only dream. All of this would have been following well-established practice, as hundreds of brick temples, as well as stūpas and vihāras (monasteries), had been built across northern India before the time of the Pratīhāras. Remains of large brick temples raised up on a succession of tiered platforms have come to light at the Gupta sites of Ahicchatra (Uttar Pradesh) and Pawaya (Madhya Pradesh), and the Vākāṭaka capital, Mansar (Maharashtra). The fifth-century Gupta temple at Bhitargaon (Uttar Pradesh) is the earliest brick temple with its superstructure almost intact. Brick temples of the seventh century include the famous Mahābodhi temple at Bodhgaya (Bihar), the Rājīvalocana temple at Rajim, and the Lakṣmaṇa temple at Sirpur, the last two located in ancient Dakṣiṇa Kosala (modern Chhattisgarh). However, none of these brick examples is a direct predecessor of the Nāgara – at least, not of the ‘mainstream’ Nāgara, that widespread style which had reached maturity in the Gangetic basin and central India by the seventh century, swiftly spreading in all directions. For its forbearers, one must look to the Viṣṇu temple at Deogarh (Uttar Pradesh, c. 500 ce) and fragmentary evidence from other Gupta stone temples, of which no brick equivalents survive. From these derive the Latina mode of Nāgara temple, with its curved śikhara with latās (vertical bands), and the corresponding kind of Valabhī shrine with a wagon-vaulted roof.

The earliest surviving brick versions of Latina and Valabhī shrines belong to about the eighth century. Two are in the Ganga-Jamuna Doab between Kanpur and Fatehpur – a brick Valabhī temple at Sarhan Bujurga, and a brick stellate version of the Latina mode with 12 bhadrās (central offsets) at Nimiyakheda near Bhitargaon. Another work of this early date is the Śiva temple at Kalayat. The Śiva temple is one of two brick temples of similar date in the town of Kalayat, both adjoining a picturesque complex of later temples known as the Kapil Muni Tirtha and under the protection of the Archaeological Survey of India. A stone doorway of about the eighth century has been incorporated into one of the shrines inside the complex. The other early temple, sited diagonally across the wide tank to the south of the main ghāṭ, survives only as fragments built into a later structure. These temples are geographically more distant but stylistically closer than Nimiyakheda and Sarhan Bujurga to the mainstream Nāgara tradition familiar from central Indian stone temples, and therefore more reliably datable to the latter part of the eighth century. The Śiva temple is a rare surviving example in brick of a Latina shrine in its classic form. It offers a glimpse of the medieval temple building tradition of a region where nothing comparable remains.

Standing to the west of the Kapil Muni Tirtha, the Śiva temple consists of a mula-prāśāda (main shrine) which has been repaired but is essentially intact (Figs. 4.1 to 4.3). The shrine exterior is a little over 5 m², fronted on the east side by a shallow porch of a much later date. At the corners of the shrine are ghatapallava (vase-and-foliage type) pilasters, between which the walls might at first appear to be triratha (of three projections) because there are three projecting niches or rathikās. However, the underlying scheme, as clearly apparent in the śikhara, is paścaratha (of five projections), the lateral niches masking the step forward between the first and second planes. The three projecting niches take the form of miniature Valabhī shrines. The wider central Valabhī that forms the bhadrā (central wall offset) penetrates upwards through the varaṇḍikā (cornice zone) into the base of the śikhara. While a typical niche in a Latina shrine, the kind of niche with a gavākṣa-fronted udgama (pediment fronted by a dormer motif), is derived from the Valabhī form, it is rare to see a triad of such faithful models of Valabhī temples. Each one has karnakūṭas (miniature square corner pavilions) topped by ṛmalakas (ribbed circular crowning member) creating a bhūmi (level) upon which the proliferated crowning pediment
Fig. 4.1. Śiva temple, Kalayat, North. Photo: Adam Hardy.
is raised. The definition of the three miniature shrines is emphasized by the distinctive nature of their respective moulded bases, differing in height as well as design from the vedībandha (basal wall mouldings) of the main body of the temple, visible at the corners. The vedībandha is now partially submerged below the present paving level. In the śikhara, four ascending karṇakūṭas remain, their ribbed āmalakas marking the bhūmis. Originally, there would doubtless have been five bhūmis and a crowning āmalaka, the top portions now having been replaced by a rendered capping and cupola.

A parallel with Kalayat can be seen in a Latina temple design that stems directly from this mainstream Nāgara tradition in one of its distant outposts. This is the Parasurāmesvara at Bhubaneswar (Orissa), a stone temple generally dated to the mid- to late-seventh century (Fig. 4.4). This design became a standard one for Latina temples in Orissa for a century or so, until the regional schools transformed their temple architecture under other influences. As at Kalayat, three Valabhi shrine images project from the wall, the central one rising into the śikhara, which again is pañcabhūmi (of five levels), but the pratilatā (segment flanking the latā spine) does not step forward from the karṇa (corner projection). Correspondingly, there is no step in the varāndika and jaṅghā (wall) below. The Orissan temple is earlier than Kalayat: its śikhara still has a recess next to the karṇa, with miniature colonnades and Valabhi pavilions (bālapañjaras), and its gavākṣas (dormer motifs) have not yet coalesced into jālaka (interlaced network) patterns.

NASIRABAD

In Madhyadesa itself, the temples at Nimiyakheda and Sarhan Bujurga are earlier creations of a tradition of brick temple architecture that continued in the Ganga-Jamuna Doab through the ninth and tenth centuries. This branch of the Nāgara tradition largely built Latina temples, both on the usual orthogonal plan (Viṣṇu temple, Thitaura), in stellate varieties as already seen at Nimiyakheda (Sūrya temple, Tinduli), and circular ones (Temples 1 and 2, Kurari). Krishna Deva, in the Encyclopaedia of Indian Temple Architecture, ascribes all these to the Pratīhāras of Kanauj. Being relatively close to that famed city, during a period when it dominated northern India as the capital of the Pratīhāra empire, it might be imagined that these temples are the remnants of an imperial style which at Kanauj itself is lost in the rubble. But their character is idiosyncratic and far from mainstream, very different from stone temples thought of as ‘Pratīhāra’ in central India. Interestingly, where evidence of stone temples survives in the region, its nature is markedly mainstream and there are no stone examples of the regional style that we see in brick, suggesting that there was a school of masons who built exclusively in that material. One distinctive feature of these brick temples is
Fig. 4.3. Śiva temple, Kalayat, elevation. Drawing: Adam Hardy.
Fig. 4.4. Paraśurāmeśvara temple, Bhubaneshwar, South. Photo: Adam Hardy.
the inventive profusion of pattern carved in the brickwork, taking the standard range of gavākṣa components and transforming them almost beyond recognition. Another widespread peculiarity is that the śikhara segments and the respective niche pediments in the wall zone are made equal in width and covered in the same kind of pattern. Since the body of the niche is virtually dispensed with, so that the pediment almost fills the full jaṅghā height, patterned bands run all the way up the temple with only the barest of interruptions.

Although Nasirabad lies around 200 km north of the area where the other known examples are concentrated, the temples there belong to this tradition and bring further evidence of its fecundity and variety. Two large brick temples are found here along with associated shrines, one in the northern part of the village, now known as the Kalpa Devī and the Āstika Bābā, in the fields to the east. The original dedications are unknown as no images survive in the sanctums or the walls. Their date must be similar to the Tinduli and Kurari temples, which is around the early tenth century. The Kalpa Devī (Figs. 4.5 and 4.6) faces east with an antarāla (vestibule), entered from a platform. Though not immediately apparent by virtue of the differences in style and proportions, it so happens that the underlying composition is virtually that of the Śiva temple, Kalayat. Again, a temple-within-a-temple emerges from the bhadra, more emphatically projected and rising higher into the śikhara, again with Valabhī niches on either side, now almost jaṅghā-less and with jālaka-covered udgamas. Again, there are ghatapallava pilasters at the corners, and again, a seemingly tripartite pattern in the wall zone masks a five-fold scheme that becomes fully apparent from the varaṇḍikā upwards, with the mid-point of the lateral niches aligned with the point at which the pratilatā steps forward from the karna. Here too, there would probably have been five bhūmis in the śikhara. The shrine-image on the bhadra, here with an additional...
East, west and north. Only the base remains of all but one, which is almost intact (Fig. 4.7). It is Latina, and once again a Valabhi shrine-image, or rather the outline of one, dominates the elevation. This example shows the mortar-less brickwork in its initial post-construction state, all the bricks rectangular and yet to be carved, except for those that have been rounded off to form the varāṇḍikā and corner āmalaka.

The concept of a full-fledged temple form emerging out of the bhadra and penetrating through the lower part of the sikhara prevails at Nasirabad, even in minor shrines. A south-facing subsidiary shrine sharing the platform with the Kalpa Devi has a steep Phāṃsanā (tiered, pyramidal) superstructure, yet with a central latā, and with Valabhi form on the bhadra. The Āstika Bābā, east-facing with no surviving maṇḍapa (hall), has as many as seven associated shrines facing east, west and north. Only the base remains of all but one, which is almost intact (Fig. 4.7). It is Latina, and once again a Valabhi shrine-image, or rather the outline of one, dominates the elevation. This example shows the mortar-less brickwork in its initial post-construction state, all the bricks rectangular and yet to be carved, except for those that have been rounded off to form the varāṇḍikā and corner āmalaka. The main Āstika Bābā temple (Figs. 4.8 and 4.9) stands at the other end of the process, remarkable for the quantity of stuccowork, certainly ancient and possibly the original, still covering its carved surfaces. Its basic composition is not radically different from that of the Kalpa Devi. The essential difference is that the pilasters formerly at the corners have swapped places with the lateral niches, giving an unambiguously pañcaratha scheme in the jaṅghā as well as the sikhara. This
creates an almost continuous band of pattern all the way up the karna in the typical manner of this Madhyadesa brick style. Pratīratha treated as pilasters are typical of central Indian pañcaratha Latina temples of the ninth century, and are seen at Thitaura among the brick temples of this particular tradition. The large shrine-image on the bhadra of the Āstika Bābā is generally like that of the Kalpa Devī, but with no āmalaka on its central niche, nor at its summit, which terminates more elegantly in normal Valabhi fashion.

BRICK DETAILS
The overall composition of the temples we have been discussing could as easily have been realized in stone, but certain details follow the nature of brick. The garbhagrha (sanctum) ceilings are steep corbelled vaults rather than single or piled up slabs as is usual in stone temples. Mouldings follow brick coursing, so the bhāga (module) for the upamāna (vertical measure) inevitably follows the brick course size. At Nasirabad, the kumbha (lowest moulding in the vedībandha base) is extremely tall compared to the norms of stone construction, easily achieved in brick but problematic for a single course of stone.

The jālaka patterns so essential to the texture of these temples are inextricably bound up with brick coursing. By the seventh century, a standard grid had been invented for setting out gavākṣa motifs (Fig. 4.10), underpinning the stylistic uniformity of early mainstream Nāgara temple architecture over a vast region, and used persistently in the regional Nāgara traditions that subsequently developed. The gavākṣas of the Paraśurāmeśvara, Bhubaneshwar (Fig. 4.4) are of the mainstream kind, but with long ‘ears’ and chunky strings of pears which impart a characteristically Orissan character. During the eighth century, and taking hold in various regional styles, the gavākṣa motif was manipulated to create a range of components that could be combined in different ways to form varied ‘network’ or jālaka patterns (Fig. 4.10, top left). The grid underlying the jālaka is not always a grid of squares. It can easily be varied or distorted. In the tapering segments of a śikhara the spacing of the vertical gridlines must reduce, and that of the horizontals may also do so. In brick temples, the horizontals must correspond to brick joints and therefore remain evenly spaced. A standard gavākṣa within a jālaka is four grid squares in height, its round opening taking up two. So, in a brick jālaka it is convenient to make gavākṣas four courses high, and this very well suits the scale of any normal-sized brick temple. Gavākṣas are conceived as a figure against a ground of piled up mouldings that represent the thatched eaves of a multi-storeyed palace, the gavākṣas deriving from horseshoe-gabled dormer windows in these eaves. In brickwork, the eave mouldings, slightly simplified, are typically
suggested by projecting alternate courses by a few centimetres at the sides of the patterned band, giving the edges a serrated effect.

Three jālaka patterns common in stone are illustrated here (Fig. 4.10 A, B, and C) because they are the basis of patterns found in our brick examples. But the latter make changes to the grid to suit the material, and reinvent both the gridded shapes by which the gavākṣas and the fragmented components derived from them are set out, and, at
times, the whole way of drawing these elements. At Kalayat, there is a particular quality in the jālaka of the śikhara that comes from increasing the number of grid squares horizontally – this is doubled in the latā – and the extremely wide components that result (Fig. 4.11). Gavākṣas are treated as surface shapes rather than outlines – always an option, though we cannot be sure whether or not the paintwork would have introduced linearity. Pattern B is used in the latā and A in the karṇaṅkūta. In the pratīlatās, there are interconnected half-gavākṣas (‘r’ motifs), except that, oddly enough, in some places there is pattern A.

Even more thorough transformations of such patterns are seen in the brick temples of Madhyadeśa. Nimiyakheda and Sarhan Bujurga, where jālakas have not yet appeared, use only whole and half-gavākṣas. In the later examples, it might seem that we are looking at an entirely different kind of ornament, but in Indian temple architecture nothing comes from nothing. A good illustration is provided by the entrancing surfaces of the Sūrya temple, Tinduli, which alternate between patterns derived respectively from A and C, both dizzily transformed (Figs. 4.12-4.13; Col. pl. 3). In the one based on pattern A (though using ‘W’ rather than ‘O’ motifs), the gavākṣa components are only slightly narrower than those at Kalayat, and everything is transformed into a mass of pearl-decked tendrils (Fig. 4.13, left). The other jālaka, inspired by pattern C, makes the ‘r’ and ‘v’ motifs two squares high, the latter inscribed in 2 x 4 boxes, all piled up in syncopated and overlapping stacks (Fig. 4.13, right). Dark holes create a swirl of fish and tadpoles. This almost reverses figure and ground, except that the care taken over the curves and flourishes of the surface bands shows that the masons paid attention to both. Despite the complete coalescence of motifs into one continuous tracery, they did not let the familiar shapes dissolve entirely, beyond the ability of the contemplating mind to bring them back.
The second of those patterns dominates the round temples at Kurari but is not found at Nasirabad, where the first one is used profusely. In the Kalpa Devī this is not obvious, as the gavākṣas are flat rather than linear and twisting, but they have the same proportions and degree of overlap (two adjacent squares). In the lateral niches and the karnakītās (Fig. 4.14, left) the underlying scheme is virtually the same as at Tinduli – just one square narrower; the pratilatā two-thirds of this (a full ‘O’ motif, with ‘r’ at the sides), while the latā uses the same principles to create a version of pattern B (Fig. 4.14, right). In the Āstika Bābā, gavākṣa patterns are more difficult to decipher because the plaster hides the guiding structure provided by joints and this overlays a further degree of abstraction. These were curvilinear rather than surface jālakas, and one can make out the same one as at Tinduli in the lateral shrines (Fig. 4.9). The corners are treated differently in this temple, giving another kind of serration with two projecting courses alternating with a single recessed one. We can speculate as to whether paintwork renewed the definition of heavenly windows, left them liminal, or consigned them to ultimate extinction.

CONCLUSION

These brick temples help to fill some of the glaring gaps in the jigsaw puzzle of Indian temple architecture, or at least to point to gaps of which we were barely aware. Despite their differences outlined earlier, the similarity between the Kalayat temple and the Paraśurāmeśvara is striking, going beyond the shared broad tradition and way of thinking. This does not imply that Kalayat has Orissan connections, rather that the architecture of the Paraśurāmeśvara and that of the brick Śiva temple share the same source in a now lost temple ‘type’ (in the sense of a recurrent design) from the early stages of the mainstream Nāgara tradition in Madhyadeśa. So much has been lost from that onetime cultural heartland, where wars and bricks have been a lethal combination for temple survival.

That the hazy picture continues northwards makes the survival of Kalayat all the more precious. If one looks further north, to the great rock-cut temple at Masrur in Himachal Pradesh (Meister 2006) of a similar date to Kalayat, and to the vigorous and surprisingly mainstream Himalayan Nāgara tradition that followed it, or still further to the Nāgara temples along the Indus and in the Salt Range in Punjab and the erstwhile NWFP (Khyber Pakhtunwala), Pakistan (Meister 2010), it emerges that what seemed like a gap must have been something more of a continuum.

The temples of Kalayat and Nasirabad stem from the same tradition of Nāgara architecture, treating it in gloriously different ways and yet revealing unexpected connections. The forgotten forbearer of the Paraśurāmeśvara lives on after Kalayat, in the Kalpa Devī at Nasirabad. And the two sites are
Fig. 4.13. Jālaka designs from Sūrya temple, Tinduli. Drawings: Adam Hardy.

Fig. 4.14. Jālaka designs from Kalpa Devi temple, Nasirabad. Drawings: Adam Hardy.
linked together by the bond of brick – in the making of mouldings and the gentle inflections of pulsating jālakas to the exigencies of their medium, playfully affirming the ingenuity of their creators until time plasters over everything.

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NOTES

1. Neeta Das persuasively suggests that carving must have been done before firing, but the uncarved example in the Āstika Bābā group, Nasirabad, as well as the intricacy of certain patterns, suggests otherwise. A combination of techniques may have been used. See Das (2013).

2. For Pawaya see Greaves (2014). For Ahicchatra and Mansar see Raven (2008).

3. For a discussion of this point with reference to these examples see Hardy (2007a, 108-10 and 168-73). There I classified all these temples as broadly proto- or early Nāgara, but I would now emphasize their separateness from the Nāgara mainstream – an argument that I intend to develop in a paper revisiting the origins of the Nāgara tradition.


5. See Krishna Deva in EITA II.2, 1: 76-78.

6. Also classically Latina and surely a little earlier is the brick temple of Kalaz, Punjab, Pakistan; see Meister (2009, 27-29 & figs. 28-29).


9. In the Śiva temple, Kalayat, the (average) course height, i.e. brick thickness is 60 mm. It is extremely close to this in the two larger temples at Nasirabad, while in the uncarved temple at that site it is 50 mm. The round figures in mm are coincidental.

10. See “Gavakshas” in Hardy (2007a, 160-65); also Hardy (2007b).

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