



ARCHITECTURAL FEATURES OF THE BRAHMANICAL TEMPLES OF ODISHA

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Abstract: *The temple building practice of Odisha is prominent due to its number, size and volume latently progressing throughout ages. The land of Odisha witnessed the emergence of Brahmanical temple architecture from the reign of the Sailodbhavas dynasty (c. 6th-8th centuries CE). The classic temple building tradition underwent various phases - formative phase, mature phase and declining phase. The gradual development of the Brahmanical edifices evolved on a large scale from 6th to 16th century CE in Odisha. This resulted in the erection of thousands of temples throughout the state. Architecturally, we find varied structures of the different sects like Vaisnavite, Saivite and Shakta. The indigenous temple building tradition of Odisha is based on several silpa texts like the Bhubana Pradipa, Silpa Prakash, Silpa Pothi, etc. and known as the Kalingan style of architecture. The architectural and sculptural features of the Kalingan style of temples are often supported by the epigraphic and textual records. The temples building tradition form a glorious chapter in the socio-economic and cultural landscape of the region. It is proposed to examine the distinct architectural designs, in order to understand the architectural patterns and tradition.*

Keywords: *Rekha, Pidha, Khakara, Bhubanapradipa, Parsvadevata, Navagraha Saptamatrika, Dikpala.*

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Introduction

The present state of Odisha lies on the east coast of India. Geographically, it is surrounded by the Bay of Bengal on the east, West Bengal and

Jharkhand on the north, Chhattisgarh on the west and Andhra Pradesh on the south. The state was previously known as Kalinga, Utkal, Odra and Orissa through the ages. Odisha is famous for its

magnificent temple building tradition, and we find freely standing temples (as opposed to rock-cut structures) from the sixth century CE onwards, i.e. in the post-Gupta period. The indigenous style, known as Kalingan style of architecture (Mitra: 1961: 10; Deba: 1995: 10), was a regional variation of the Nagara style of temple architecture. Kalingan style temple building tradition has its own distinctive feature as well as the sculptural designs among the important regional styles of temple building tradition in India (Brown: 1959: 102). The artistic richness and engineering marvels of Odishan temple architecture is reflected in the massive structures and beautiful sculptures. The architectural design and sculptural embellishment on the temple walls have few parallels in the world. In general stone blocks were used as the primary raw material to erect these grand structures. The structures vary over time and in respect of particular deities, patronisation, materials and sizes. The *Bhubana Pradipa* elaborates the architectural and sculptural aspects found in the temples of Odisha. The architectural design can be divided into three broad categories, namely *Rekha*, *Pidha* and *Khakhra Deula* (Behera: 1993: 2). The sculptural motifs can also be divided into three distinct groups such as religious, secular mythological. These designs have been employed by the artisans continuously for a long span of time with slight modifications through the ages. (Fig. 8.1)

Epigraphic and Textual Sources

Odisha is a land of outstanding stone temples. From the sixth century to the sixteenth century CE temples were erected in different parts of the state. The temples are dedicated to various deities of the Saiva, Vaisnava, Sakta and Saura sects. Majority of the temples were constructed during the period ninth to eleventh centuries CE. A great number of them were associated with Saivism. The Amritesvar temple inscription, Holal, Karnataka describes the Kalingan style of temple architecture as an addition to the main three styles (Garnayak: 2007:55). The temple is a religious architecture.

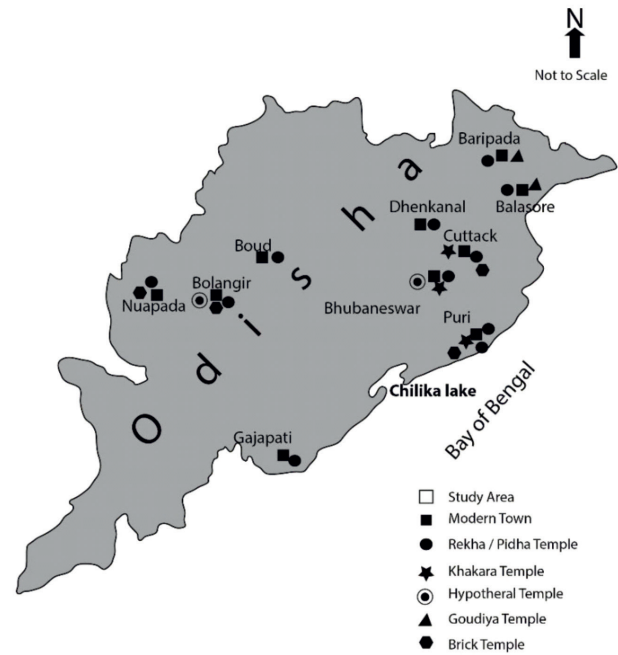


Fig. 8.1: Map showing the major temple sites of Odisha

It is the house of gods and goddess on earth. The Hatigumpha inscription of Kharavela records the erection of religious structure for the placement of Kalinga Jina, Bhadrak (Panigrahi: 1981: 29). The inscription of Raja Gana and the Asanpat inscription of Satrubhanja also refer to the temple building tradition of Odisha (Dehejia: 1979: 168; Parida: 1999: 33). Chinese traveller Xuan Zang has also referred to the temple style of Odisha. Apart from epigraphic records art, architecture, sculptures and existing monuments establish one of the imperative sources of evidence to know the built heritage tradition of this region. The contribution of religious movement (Shaiva, Shakta, Vaisnava), powerful dynasties ruling for a long period, royal patronisation of religious entity, artistic development and sound economic condition of the state are the prominent key factors for construction of large numbers of temples in Odisha.

The temples of Odisha are mainly encountered in *Rekha* and *Pidha* design. *Khakhara*, hypothermal and Gaudiya types are found in very less numbers as compared to the former. Early Kalingan temples were square hut type structures. But later on the pattern underwent changes with

the addition of the *shikhara* to the main structure. Due to the prominent *rahapagas* in the mature stage of development, the temples of the later period look circular from a distance, but the ground plan of *Kalingan* style is basically square. There are a few indigenous *silpa* texts in Odisha that provide the guidelines for the construction of temples, like the *Bhuban Pradipa*, *Silpapothi*, *Silpapathakosa*, *Silpa-ratnakara*, *Silpasarini*, *Silpa Prakash*, *Padma Kesara*, and *Silpa Kalasha* (Garnayak, 2007: 55). These texts determine the standard construction pattern in the field of sacred architecture. Among these architectural texts *Bhuban Pradipa* was the most important for the study of Odishan temple architecture as traditionally it is well preserved by the artisan class. Notable archaeologist N.K. Bose collected the seven *Odia* manuscript on *Silpasatra*, one from Lalitagiri of Cuttack district and rest from the undivided Puri district (Behera: 1993: 97).

The *Bhubana Pradipa*, is a treatise on *Kalingan* temple architecture that deals with the categorisation of temples and specific measurement of different components (Bose: 1932: 7). The word *Bhuvana Pradipa* distinguished as *Bhuban* means fourteen worlds including the Earth, Heaven and Nether world etc., and *Pradip* means lamp. It is known as the lamp on the abode of gods. The text refers to Visvakarma as the chief architect, Pingala as the artist and Ahidhara as carpenter, who built temples for the gods in heaven. The text also deals with classification of soils, augury (sign of good/bad/foretelling), *sanku* (determination of naga position), astrological consideration, auspicious ceremony to be observed, *hasta* and *angula* (units of measurement), foundation of the buildings etc. The text discusses different types of temple style, such as *Rekha Deula*, *Bhadra (Pidha) Deula*, *Khakara Deula*. Apart from these three varieties, there are two more types of temple already being reported in the text *i.e.*: hypaethral (Circular and open to sky) and *Goudiya* type.

The temple building tradition was patronised by various dynasties in different regions. The Brahmanical temple building tradition started

during Gupta period in India. A temple named Bhima at Mahendragiri in Gajapati district of Odisha belongs to the Gupta period (Parida: 1999: 23). Later on, temples were erected by the Sailodbhavas, Bhaumakaras, Somavamsis, Gangas and Gajapatis all over the Odisha (Panigrahi: 1986: 373 – 420; Mohapatra: 1986: 46-87). Scholars like Vidya Dehejia divided the temples of Odisha into two phases - formative and mature (Dehejia: 1979: 101). Subsequently several scholars specialised in the field of temple architecture divided *Kalingan* style into three main phases as formative, mature and climax. In between formative and mature phase there is a transitional phase, where we find the *Pabhaga* motif added with one more executed flat folding, niche cutting becoming comparatively a small decoration on the *Bada* portion. After climax phase there was a declining phase, where temple building traditions reached a plateau due to the frail economic and political condition. This phase is characterised by temple walls devoid of sculptural decoration and low craftsmanship.

Temple types in Odisha

Basically the temples of Odisha can be divided in to three categories, namely *Rekha*, *Pidha* and *Khakara* (Fig.8.2). All these temples have various divisions and components which were added over time as per the requirement or purpose of decoration. The temples of Odisha were made of stone and bricks with dry masonry technology. Brick temples are much less in numbers than stone temples of Odisha (Behera: 1993:2, Dehejia: 1979: 29, Ganguly: 1912: 27, Fabri: 1974: 179; Khamari: 2012).

The *rekha* temple consists of a square sanctum surmounted by a curvilinear spire. It is known as *Garbhagriha* (Sanctum) or *Deul* in the local language. The sanctum has projections on all sides, and depending upon their number, may be *triratha*, *pancharatha*, *saptaratha* and *navaratha* in plan (Donaldson: 1986: 13). It is divided into four broad divisions in elevation such as *Pista*, *Bada*, *Gandi* and *Mastaka*. The *Rekha deula* is

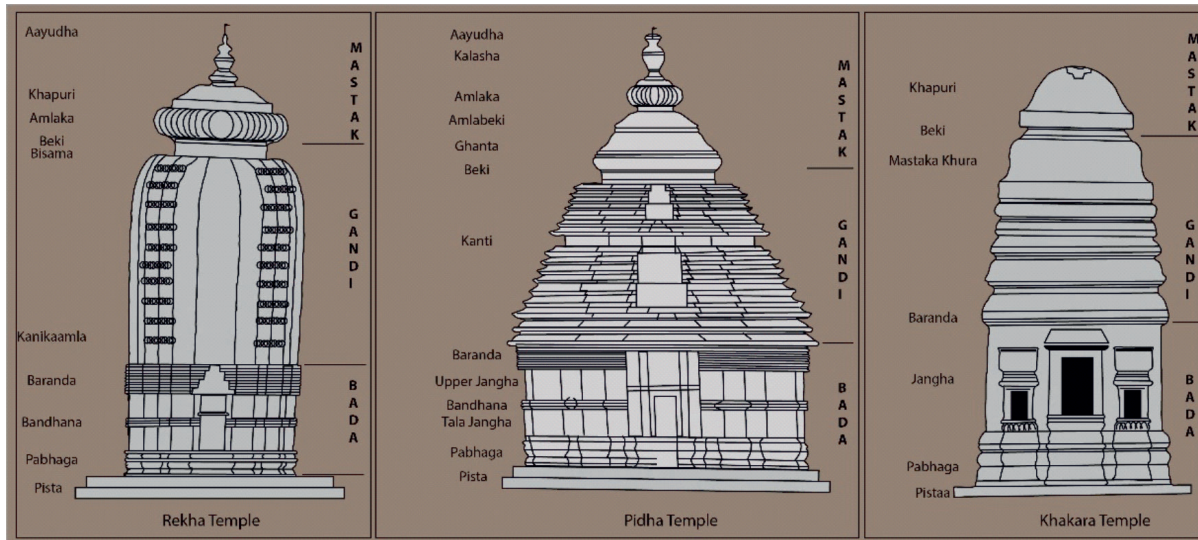


Fig. 8.2 Line drawing of Kalingan style of temple with vertical division of the Temple

regarded as cosmic man (*vastupurusha*). *Pista* is not a regular feature of the temple architecture. In the initial stage it was missing and was added during a later period. The *Bada* is a square wall, with a door way on one side. The *Bada* is divided into five divisions such as *Pabhaga*, *Tala Jangha*, *Bandhana*, *Uper Jangha* and *Baranda*. In the initial phase it is found that the *Bada* has only three parts and was known as *Trianga Bada* (*Pabhaga*, *Jangha* and *Baranda*). Later on, it is known as *Panchanga Bada* having all the five components. *Pabhaga* consists of several mouldings mostly either three or five. These mouldings are named as *Khura*, *Kumbha*, *Pata*, *Karni* and *Basanta*. In earlier temple the *Jangha* is one but in later temples *Jangha* is divided into two storeys with an additional set of mouldings. This set of mouldings is known as *Bandhan/ Madhya Bandhana* and the mouldings are usually five, seven or ten in number. The *Baranda* (cornice) is also a set of mouldings, which is the dividing line between the *Bada* and *Gandi*. To increase the height of the temple with proper proportion the numbers of mouldings are increased in the *Baranda* portion. *Gandi* is an elongated tower like portion or curvilinear super structure. The *Gandi* consist of a numbers of vertical divisions known as *Pagas*. The numbers of *Pagas* determine the plan of the *Gandi* portion of the temple, and are

a continuation of the *Bada*, - whether *Triratha*, *Pancharatha*, *Saptaratha* or *Nabaratha*. These divisions are due to vertical projection between the central *Rahapagas*, intermittent *Anurahapaga* and corner *Kamikapagas*. The *Gandi* is well decorated with aerodynamic design to safeguard the temple from water percolations and to avoid air born activities inside. Frequently, the *kanika pagas* consist of *Bhumiamalaka*, whereas on the *pagas* with miniature *Rekha deula*, are popularly known as *Angasikhara*. *Mastak* (literally the head of the temple) consists of several portions such as *beki*, (next) *amlaka*, (ribbed member) *khapri*, (finial) *kalasa* (pitcher), *aayudha* (symbol of the deity) and *dhwaja* (flag) (Behera: 1993: 2-5, Ganguly: 1912: 27 & Fabri: 1974: 102-109).

Usually the structure named *pidha deula* consists of a square or rectangular base but covered by the pyramidal roof of receding steps. This is used as frontal audience hall known as *jagamohan* (Bose: 1932: 78-83). *Pidha deula* has also *Bada*, *Gandi* and *Mastaka* divisions. *Bada* is same as of *Rekha deula*. *Gandi* consists of receding tiers in the shape of a stepped pyramid. A series of continuous *pidhas* is known as *Potala*. The gap between two groups of *pidhas* or *potala* is known as *Kanti*. The *mastaka* of the *pidha deul* has the same features besides the addition of *ghanta* (bell) and *padma* (inverted lotus).

Khakra type of temples are not very common and have both square and rectangular ground plan surmounted by a barrel vaulted roof with gable ends. Among the Khakara temples in Odisha Vaital Temple, Bhubaneswar, Varahi Temple, Chaurasi and Durga Temple at Banki are important. (Panigrahi:1986: 450-455; Mohapatra: 1986: 46-87; Parida: 1999: 86).

In addition to these there are two more types of temple found such as hypaethral and Goudiya (*Chala* design) temples. Hypaethral temples are circular in plan and open to the sky (Das: 1981: 12-13; Mahapatra: 1953). They have a square pillared *mandap* placed in the central part of the temple. Two hypaethral temples are found at Hirapur and Ranipur. Jharial is very important regarding architectural and sculptural significance. Two Gaudiya type of temples such as Rasika Rai Temple in Mayurbhanj and Chandaneswar Temple in Balasore are also important due to their distinctive architecture. The *Chala* design temples are mostly found in Balasore and Mayurbhanj district. These temples have no particular ground plan but the temple roof is little slanting. (Fig. 8.3).

Sculptures in Temples of Odisha

The temples of Odisha are remarkable for their sculptural masterpieces. The sculptures in the temples of Odisha are divided in two groups such as religious and secular sculptures. Religious sculptures include Navagraha (Ravi, Chandra, Mangal, Buddha, Brihaspti, Sukra, Sani, Rahu, Ketu), Parsvadevatas, Saptamatrikas (Kaumari, Indrani, Vaisnavi, Brahmani, Varahi, Shivani, Chamunda), Dikpala (Indra, Agni, Yama, Naituta, Varuna, Vayu, Kubera, Isana), Lakulisha, Surya, Visnu's incarnations and *Shiva's* manifestations etc., (Gupta: 1997; Gopinathrao: 1971: 37-47). Secular sculptures consist of erotic sculptures, *nayikas* (female figures), animals, birds, decorated door jambs, *nagas* and *nagis* (anthropomorphic representation of snakes) on columns and grotesque creatures, etc. On the temple wall there are stories from *Ramayan* and *Mahabharata*

narrated in a series of sculptural panels. The sculptural elements duly depicted on temple wall also signify the identity of the presiding deity, whether it belong to *Shaiva*, *Shakta*, *Vaisnava* or *Saura* sects. Sometimes the sculptural depiction of two or more faiths in a single complex it is noticed, with individual chambers thus indicating religious harmony of the particular period (Behera: 1993: 97-101, Fabri: 1974: 102-109 & Parida: 1999: 4). (Fig. 8.4).

Architectural and Sculptural representation in Kalingan temples

The formative phase of Kalingan temple architecture is found on Parasurameswar at Bhubaneswar temple, which represents the *Triratha* (*Raha Paga and Kanika paga*) plan, *Astagraha* panel (Ketu was missing), *Traanga Bada* (*Pabhaga, Jangha and Baranda*), *Pabhaga* having three mouldings, *Parsvadevatas* niches cut through the *paabhaga* of the temple. In general the sculptures carved during this formative stage are of low relief with odd limb proportions. Kartika holding a cock instead of peacock and *Mukhasalas* were without internal pillars. Earlier, the temples had a single chamber, later on *Mukhasalas* were added in the front side. In the mature phase, in the plan of Odishan temple two additional structures were added to the Jagamohana. By the end of the 11th century CE the Kalingan style of temple architecture had a *Deul* or *Vimana*, *Jagamohana*, *Bhogomandapa* and *Natamandapa*. This phase witnessed the refinement and best representation of architectural as well as the sculptural patterns. During this period increasing the vertical mouldings for raising the height, such as *Panchanga Bada* (*Pabhaga, Talajangha, Bandhana, Upperjangha, Baranda*) are noticed. The best representations of the mature phase are the Rajarani, Brahmeswar and Lingaraj temple. During this mature phase *Ketu* was added to the *Navagrah* panels on the lintels, *Pabhaga* turned into five mouldings, *Baranda* in five or seven or nine mouldings, *Angasikhara* motifs were introduced, and sculptures in high relief and



Rekha deula,
Siddheswar Temple, Gangadhar
Prasad, Dhenkanal, 7th / 8th CAD



Pidha Deula,
Sun Temple, Konark, 13th CAD



Goudiya Temple
Chandaneswar Temple, Balasore,
15th CAD



Khakara Style Temple
Varahi Temple, Chaurasi,
10th CAD



Hypothermal Type Temple, Chausathi yogini Temple, Hirapur, 9th CAD

Fig. 8.3 Types of temples in Odisha



Astagraha Pannel, Siddheswar Temple, 8th CAD



Uma Maheswar with Saptamatruka panel, Khajureswar Temple, Shergarh, 10th CAD



Vishnu, Angesvara Temple, Pitapara, 10th CAD



Durga, Vaital Temple, Bhubaneswar
8th CAD



Surya, Varahi Temple, Chaurasi, 10th CAD

Fig. 8.4 Sculptures of Odishan temples



Fig. 8.5,a,b,c: Important Brick temples of Odisha: Indralath Temple, Bolangir (9th-10th century CE); Angeshwar Temple, Cuttack (10th century CE); Isvardev Temple, Puri (10th-11th century CE) respectively

rounded shape are found on the temple walls which are not profusely decorated.

Ornate door jambs with Gajalaxmi on the *lalatabimba* is a common feature, but Ganesa and Saraswati are also found in the same place in Jaleswar temple at Kalarahang, Khurda. Another important architectural design is *panchayatana* type temple, where we find one central sanctum along with four subsidiary sanctums at the four corners. The central shrine is bigger than the four subsidiary shrines. *Dikpalakas* or guardian deities of the cardinal points are introduced and babies added to the lap of the *Sapta Matrikas*. During the climax phase the new features like the addition of *Pistha*, *Natamandap*, *Bhogamandap*, *Vahanastamba*, *Dikpalikas*, occurred, but the older traditions continued. The most important feature of this period was the soaring height and magnificent structure.

The technology behind the Kalingan temple building tradition is dry masonry based on weight and measure. In joinery portion used the stone dowel and keystone as lock. Later on the masons used metal dowel and beams. Frequently iron beams and dowel was used to strengthen the structure (Behera: 1993: 8-10; Dehejia: 1979:

29). In this context the best examples are the Sun Temple at Konark and Jameswar temple at Bhubaneswar. Although the majority of the temples discussed above were made of stone, we also find some temples made of brick (Fig. 8.5).

Conclusion

The foregoing discussion focussed upon the unique sculptural and architectural remains of Kalinga which is regarded as the indigenous development of temple architecture in Odisha. Over a period of a thousand years, it developed in the post-Gupta period and reached its climax in the 16th century CE. Architectural development of Odishan temples or the Kalingan style is distinctive. The selection of material and their use in structural edifices, represent the engineering skill of the creators. It has resulted in the longevity of built heritage tradition of the region. Kalingan style of temple architecture is unique but at the same time new adaptations and modifications also provide new horizon to the temple building tradition. A sound political and economic condition and patronisation of the state facilitated the creation of such a large number of temples in the region.

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