

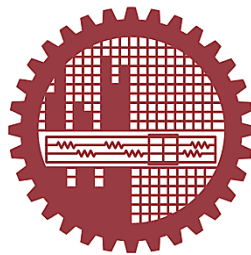
REGIONAL INFLUENCES ON THE LATE MEDIAEVAL TEMPLES IN
BANGLADESH:
A STUDY OF PUTHIA TEMPLE COMPLEX AT RAJSHAHI DISTRICT

By

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A thesis submitted in partial fulfillment of the requirement for the degree of
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A handwritten signature in black ink, reading "Brishti Majumder." with a period at the end. The signature is written in a cursive style.

Brishti Majumder

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REGIONAL INFLUENCES ON THE LATE MEDIAEVAL TEMPLES IN BANGLADESH: A STUDY OF PUTHIA TEMPLE COMPLEX AT RAJSHAHI DISTRICT

ABSTRACT

The architecture of Bengal shaped a distinct regional distinctiveness which was influenced by geo-climatic, political, social, religious, and cultural characteristics as well as the material and environment of this region. The context of Bengal has spread out a specific type of architectural style with inherent vernacular features. With its specific character of forms and spatial relationships, religious built forms hold the heritage of the country's long history and traditions with conflict and contradiction caused by transplanted interventions. In Bengal, traditional architecture showed its sustainability and flexibility by its harmonic balance with the surrounding society and environment.

One of the most significant traits of the cultural history of Bengal is temple architecture. With its wide-ranging forms, styles, designs, decorations, and art motifs temple architecture is a major component of the magnificent heritage of this region. The evolution and expansion of this architecture go back to an early historic period which can be evident from plentiful inscriptions, pieces of literature, miniature replicas, and representations of images. Every style of the temple represents a particular culture and era and reflects the socio-cultural and religious status of the land. . Temple was the result of an intense focus on economic and creative resources, as well as public means of conveying supremacy. In the Bengali context, the Hindu temple architecture is not only the abode of God and a place of worship, but they are also the cradle of knowledge, art, architecture, and culture.

Due to the negligence and lacking awareness of people and concerned bodies, temple architecture has been going through a gradual degradation process. But in the present territory of Bangladesh a large number of them what we see today as standing monuments are of later period ie. Muslim and Hindu Revivals. In Bangladesh, presently we will find a limited number of traditional Hindu temples which can be found in the north-western zone, the south-western zone, and the middle-eastern zone. Among them, the Puthia Temple complex at Rajshahi in the north-western zone of Bangladesh comprises a collection of distinguished old Hindu temples that endure a rich history full of myths and legends, unlike any other part of Bangladesh. This study will focus on the architectural characteristics of Bengal temples in Puthia and analyze the regional influences that played important roles in the design process of these temples while concentrating on the socio-cultural history, and formal expression through documentation of these temples and determining the possibilities of future conservation and restoration.

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CHAPTER 01

INTRODUCTION

- 1.1 BACKGROUND AND PRESENT STATE OF THE PROBLEM
- 1.2 OBJECTIVES WITH SPECIFIC AIM AND POSSIBLE OUTCOME
- 1.3 OUTLINE OF METHODOLOGY
- 1.4 INTRODUCTION TO PUTHIA
- 1.5 HISTORY OF PUTHIA
- 1.6 SCOPE AND LIMITATIONS

1.1 BACKGROUND AND PRESENT STATE OF THE PROBLEM:

Built between the sixteenth and nineteenth centuries, the temples of Bengal form one of the most distinctive groups of sacred monuments in the Indian subcontinent. Incorporating a wide range of forms and techniques that testify to the multiple artistic influences acting upon the region, the Bengali temples nevertheless constitute a coherent series in both their architecture and sculpture. D.J. McCutcheon found Bengali temples to be viewed as one of the most important manifestations of this region's culture, closely associated with contemporary movements in religion, literature, and the arts, as well as with broader political, social, and economic developments. Temples are not only the abode of God or place of worship, but they are also the foundation of knowledge, art, architecture, and culture. With an intense concentration on economic and artistic resources, Bengal Temples were perceived as a means of expressing power.

In Bangladesh, presently we will find a limited number of traditional Hindu temples which can be found in the north-western zone, the south-western zone, and the middle-eastern zone. Among them, the Puthia Temple complex at Rajshahi in the north-western zone of Bangladesh comprises a collection of distinguished old Hindu temples that endure a rich history full of myths and legends, unlike any other part of Bangladesh. These traditional Hindu temples of Puthia, founded by the Zamindars since the 17th century, are bearing the evidence of different architectural styles and regional influences on them. This study will focus on the architectural characteristics of Bengal temples in Puthia and analyze the regional influences that played important roles in the design process of these temples. This study will also concentrate on the socio-cultural history, formal expression through documentation of these temples and determine the possibilities of future conservation and restoration.

1.2 OBJECTIVES WITH SPECIFIC AIM AND POSSIBLE OUTCOME:

Specific Aim: This research aims to understand the architectural characteristics and regional influences on the late medieval temples in Bangladesh focusing on the temple complex at Puthia.

Objectives:

1. To identify the Architectural characteristics of the temples found in the Puthia temple complex in Rajshahi with a comparative study of Bengal Temples along with documentation.
2. To understand the regional influences that played important roles in the design process of these temples.

Possible outcome: This study is expected to include in-depth documentation of temples at Puthia Temple Complex which will eventually produce foundation knowledge of architectural attributes considering the regional influences on it.

1.3 OUTLINE OF METHODOLOGY:

This study focuses on the archetypal analysis of the temples at the Puthia Temple complex and concentrates on the history, formal expression, and documentation of these temples which will accordingly open up the possibilities of preservation and reclamation for the future with the following steps.

Step 01: Literature Review

Will be conducted on secondary source published data (e.g., research papers, books, articles, and websites:

- A thorough review will be done in the literature part to explain Hinduism and its relevance to architecture.
- A review will be conducted to find out the architectural attributes of the basic elements of the early Hindu temples.
- A systematic and comprehensive study will be done in archival literature to understand the characteristics of temple architecture of both north and south Indian styles and find out the common characters that may have been taken by the builders of Bengal temples.
- A thorough review of Bengal society transformation from the early Muslim intervention, Hindu revivalism to British influences.

Step 02: Site Survey (Primary Source Survey)

- **Case study survey:** A comprehensive survey and observation through the interview, sketching, measuring, taking photographs, recording and short noting of detailing will be conducted in the Puthia Temple complex under Rajshahi District.
- **Collect available drawings and documents:** Available architectural drawings, photographs, relevant literature of selected temples will be collected, reproduced, and generalized in categories for analysis.

Step 03: Analysis and Findings

- Based on the site survey, available archival resources, and observation, this study will produce a basic knowledge of the architectural attributes of temples of Puthia.
- Identified architectural attributes of the case studies will be analyzed and evaluated to understand the regional influence for adopting certain traditional characteristics.

Step 04: Conclusion

- This Study will focus on the regional influences on the existing temples in Puthia.

1.4 INTERPRETIVE HISTORICAL RESEARCH: A Brief Introduction

The idea of considering "History"—which has its disciplinary prominence within the academy, indeed, one among the oldest—under "interpretative research" could be questioned by some. Indeed, R. G. Collingwood has proclaimed that historical inquiry or investigation has its own mode of data. In each case, the researcher attempts to gather the maximum amount of evidence possible concerning a posh social phenomenon and seeks to supply an account of that phenomenon. To construct a narrative from the holistic and believable evidence, we need to search for evidence, collect and organize those pieces of evidence, and evaluate them. Interpretation is active irrespective of whether the task is evidence collecting, evaluation, or narration.

This chapter aims to deal with what can be generally termed interpretive research, and this term needs immediate clarification. All historical research comprises interpretation. However, interpretive research is defined specifically as investigations into social-physical phenomena within complex contexts, to explain those phenomena in narrative form and a holistic fashion. Hence the title interpretive historical research, address research into complex social-physical phenomena that are contemporary relative to the researcher (Groat & Wang, 2013)

1.4.1 TRAITS OF HISTORICAL RESEARCH

In Forty's book, *The Pursuit of History*, John Tosh observes that historians are "as true as they can be to the surviving evidence of the past." Here describing this evidence has been challenged by news perspectives—generally subsumed under the heading of "the cultural turn"—that have greatly expanded what establishes "evidence from the past." Let's consider here how Forty's example illustrates both traditional as well as these new perspectives.

a. History research brings into view something from the past

Because "something from the past" is not empirically accessible, various strategies must be exercised by the history researcher for extracting evidence from a time and a world not his or her own. Historical perspective refers to understanding a subject in light of its earliest phases and subsequent evolution. (Groat & Wang, 2013)

b. Interpretation

The historian's point of view is a significant part of historical research and narration, aside from evidence from the past. There is a technical as well as a theoretical aspect to the development of interpretation. The researcher must know where to look for it and how to look for it; this is the technical aspect. The researcher must also identify how to organize the evidence in an interpretative framework, which requires theoretical commitments. In recent years, the role of schools of thought becomes all the more important, due to the "cultural turn" in historical research.

c. Narrative.

The output of history research is not verse, or essay, or some other literary form; the output is narrative. This may seem obvious, but “narrative” in historiography requires its discipline. With a view towards the “new” in the current practice of history, Tosh cites two influential bodies of theory. The first is the “cultural turn,” whereby historians seek to interpret cultural meaning, drawing insights from cultural anthropology. The second body of theory derives broadly from various social theories, but particularly from the Marxist tradition (Tosh, 2015). Architectural and urban historians have been drawn to a spatial turn, as part of this tradition.

d. The cultural and Spatial turn

Thus the cultural turn encourages focus on local, vernacular realities rather than, for instance, national histories. It shifts attention from privileged outlooks to what can be called every day, or popular, culture. The cultural turn also values what is stored in memories and subjective “geographies” as opposed to, or in addition to, what is only captured in documents. (Groat & Wang, 2013)

1.4.2 TACTICS IN HISTORICAL RESEARCH: IDENTIFICATION OF DATA, ORGANIZATION, AND EVALUATION

In the sixth edition of *The Modern Researcher*, Jacques Barzun and Henry Graff make the following observation:

“It is from historical scholarship that the world has taken the apparatus of footnotes, source references, and bibliography, which validates what is stated. It is from writers of history that others have learned to sift evidence, balance testimony, and supply verification.”

The tactical side of historical research, which entails the hard work of gathering historical data. Sifting evidence involves tracking down sources. Balancing testimony and verification entails intense evaluation of the evidence. And writing the narrative is an ongoing compositional discipline. The discipline of collecting and interpreting data in historical research, guided by the researcher’s “historical imagination,” is quite intense. (Groat & Wang, 2013)

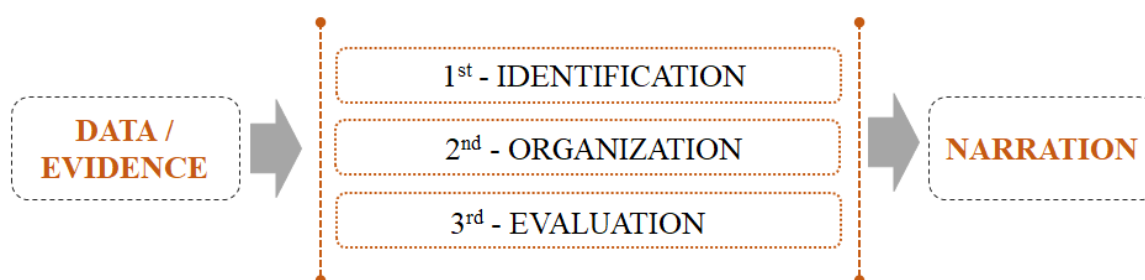


Figure 1: Some considerations for data collection, organization, historical research the Tosh and Barzun / Graff texts. Page numbers from their texts are provided here. In the Tosh, case pagination is from the 1984 edition except where noted. (Groat and Wang)

Prepared by Author

1.4.3 TACTICS: EVALUATIVE CATEGORIES IN HISTORICAL RESEARCH:

In distinction to categories of *handling* the evidence (identification, organization, and evaluation), here are some categories for *types* of evidence: determinative, contextual, inferential, and recollected evidence.

Identification	Organization	Evaluation/Analysis
Facts versus ideas	Researcher's mind	Audience
Fact finding	Accuracy	Attribution
Being a detective	Love of order	Clarification
Library	Logic	Check for falsification
Internet	Honesty	Bias
Catalogues	Imagination	Self-criticism
Encyclopedias	"Cross-questioning"	
References	Compilation	
Chronology	By topic	
Maps	By time	
Current opinion	By internal logical order	
Colleagues, "experts"	Verification	
Note taking	Composing	
	Paragraph, chapter, part	
	Use plain words, sentences	
	Tone and rhythm	
	Art of quoting	

Figure 2 : A representative list of tactical concerns in history research mentioned in Jacques Barzun and Harry F. Graff, *The Modern Researcher*, 6th ed. 2004

Source: Groat and Wang, 2013; Page 195

The figure outlines some of the themes covered in Barzun and Graff's book; we highly recommend the book itself as a guide for conducting history research at the tactical level.

a. Determinative Evidence

Of primary importance is evidence that situates the purpose of study in a particular time and a particular place. One obvious type of determinative evidence is dates. Traditionally, photographs may perhaps also serve as determinative evidence, but progressions in digital technology reduce a photograph's dependability. Photographs are outmoded compared to what can now be done with digital technology and imaging software. Today guidelines continue to evolve on the admissibility of photographs in legal proceedings. But history research, in general, has always relied on photographs as a source of determinative evidence: it not only provides social context but also often situates the topic in its natural context, which leads to contextual evidence.

b. Contextual Evidence

In architectural history research, cultural factors synchronic to the artifact under study provide contextual evidence about the artifact. It also relates to the next kind of evidence. Contextual evidence refers to information about whether or not a strategy “fits” with the context in which it is to be implemented.

c. Inferential Evidence

Sometimes, by the proximity of date and reasoned interpretation, one fact can be posited as very likely to be linked with another fact, even though “hard” connections of a determinative or even contextual nature may not be available. (Groat & Wang, 2013)

d. Recollective Evidence

Recollection can lead to determinate information such as dates, and it can yield contextual information. It is also inferential since the interviewee is drawing inferences about those facts in time past. With recollection, all of the previous kinds of evidence may be involved. The validity of recollective evidence, then, depends significantly upon who the interviewee is, what role he or she played relative to the object under study, what credibility he or she currently has, and how much of what he or she says can be corroborated by other evidence.

“Inca Quarrying and Stone Cutting” By Jean - Pierrerotzn cataloging eight different tactics. This example considers how interpretation permeates the entire progression. Particularly in terms of the four evaluative categories which have been mentioned here. (Groat & Wang, 2013)The tactics are,

- Tactic 1: On-site familiarity.
- Tactic 2: Use of documents.
- Tactic 3: Visual comparisons.
- Tactic 4: Material evidence.
- Tactic 5: Comparison with conditions elsewhere.
- Tactic 6: Local informants and lore.
- Tactic 7: Reenactment/testimonial.
- Tactic 8: Identification of remaining questions.

1.5 ORGANIZATION OF THE RESEARCH

This study focuses on the regional influences on the late medieval period in Bengal. Temples of Puthia are taken as a sample to relate these different types of temples with the regional influences and identify their architectural characteristics for further analysis to find the way towards the findings. Chapter 01 deals with the background of the study and focuses on the aim and objectives of this research while showing the scope and limitations of the thesis. This chapter also includes a short history of the Puthia Zamindars showing their chronological changes in terms of social perspective.

And also deals with the research methodology structure using interpretative historical research to analyze the architectural characteristics of these temples. Interpretative historical research includes the identification of primary sources, the organization of the collected data, and the last formation of analysis.

<i>Categories of evidence in Interpretative historical research</i>	<i>The framework of the research</i>
Determinative Evidence	Photographs and drawings as a source of determinative evidence
Contextual Evidence	Contextual evidence refers to site survey of existing temples of Puthia
Inferential Evidence	Reasoned interpretation through the old photographs and books or writings
Recollective Evidence	Interview of the locals to gather information of Puthia history and the temple activities.
<i>Table 1 : Categories of evidence in Interpretative historical research (Prepare by Author)</i>	

Chapter 02 comprises the literature review. Hinduism and its significance in architecture are explained, where Hinduism, the beginnings of Hinduism, Hindu texts, Hindu gods, and the place of worship are elaborately described. This chapter also narrates the evolution of temple architecture in the Indian sub-continent. Early Hindu temples, elements of Hindu temples, the Dravidian style (South India), and the Indo-Aryan style (north and central India) are broadly explained in this chapter. And finally, this chapter gives elaborate descriptions of deals with Bengal architecture, Bengal society, origins and developments of Bengal temples, and the classification of types by David McCutcheon. Existing temples of Puthia have been described in chapter 03 with necessary illustrations and photos. Chapter 04 deals with the archival research and analysis of the architectural features of the existing temples of Puthia and regional influences are broadly discussed in this specific chapter. Finally, the evaluation and conclusion of the research are drawn in Chapter 05.

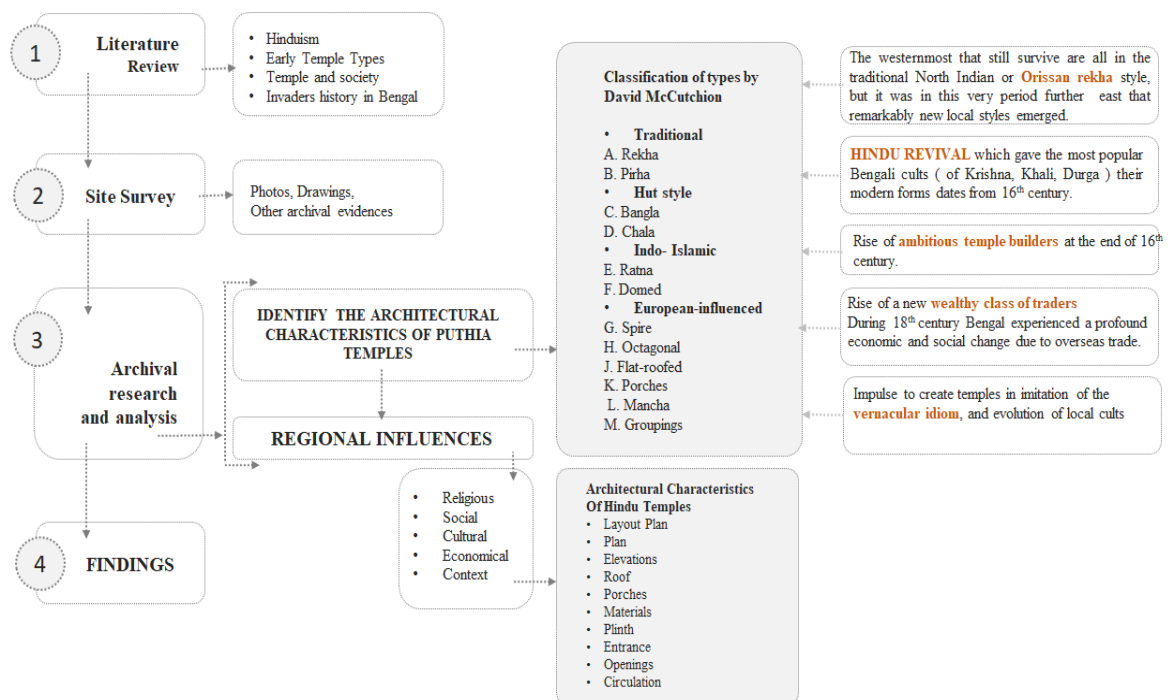
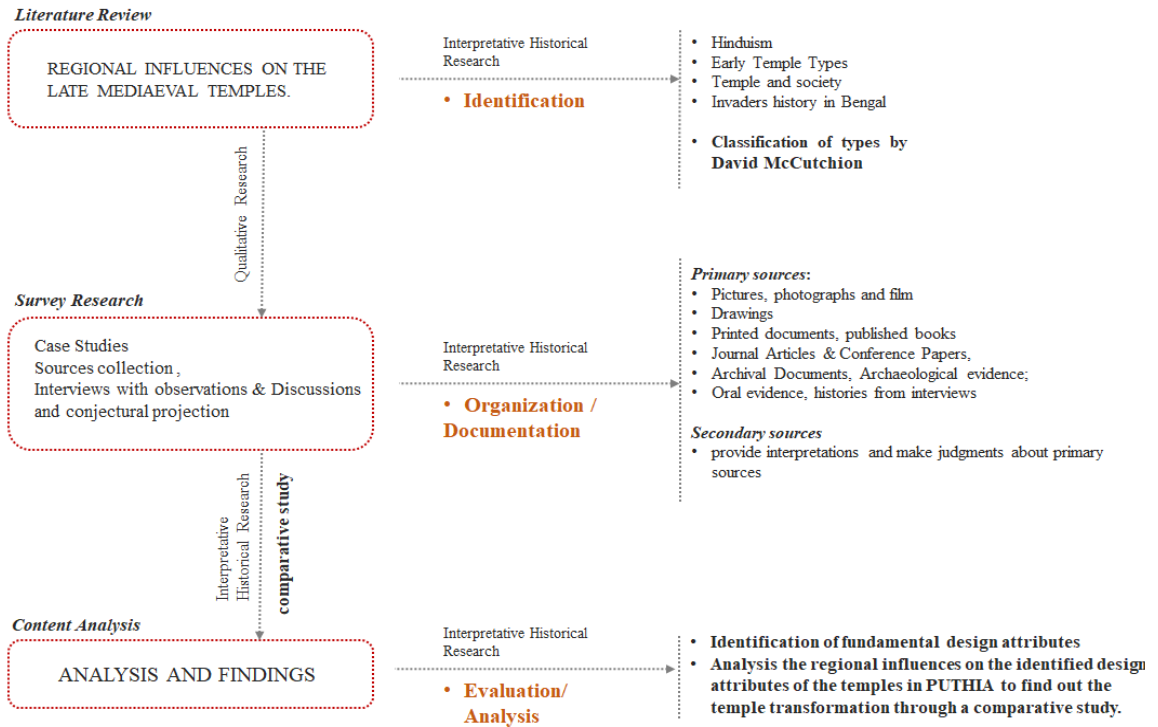


Table 2 :: Interpretative historical research (Prepare by Author)

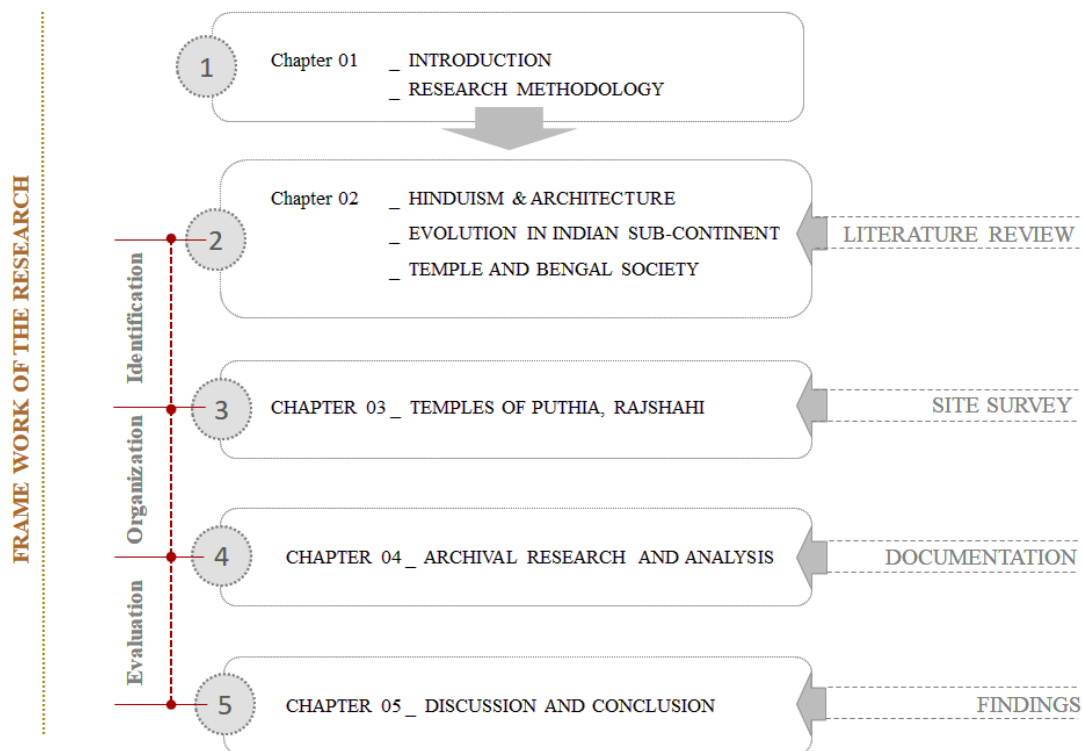


Table 3 : Framework of the research (Prepare by Author)

It is important to keep in mind that only existing temples of Puthia have been chosen as the case study sample as we can find different styles of Bengal temples there. These temples belong to the late medieval period which dated from the 17th century to the 19th century.

1.6 SCOPE AND LIMITATIONS

This study will focus on the regional influence on the Temples of Puthia and Regional influences will be discussed on a broader scale in Bengal. The site visit was done during the pandemic COVID-19, but still, all the temple has been visited physically. As it was quite difficult to have extensive measurements, all drawings of the temples have been produced from references from books, images, and physical measurements.

As this thesis is not focusing on any type of conservation proposal, all the drawings are created to identify the characteristics. This study will provide primary knowledge about the architectural features of the temples in Puthia. And this study will further open up a way to have an extensive study of conservation or renovation in this concern to preserve the rich history and heritage of Bengal.

CHAPTER 02

LITURATURE REVIEW

2.0 Introduction

2.1 Hinduism and its significance in architecture

- 2.1.1 Hinduism
- 2.1.2 The beginnings of Hinduism
- 2.1.3 Hindu texts
- 2.1.4 Hindu gods and cults
- 2.1.5 The place of worship: spirituality with man's existence

2.2 Evolution of temple architecture in Indian sub-continent

- 2.2.1 Temple definition
- 2.2.2 The Sanskrit Brahminism of the gupta
- 2.2.3 Early Hindu temples
- 2.2.4 Early temples in the chalukyas and the gupta
- 2.2.5 Elements of Hindu temple
- 2.2.6 Evolution of temple form: Dravidian & Indo-Aryan

2.3 Temples of Bengal: Temple and Bengal society

- 5.1 Bengal architecture
- 5.2 Formation of a Bengali cultural identity
- 5.3 Temple and Bengal society
- 5.4 Origins and developments: Bengal temples
- 5.5 Classifications of types by David McCutcheon

2.4 Finding the research question

2.0 INTRODUCTION

The Literature Review chapter comprises of three significant parts where we can finally find out the gap where our research continues to focus. The first Part is Hinduism and its significance in architecture where Hinduism and the beginnings of Hinduism is explained in relation to Hindu texts, Hindu gods and cults. And in second part continues with the evolution of temple architecture in Indian sub-continent where the Sanskrit Brahminism of the Gupta, early Hindu temples, early temples in the Chalukyas and the Gupta is shown to find out the elements of Hindu temple. And the evolution of temple in India, both Dravidian style (south India) and Indo-aryan style (north and central India) is briefly discussed. The third part deals with the Temples of Bengal while clarifying the Bengal society and temple form evolution. Here the temple classification of David McCutcheon is briefly discussed.

Each section or part shows how a regional type of structure is significant in the society and how a temple evolves by the regional influences such as social, cultural, geographical, context. Even in Bengal these regional influences shaped up the form of the temple architecture. But some borrowed architectural features can be seen in Bengal temple. That's why this chapter is organized to portray the evolving process of temple architecture in relation with its regional impact.

2.1 HINDUISM AND ITS SIGNIFICANCE IN ARCHITECTURE

“The temple is the most characteristic artistic expression of Hinduism, providing a focus for both the social and spiritual life of the community it serves.”

.....Goerge Michell

The main purpose of the first building art within the Indian subcontinent was the representation of the prevailing religious perception of the people through a tangible form. Therefore early Indian architecture within the sort of various sacred monuments is a representation of its religious beliefs. The Hindu temples that came to be known for their ornamental value also are symbolic of Hindu philosophy. That's why one of the foremost enduring achievements of Indian civilization is undoubtedly its architecture, whose roots derive from the Shilpa Shastra, one among the six Vedangas.

“Hinduism is not a sole religion, it is the collection of costumes of various religions which are native and predominant in India, does not believe in any one philosophic concept or any single God, and thus may be broadly described as a way of life.” (Vardia, 2008) Hindu architecture evolved over the centuries from simple rock-cut cave shrines to massive and ornate temples which spread across the Indian sub-continent and beyond, forming a canonical style that's still adhered to today in modern Hindu temples across the world.

2.1.1 HINDUISM:

Hinduism, a religion that originated in the Indian subcontinent and is still practiced by most of its inhabitants and those whose families have migrated from India to other parts of the world. The word Hindu is derived from the Sanskrit word Sindhu (“river”—more specifically, the Indus); the Persians in the 5th century BC called the Hindus by that name, identifying them as the people of the land of the Indus. The Hindus define their community as “those who believe in the Vedas” or “those who follow the way (dharma) of the four classes (varnas) and stages of life (ashrams).”

Hinduism is a major world religion, not merely by its many followers but also because of its profound influence on many other religions during its long, unbroken history, which dates from about 1500 BC. The corresponding influence of these various religions on Hinduism (it has an extraordinary tendency to absorb foreign elements) has greatly contributed to the religion's syncretism—the wide variety of beliefs and practices that it encompasses. Moreover, the geographic, rather than ideological, basis of the religion (the fact that it comprises whatever all the people of India have believed and done) has given Hinduism the character of a social and doctrinal system that extends to every aspect of human life. (Pecorino, 2001)

Enormous challenges to each description of the tradition have been offered by the long history and the heterogeneity of Hinduism. The very inquiry of identifying the beginning of Hinduism has become one of the most controversial topics. The individuality of Hinduism rests primarily on the precise line of verbal revelation on which the Hindu tradition is grounded. The Vedas and the other books, which are held sacred as scriptures by Hindus, differentiate Hinduism from others.

The relative geographic isolation of the Indian subcontinent facilitated the development over long periods of a civilization that was little influenced from the outside. Cosmological and other ideas developed and found fairly universal acceptance throughout India. Together these could be termed the *Hindu world-picture*.

All observers—including Hindus themselves—would describe Hinduism as polytheistic. Nowhere else in the world do we find such a profusion of gods and goddesses, of semi-divine beings and demons, ramifications of genealogies of gods, and manifestations of divinity in human and animal forms. But that is only the surface of Hinduism, the colorful appearance of a tradition, which has enormous depths. While Hinduism could never be conceived as a parallel to biblical or Islamic monotheism, it has developed its sophisticated notions of the unity of the highest principle, and many forms of Vaiṣṇavism, Śaivism, or Śāktism have theologies, in which One Supreme Being is given the title and role of Lord, the creator, preserver, and destroyer of the whole universe and the savior of those who believe in him or her.

While acceptance of the Veda as revealed is certainly the most basic criterion for declaring oneself a Hindu—the preferred self-designation of Hinduism in Indian languages is *Vaidika dharma*, the “Vedic Law”—there is another genre of literature that has shaped the minds and hearts of present-day Hindus much more profoundly: the two great epics, *Mahābhārata* and *Rāmāyana*, and the voluminous *Purāṇas*, the true Bibles of Hinduism. Typical for Hinduism, it has not just one, but eighteen such scriptures, accepted as revealed by the followers of the various greater traditions. They exalt Viṣṇu, Śiva, Devī to the highest position; they contain the colorful myths for which Hinduism is famous; they instruct their readers in matters of worship and hygiene, promise health, wealth, and eternal salvation to all who recite them. The *itihāsa-purāṇa* literature is enormous—it has hardly any parallel in another culture. While not all Hindus are fully acquainted with it, many know surprisingly much from it. (Klostermaier, 2007)

2.1.2 THE BEGINNINGS OF HINDUISM

“The modern archaeological record for South Asia indicates a cultural history of continuity rather than the earlier 18th through 20th century scholarly interpretation of discontinuity and South Asian dependence upon Western influences.”

—J. G. Shaffer and D. A. Lichtenstein,

“Migration, Philology and South Asian Sociology”

The ancient Persians, who occupied the lands west to the Indus River called the whole country lying across the Indus River *Sindh* and its inhabitants *Sindhus*, a designation that was later taken over by the Greeks who succeeded them and resulted in the now commonly used designations of India and Indians. The Muslims, who began invading India from the eighth century onward, used the term *Hindu* as a generic designation for non-Muslim Indians, identical with “idol worshipers.” In the 1830s Englishmen, writing about the religions of India, added *-ism* to *Hindu* and coined the term *Hinduism*, making an abstract and generic entity out of the many diverse and specific traditions of the Hindus.¹ While Hindus have appropriated the designation *Hindu* and use it today to identify themselves over against Muslims or Christians, they have expressed reservations concerning the designation of *Hinduism* as the “religion of the Hindus.” (Klostermaier, 2007) The basic beliefs and practices of Hinduism cannot be understood outside their chronological context. Although the early scripts and events are difficult to date with accuracy, the general chronological development is quite visible.

A. VEDIC CIVILIZATION

About 2000 BC, around the sites of Harappa and Mohenjo-Daro, a highly developed civilization flourished in the Indus Valley. By about 1500 BC, this civilization was in a serious decline, when the Indo-Aryan tribes invaded India. It is therefore impossible to distinguish, on current evidence,

whether or not the two civilizations had any significant connection. Many elements of Hinduism that were not present in Vedic civilization (such as worship of the phallus and goddesses, bathing in temple tanks, and the postures of yoga) may have been derived from the Indus civilization, however.

The commonly proposed period of the earlier Vedic age is dated back to the 2nd millennium BCE. After the collapse of the Indus Valley Civilization, which ended c. 1900 BCE, groups of Indo-Aryan peoples migrated into north-western India and started to inhabit the northern Indus Valley. **The Vedic period** (or Vedic age) (c. 1500 – c. 600 BCE) is the period in the history of the Indian subcontinent intervening between the end of the urban Indus Valley Civilization, and second urbanization which began in 600 BCE. It gets its name from the Vedas. The Vedas were composed and orally transmitted by speakers of an Old Indo-Aryan language who had migrated into the northwestern regions of the Indian subcontinent early in this period. The associated Vedic culture was tribal and pastoral until c. 1200 or 1100 BCE and centered in Punjab.

The Indo-Aryans had brought with them their predominantly male Indo-European pantheon of gods and a simple warrior ethic that was vigorous and worldly, yet also extremely religious. Gods of the Vedic pantheon survive in later Hinduism, but no longer as objects of worship. They used to worship natural forces like rain, fire, wind, earth, and space (Panchatatwa). It leads the Vedic people to worship the Gods who have these natural powers such as God **Indra**, king of the gods and god of the storm and fertility; **Agni**, god of fire; and **Varun**, god of the wind, etc.

By 900 BC, it then spread eastward to the Ganges Plain, becoming more agricultural and settled. The Vedic period saw the emergence of a hierarchy of social classes and later of monarchical, state-level polities. By the 6th century BC, Buddhism had begun to make its mark on India and what was to be more than a millennium of fruitful interaction with Hinduism. (Grover, 1980)

B. CLASSICAL HINDU CIVILIZATION

From about 200 BC to AD 500 India was invaded by many northern powers, of which the Shakas (Scythians) and Kushanas had the greatest impact. This was a period of great flux, growth, syncretism, and definition for Hinduism. This was the period in which the epics, the **Dharmashastras**, and the **Dharmasutras** took ultimate form. Under the Gupta Empire when most of northern India was under a single power, classical Hinduism found its most consistent expression. The sacred laws were organized and the great temples began to be built. Myths or stories of *Ramayana*, *Mahabharata*, *Avatars* were expressed through illustrations on walls in form of rock-cut architecture, and rituals were preserved according to the *Puranas*.

C. RISE OF DEVOTIONAL MOVEMENTS

In the post-Gupta period, a less rigid and more eclectic form of Hinduism emerged, with more dissident sects and vernacular movements. At this time, too, the great devotional movements arose. Many of the sects that emerged during the period from 800 to 1800 are still active in India today. Most of the *bhakti* movements are said to have been founded by saints—the gurus by whom the tradition has been handed down in unbroken lineage, from guru to disciple. This lineage, in addition to a written canon, is the basis for the authority of the *bhakti* sect.

The philosophies of Shankara and Ramanuja were developed in the context of the six great classical philosophies (*darshanas*) of India: the Karma **Mimamsa** (“active investigation”); the **Vedanta** (“end of the Vedas”), in which tradition the work of Shankara and Ramanuja should be placed; the Sankhya system, which describes the opposition between an inert male spiritual principle (*Purusha*) and an active female principle of matter or nature (*Prakriti*), subdivided into the three qualities (*gunas*) of goodness (*sattva*), passion (*rajas*), and darkness (*tamas*); the Yoga system; and the highly metaphysical systems of Vaisheshika (a kind of atomic realism) and Nyaya (logic, but of an extremely theistic nature).

D. MEDIEVAL HINDUISM

Parallel with these multifaceted Sanskrit philosophical investigations, various vernacular songs were composed according to the context and culture. These songs and tracks were transmitted verbally and preserved locally throughout India. They were composed during the 7th-9th centuries in Tamil and Kannada by the **Alvars**, **Nayanars**, and **Virashaivas**. During the 15th century, many songs were composed by the Rajasthani poet **Mira Bai**, in the Braj language. In the 16th century in Bengal, **Chaitanya** founded a sect of erotic spirituality, celebrating the union of Krishna and Radha. **Chaitanya** believed that both Krishna and Radha were incarnate within him, and he believed that the village of Vrindaban, where Krishna grew up, had become manifest once again in Bengal. The school of the **Gosvamins**, who were disciples of **Chaitanya**, developed an elegant theology of aesthetic participation in the ritual enactment of Krishna's life.

These ritual dramas also developed around the village of Vrindaban itself during the 16th century, and they were celebrated by Hindi poets. **Kabir Das** (1398/1440 — 1448/1518) was a 15th-century Indian mystic poet and saint, whose writings influenced Hinduism's Bhakti movement and his verses are found in Sikhism's scripture Guru Granth Sahib. The first great Hindi mystic poet was Kabir, who was said to be the child of a Muslim and was strongly influenced by Islam, particularly by Sufism. His poems challenge the canonical dogmas of both Hinduism and Islam, praising Rama and promising salvation by the chanting of the holy name of Rama. (Kabir Das) He was followed by **Tulsidas**, who wrote a beloved Hindi version of the *Ramayana*. A contemporary of **Tulsidas** was Surdas, whose

poems on Krishna's life in Vrindaban formed the basis of the *ras lilas*, local dramatizations of myths of the childhood of Krishna, which still play an important part in the worship of Krishna in northern India.

E. 19th and 20th Centuries

In the 19th century, important transformations took place under the patronages of Ramakrishna, Vivekananda, and the sects of the Arya Samaj and the Brahmo Samaj. These movements attempted to resolve traditional Hinduism with the social modifications and political principles of the day. Similarly, Bhimrao Ramji Ambedkar revived the myth of the Brahmins who fell from their caste and the tradition that Buddhism and Hinduism were once one, to enable Untouchables to gain self-respect by “reconverting” to Buddhism.

Hinduism blooms despite numerous reforms and shortcuts necessitated by the gradual modernization and urbanization of Indian life. The myths and the rituals survive not only in the temples but also in the rites of passage. Thus, Hinduism, which sustained the Indian subcontinent through centuries of foreign occupation and internal disruption, continues to serve a vital function by giving passionate

2.1.3 HINDU TEXTS

The Vedas are the collection of chants composed in archaic Sanskrit and the oldest literary testimonial of the Indian people. The Vedas are universally considered the foundational scriptures of Hinduism. The authors of these chants entitled themselves *Āryans*, “Noble People.” In the absence of reliable evidence, it is assumed a time frame for Indian history is based on assumptions. Considering the traditional dates for the life of Gautama, the Buddha, as fairly well established in the sixth century BCE, supposedly pre-Buddhist Indian records were placed in a sequence that seemed plausible to philologists. Accepting on linguistic grounds the traditional claims that the *Rgveda* was the oldest Indian literary document, Max Müller, a greatly respected authority in Veda studies, allowing a period of two hundred years each for the formation of every class of Vedic literature and assuming that the Vedic period had come to an end by the time of the Buddha, established the following sequence that was widely accepted: (Klostermaier, 2007)

- *Rgveda*, ca. 1200 BCE
- *Yajurveda*, *Sāmaveda*, *Atharvaveda*, ca. 1000 BCE
- *Brāhmaṇas*, ca. 800 BCE
- *Āraṇyakas*, *Upaniṣads*, ca. 600 BCE

The ultimate acknowledged authority for all Hindus is the Vedas. *Rig-Veda* is the oldest of the four Vedas, which was composed in an ancient form of the Sanskrit language in northwest India. This text was almost certainly established between about 1500 and 1000 BC and consisting of 1028 hymns that have been memorized syllable by syllable and preserved orally to the present day. The *Rig-Veda* was accompanied by two other Vedas, the *Yajur-Veda*, and the *Sama-Veda*. A fourth book, the *Atharva-Veda*, was probably added about 900 BC. At this time, the emerging of Brahmanas was noted which includes extensive Sanskrit texts illuminating ceremonial rituals and the mythologies behind these rituals. The Upanishads were composed between the 8th century BC and the 5th century BC; these are mystical-philosophical meditations on the meaning of existence and the nature of the universe.

The Vedas, including the Brahmanas and the Upanishads, are regarded as the revealed principle which detected as “*shruti*,” what has been heard [from the gods] and no syllable can be changed. The authentic content of this canon, however, is unknown to most Hindus. The practical collection of Hinduism is contained in the *Smriti*, or “what is remembered,” which is also orally preserved. There is no prohibition against improvising variations on, rewording, or challenging the *Smriti*. The *Smriti* includes the two great Sanskrit epics, the *Mahabharata* and the *Ramayana*; the many Sanskrit Puranas, including 18 great Puranas and several dozen more subordinate Puranas; and the many *Dharmashastras* and *Dharmasutras*, of which the one attributed to the sage Manu is the most frequently cited.

“The two epics *Ramayana* & *Mahabharata* are built around central narratives. The *Mahabharata* tells of the war between the Pandava brothers and their cousins the Kauravas. The *Ramayana* tells of the journey of Rama to rescue his wife Sita after she is kidnapped by the demon Ravana. But these stories are embedded in a rich corpus of other tales and discourses on philosophy, law, geography, political science, and astronomy so that the *Mahabharata* (about 200,000 lines long) constitutes a kind of encyclopedia or even literature, and the *Ramayana* (more than 50,000 lines long) is comparable. Although it is therefore impossible to fix their dates, the main bodies of the *Mahabharata* and the *Ramayana* were probably composed between 400 BC and AD 400. Both, however, continued to grow even after they were translated into the vernacular languages of India (such as Tamil and Hindi) in the succeeding centuries.”

The Puranas were composed after the epics, and several of them develop themes found in the epics (for instance, the *Bhagavata-Purana* describes the childhood of Krishna, a topic not elaborated in the *Mahabharata*). The Puranas also include subsidiary myths, hymns of praise, philosophies, iconography, and rituals. Most of the Puranas are predominantly sectarian; the great Puranas (and some subordinate Puranas) are dedicated to the worship of Shiva or Vishnu or the Goddess, and several subordinate Puranas are devoted to Ganesha or Skanda or the sun. In addition, they all contain

a great deal of nonsectarian material, probably of earlier origin, such as the “five marks,” or topics (*panchalakshana*), of the Puranas: the creation of the universe, the destruction and re-creation of the universe, the dynasties of the solar and lunar gods, the genealogy of the gods and holy sages, and the ages of the founding fathers of humankind (the Manus). ” (Pecorino, 2001)

2.1.4 HINDU GODS AND CULTS

The ritual and legalistic side of Brahmanism is the caste system based on the elaborate codes of the Law of Manu, according to which God created distinct orders of men as he created distinct species of animals and plants. Men are born to be brahmins, soldiers, agriculturists, or servants (Baker, 1969).

Although the presence and prominence of several gods and demigods are acknowledged by all Hindus, most individual worshipers are mainly devoted to a single god or goddess, of whom Brahma, Vishnu, Shiva, and the Durga, Laxmi are the most popular. There is a religious belief that '**Brahma, Vishnu, and Mahesh** collectively created the world. **Brahma** is the creator, **Vishnu** is the administrator and **Mahesh** is the destroyer.' The three identities namely *Brahma*, *Vishnu*, and *Mahesh* were created as symbolic representations to help people learn the properties of the three attributes:

- *Brahma* was placed in the state in which there is creation i.e. the phase arises.
- *Vishnu* was placed in a state that remains permanent or steady.
- And where destruction takes place that is where *Mahesh* was placed.

Vishnu is regarded as the preserver and protector. Hinduism believes that when humanity is endangered by disorder or evil, in order to restore virtue, Vishnu will descend into the world in one of its incarnations. The incarnations that Vishnu takes are called **Avatars** and the Hindu scriptures speak of ten avatars. It is believed that these **Avatars** appears in different span of times termed as yugas.

Along with these two great male gods Shiva and Vishnu, several goddesses are the purpose of primary devotion. In some myths, Devi is the prime mover, who commands the male gods to do the work of creation and destruction. As **Durga**, the Unapproachable, she slew the buffalo demon Mahishashur in a great battle; as **Kali**, the Black, she dances in a mad frenzy on the corpses of those she has slain. The Goddess is also worshiped by the Shaktas, devotees of Shakti, the female power.

More peaceful manifestations of the Goddess are seen in wives of the great gods: **Laxmi** goddess of wealth and good fortune. The wife of Vishnu is said to have taken different forms to be with him in each of his incarnations. And **Parvati**, the wife of Shiva and the daughter of the Himalayas. The great river goddess **Ganga** (the Ganges), also worshiped alone, is said to be a wife of Shiva; a goddess of music and literature, **Sarasvati**, associated with the **Saraswati** River, is the wife of Brahma. Many of the local goddesses of India—**Manasha**, the goddess of snakes, in Bengal, and **Minakshi** in Madurai—are married to Hindu gods, while others, such as **Shitala**, goddess of smallpox, are

worshiped alone. These unmarried goddesses are feared for their wild and natural powers, unpredictable outbursts.

Many minor gods are assimilated into the central pantheon by identifying with the great gods or their children and friends. **Hanuman**, the monkey god, appears in the *Ramayana* as the cunning assistant of Rama in the siege of Lanka. **Skanda**, the general of the army of the gods, is the son of Shiva and Parvati, as is **Ganesha**, the elephant-headed god of scribes and merchants, the devastator of difficulties, and the object of worship at the beginning of any important enterprise. (Pecorino, 2001)

2.1.5 YUGA

Yuga, in Hindu cosmology, is an age of humankind. Each *yuga* is progressively shorter than the preceding one, corresponding to a decline in the moral and physical state of humanity. In Hindu astronomy, a *Yuga* is a unit of time consisting of five solar years. According to Hindu texts, there are four such *yugas* called:

- Satya Yuga
- Treta Yuga
- Dvapara Yuga
- Kali Yuga

These four *yugas* make up the *maha Yuga* (“great *yuga*”), and 2,000 *maha yugas* make up the basic cosmic cycle, the *Kalpa*. The first Yuga (Satya) was an age of perfection lasting 1,728,000 years. The fourth and most-degenerate *Yuga* (Kali) is the present age, which began in 3102 BCE and will last 432,000 years. At the close of the Kali-yuga, the world will be destroyed, to be re-created after a period of quiescence as the cycle resumes again. (Encyclopedia Britannica, 2015)

2.1.6 AVATARS

As mentioned earlier, Avatars are the form of Lord Vishnu’s incarnations. There are ten avatars according to Hindu scriptures. They are thought to have been present in the *different Yugas*. Collectively, the avatars of Vishnu are called *dasavatara* (10 avatars) where each has a different form and purpose. Whenever mankind is confronted with a challenge, a specific avatar descends to address the issue.

1. **The First Avatar: Matsya (The Fish)** Matsya is said to be the avatar that rescued the first man, as well as other creatures of the earth, from a great flood. Matsya is sometimes depicted as a great fish or as a human torso connected to the tail of a fish.

2. **The Second Avatar: Kurma (The Tortoise)** Kurma (or Koorma) is the tortoise incarnation that relates to the myth of Vishnu took the form of a tortoise upon which to
3. **The Third Avatar: Varaha (The Boar)** Varaha is depicted as either a full boar form or as a boar skull on a human body who raised the earth out of the water with his tusks.
4. **The Fourth Avatar: Narasimha (The Man-Lion)**As the legend goes, the demon Hiranyakashipu obtained a boon from Brahma that he could not be killed or harmed by any means. However, his son Prahlada was devoted to Vishnu. When the demon Narasimha challenged Prahlada, Vishnu emerged in the form of a man-lion known as Narasimha to slay the demon.
5. **The Fifth Avatar: Vamana (The Dwarf)** In the Rig Veda, Vamana (the dwarf) appears when the demon king Bali ruled the universe and the gods lost their power. Vamana visited the court of Bali and begged for as much land as he could cover in three steps. When Bali granted the wish the dwarf then assumed the form of a giant. He took the whole earth with the first step and the entire middle world with the second step. With the third step, Vamana sent Bali down to rule the underworld.
6. **The Sixth Avatar: Parasurama (The Angry Man)** In his form as Parasurama, Vishnu appears as a priest (Brahman) who comes to the world to kill bad kings and protect humanity from danger.
7. **The Seventh Avatar: Lord Rama (The Perfect Man)** Lord Rama is the seventh avatar of Vishnu and a major deity of Hinduism. He is considered supreme in some traditions. He is the central figure of the ancient Hindu epic "Ramayana"
8. **The Eighth Avatar: Lord Krishna (The Divine Statesman)** Lord Krishna (the divine statesman) is the eighth avatar of Vishnu and is one of the most widely revered deities in Hinduism. According to legend, the famous poem, the Bhagavad Gita, is spoken by Krishna to Arjuna on the battlefield.
9. **The Ninth Avatar: Balarama (Krishna's Elder Brother)** Balarama is said to be the elder brother of Krishna. It is believed that he engaged in many adventures alongside his brother. Balarama is rarely worshiped. In several versions of the mythology, Lord Buddha is thought to be the ninth incarnation. However, this was an addition that came after the *dasavatara* was already established.
10. **The Tenth Avatar: Kalki (The Mighty Warrior)** Kalki (meaning "eternity" or "mighty warrior") is the last incarnation of Vishnu. He is not expected to appear until the end of Kali

Yuga, the current period. Kalki will come, it is believed, to rid the world of oppression by unrighteous rulers. It is said that he will appear riding a white horse and carrying a fiery sword. (Das, 2020)

The myths connected with each **avatar** reference a specific period of time or **yuga** when they were most needed. No matter the specific intent or place in time, the avatars are meant to re-establish the **dharma**, the path of virtue, or universal laws taught in the Hindu scriptures. The legends, myths, and stories that include the **avatars** remain important allegories within Hinduism.

2.1.7 THE PLACE OF WORSHIP: SPIRITUALITY WITH MAN'S EXISTENCE

The ideology behind the designing of Hindu sanctuaries is to link man with the divinities. Hindu sanctuary is the place where one can feel the spirituality within themselves. According to the Hindu spiritual philosophy, man's existence is a summation of infinite man or woman lifespans certain up within the cycle of rebirth. One can accomplish enlightenment through natural deeds, mind, and dedication. Thus, in this world the temple is the symbol of enlightenment: it is the space where God's existence can be sensed, and through rituals and ceremonies men can reveal the divine spiritual knowledge.

The sacred and secular lives of a Hindu are integrated with the daily procedures or rituals which require numerous connections with the divine, whether it takes place in a miniature temple at a household or a local temple. Hence, the temple is also the product of a desire to transcend the world of man-the principles of its construction, the forms of its architecture and decoration, as well as the rituals that take place within its walls, are all aimed at ultimate liberation (Michell, *The Hindu Temple: An Introduction to its Meaning and Forms*, 1988)

From the 1st century CE, an innovative type of worship known as Bhakti or devotional **Hinduism** spread across the Indian subcontinent, and the old Vedic gods were substituted in prominence by deities like **Shiva**, **Vishnu**, **Krishna**, and **Devi**. These gods would turn out to be the dominant figures of Hinduism and their worship required sanctuaries or temples where the devotee could get the divine spiritual knowledge and reveal their hopes for a better life.

2.2 EVOLUTION OF TEMPLE ARCHITECTURE IN INDIAN SUB-CONTINENT

One of the most significant highlights of Indian architecture has been the evolution of the Hindu temple architecture. In India the temples are found everywhere varying from small villages to the metropolitan cities. The typical quality of early Indian architecture lies in the expression of spiritual contents through its temple architecture. Unlike the western architecture, the evolution of Indian temple architecture is marked by a strict adherence to the original ancient models that were derived from religious consideration- and that continued over many centuries with the use of the basic proportion and rigid forms of the early temples. A large variety of Hindu temples was constructed throughout India with distinction in scale, techniques of building and particularly the deities that were worshipped, which were the result of the differences in political, cultural and affluence.

This section will cover the different styles that prevailed in Hindu temples of India. It is evident that temple styles differed significantly from region to region. For example, a temple plan may be placed along a single linear axis or it may be placed in concentric rings. Although, the elements of Indian temples may differ across regions, the real motive was derived from a single philosophy of design. All small and large Hindu temples built since historic times have been following the same philosophy. (Vardia, 2008)

2.2.1 TEMPLE DEFINITION

“The temple is the most characteristic artistic expression of Hinduism, providing a focus for both the social and spiritual life of the community it serves.”

.....Goerge Michell

*Brick Temples of Bengal from the Archives
of David Mccutcheon*

A Hindu temple, states **George Michell**, functions as a place of divine existence, where the man may cross over from the world of illusion to spiritual knowledge and truth. The word ‘**temple**’ is derived from the Latin ‘**Templum**’ which means a sacred precinct. (Wikipedia) According to the definition, a temple is a structure reserved for religious or spiritual activities, such as prayer and sacrifice, or analogous rites. Traditionally, the temple is a sacred structure and also indicative of the abode of god or gods. However these temples are not only the abode of God and place of worship, but they are also the cradle of knowledge, art, architecture, and culture. The practices and traditions of temples exist in history and in the present time, which greatly influences socio-cultural life.

It is a space and tangible structure designed to bring human beings and gods together, infused with symbolism to express the intangible philosophies and beliefs of Hinduism. The symbolism and

structure of a Hindu temple, states **Stella Kramrisch**, are deep-rooted in Vedic traditions. A temple incorporates all elements of the Hindu cosmos - presenting the good, the evil, and the human, as well as the elements of the Hindu sense of cyclic time and the spirit of life - symbolically presenting dharma, Kama, artha, moksha, and karma. The spiritual principles symbolically represented in Hindu temples are given in the early Sanskrit texts of India, while their structural rules are described in various ancient Sanskrit treatises on architecture. The layout, the motifs, the plan, and the building process recite ancient rituals, geometric symbolisms, and reflect beliefs and values innate within various schools of Hinduism.

Hindu temples are not just sacred spaces, they are also secular spaces. Their significance and purpose have extended beyond spiritual life to social rituals and daily life, offering thus a social meaning. Some temples have served as a venue to mark festivals, to celebrate arts through dance and music, to get married or celebrate marriages, commemorate the birth of a child, other significant life events, or mark the death of a loved one. In political and economic life, Hindu temples have served as a venue for the succession within dynasties and landmarks around which economic activity thrived. (Hindu temple architecture)

2.2.2 THE SANSKRIT BRAHMINISM OF THE GUPTAS

The evolution of the 'Aryans' nomadic ways to urban ways of life gave birth to a new elite class of merchants, artists' guilds, and bureaucrats. This materially reformist group residing in the towns and cities as Vedic religion was established by the Brahmins which portray them rather as a mechanical and lifeless character. This Conflict between conventional orthodoxy and the "aspiration of newly rising groups in the urban centuries" led to the growth of religious and philosophical speculations that challenged the institutionalized supremacy of Brahmins. (Grover, Satish. 1988)

Brahmin discontent had been constantly simmering beneath the tight administrative organization of a centralized Mauryan authority. The power of the great Mauryan dynasty was swiftly eroded by repeated rebellions of the malcontent Brahmins, within fifty years of the death of Asoka. After the Mauryans, several provincial kingdoms whose rules had been chafing under the centralized power of Kushans, Sungus, and Andhras. In this time tremendous wealth had been accumulated through trades with contemporary Romans, Arabs, and even the southeast nations of Java, Bali, and Sumatra.

The feudal kings, following the lead of Kanishka, were beginning to adopt Sanskrit, spoken by the Aryan Brahmin, as their official court language. Since Buddhism had already acquired the status of a world, rather than an Indian religion, Brahmins were quick to become the torch-bearers of truly indigenous culture. Now the South is organizing and uniting itself into a maritime power to acquire wealth overseas trade. With growing prosperity, the southern part was attracted by the cultured and

courtly ways of the north and began to adopt what may be called Indo-Aryan attitudes. The seeds of a nationwide revival of Brahmanism, popularly referred to as 'Hinduism', were beginning to take root. During this time Guptas reached the zenith of their power and splendor as they set a lifestyle with the refined syncretism of the method, learned training, and self-control. (Grover, 1980)

There are hardly any remains of Hindu temples before the Gupta dynasty in the 4th century CE; no doubt there were earlier structures in timber-based architecture. The rock-cut Udayagiri Caves are among the most important early sites, built with royal sponsorship, recorded by inscriptions, and with impressive sculptures. The earliest preserved Hindu temples are simple cell-like stone temples, some rock-cut and others structural, as at Temple 17 at Sanchi.

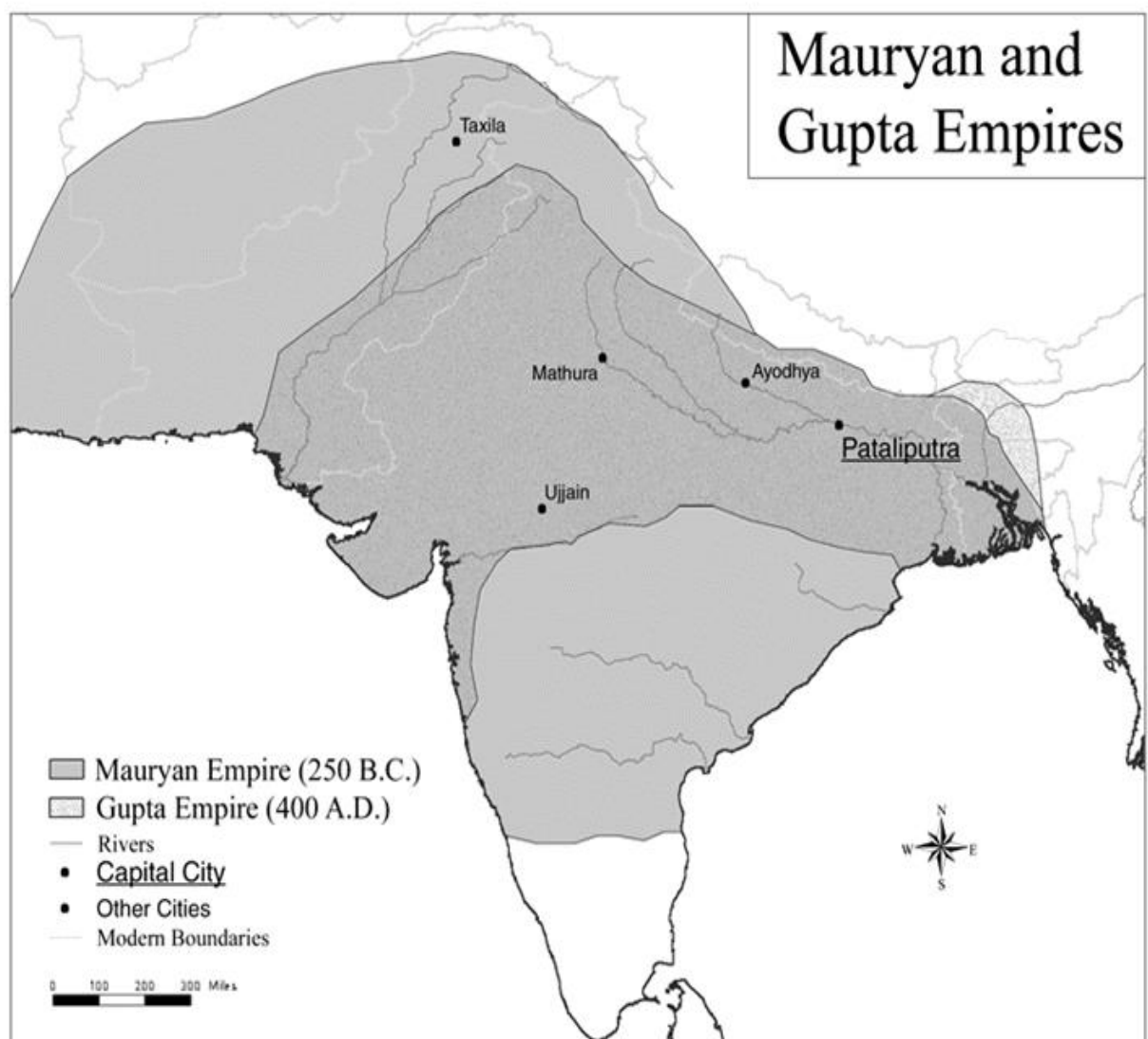


Figure 3: map of the Mauryan and Gupta empires

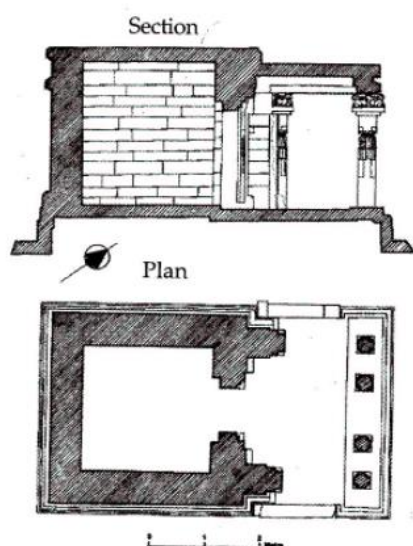
Source: https://commons.wikimedia.org/wiki/File:Maurya_india.png

2.2.3 EARLY HINDU TEMPLES

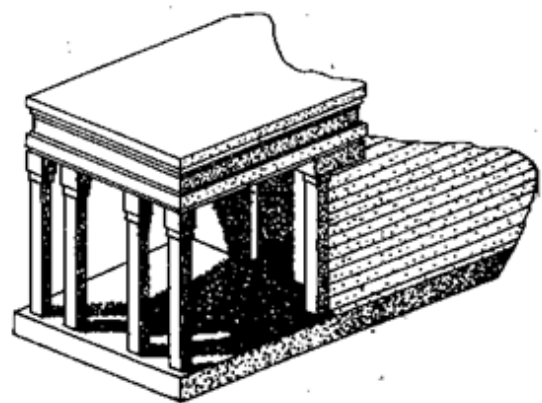
The character of Hindu temples reflected local architectural styles and the material and skills to which they related. The main forms and styles of the Hindu temple were established during 600-800 AD. The cell or shrine, the garbhagriha (usually square in plan), housed the image and was approached through a columned porch or mandapa. The shrine was roofed with a pyramidal spire or vertically attenuated dome-like structure known as sikhara.

“The rituals of the Aryan Hindu had till now involved the propitiation of abstract forms of natural forces. These forces are assumed to be omnipresent, the building of permanent earthly abodes for them had not been found necessary. The only edifice required was an altar, roofed with timber posts and beams covered with matted reeds. However, like Mahayana, which is bowing to popular appeal had given into the worship of images of Buddha; an anthropomorphic conception of a deity in the form of a statue gradually became a part of Hindu worship too.

The earlier Brahminical or Hindu shrine was nothing more than a cell to house an image. Other rituals were still conducted in the open air. The Oldest shrines of the Hindu region, true to the national genius, are once again a group of caves out of a mountainside Udaygiri, near ancient Sanchi. (Fig 8.07). The interior is a plain rectangular room or a garbhagriha (literally the womb-house), in which the image was installed. The entrance is through a small portico, which was faithful representation in stone of a familiar post and lintel timber model oft-depicted in the paintings of Ajanta.” (Grover, 1980)



Pan of Temple no 17, Sanchi



A cave and attached portico at Udaygiri.

Figure 4: True to Indian Tradition, the earliest place of Hindu worship was a dark cubic space curved out of living rock
Source: Grover, Satish. 1988. *The Architecture of India: Buddhist and Hindu*.

The earliest existing structural Hindu temples are at Sanchi and Tigawa near Jabalpur. Though their patrons decided to build temples by the more orthodox structure techniques of masonry, the only model of Hindu sanctums known to the designers was the grottos of Udaygiri. The structural masonry builder started to take his cue from the art of the rock cutter, who centuries ago had modeled his expertise on free-standing timber constructions of the Aryan woodworker. The Sanchi Temple of the early fifth century repeats in toto the Plan of the Udaygiri Shrines. The spirit of the liberal Gupta Empire proceeded to create new architectonic symbols of the new and resurgent religion of the Brahmins. (Grover, 1980)

2.2.4 EARLY TEMPLES IN THE CHALUKYAS AND THE GUPTA S: HINDU ART PERVADES THE SOUTH

Some sense of artistic authority seems to have been felt even in the southern part. A group of craftsmen was appointed by their Chalukyan overlords in about 600 A.D. to build shrines, for the Aryan gods, whom they had recently started worshipping, at their capital city of Aihole (in modern Karnataka state). Probably immigrants from the site of Ajanta just over 300 miles north, the craftsmen were acquainted with the bits and pieces of Buddhist ritual and well experienced in the high traditions of Gupta sculpture. However, there was neither a visual idea nor any experience in the building of free-standing monuments, leave aside a specific notion of a Hindu temple. The craftsmen and the Hindu priest didn't have any clear idea for such spiritual space. The only unclear ideas of what a temple should be--"an impressive structure where a graven image of God could be installed, consecrated and worshipped." True to instinct, the pioneer builders, picked on the most prestigious rural timber structure, the "Santhagara," or Assembly Hall of the village council, as their model (Fig.). (Grover, 1980)

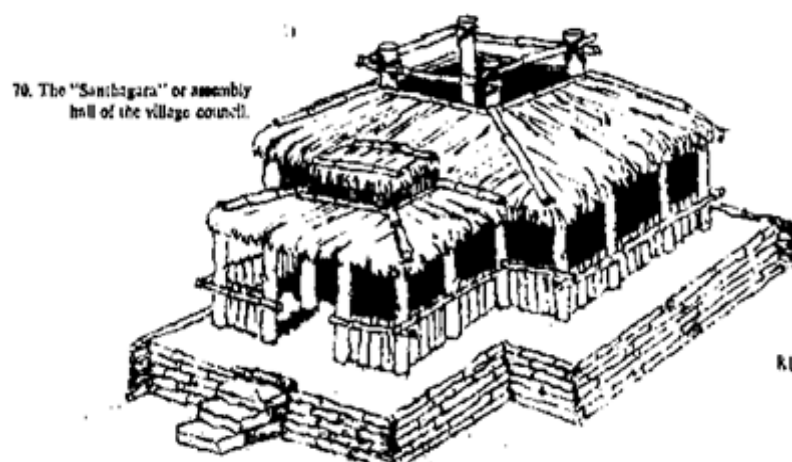


Figure 5 : The ' Santhagara ' or assembly hall of the village council which shows way to temple architecture
Source: Grover, Satish. 1988. *Buddhist and Hindu Architecture in India*.

With a few modifications, they set about the task of adapting its timber structural form to the permanency of stone masonry and its village council plan to one fit for the worship of gods. The result of their innocent endeavor is a temple, which for some curious reasons is popularly called the Lad Khan.

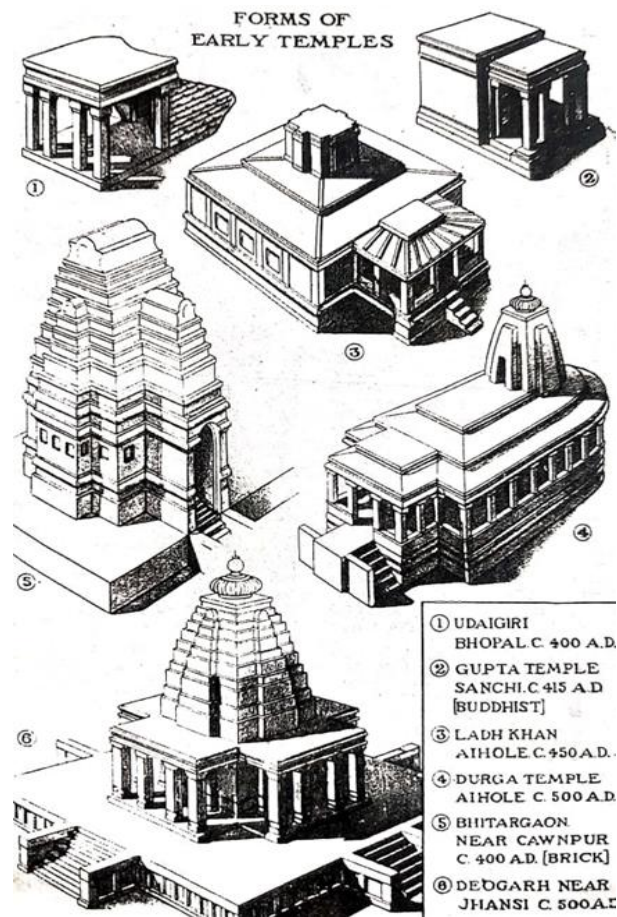


Figure 6 : Forms of Early Temples; Evolution of early temple forms
Source: Fletcher, 1952; plate no- XLI

2.2.5 ELEMENTS OF HINDU TEMPLE

As the surviving examples show, in the latter half of the seventh century, the temple edifice, in its medieval aspect, was beginning to assume a prescribed form. Similar to the Gothic church, (such terms as paving, aisles, chancel, spire, etc.), the Indian temple also comprises several essential parts, the names of which will figure repeatedly in any account of its structure. These elements are known in their original Sanskrit words are as follows: (Fletcher, The History of Architecture, 1992) The sanctuary as a whole is known as the Vimana that consists of two parts. The upper part of the Vimana is called the Sikhara and the lower portion inside the Vimana is called the Garbhagriha (cella or inner chamber). (Vardia, 2008)

1. **‘Sikhara’** meaning the tower or the spire. The pyramidal or tapering portion of the temple represents the mythological ‘Meru’ or the highest mountain peak. The shape and the size of the tower vary from region to region.

2. **‘Garbhagriha’** meaning the womb chamber. It is the nucleus and the innermost chamber of the temple where the image or idol of the deity is placed. The chamber is mostly square in plan and is entered by a doorway on its eastern side. The visitors are not allowed inside the garbhagriha in most of the temples, only the priests perform the rituals and worship.

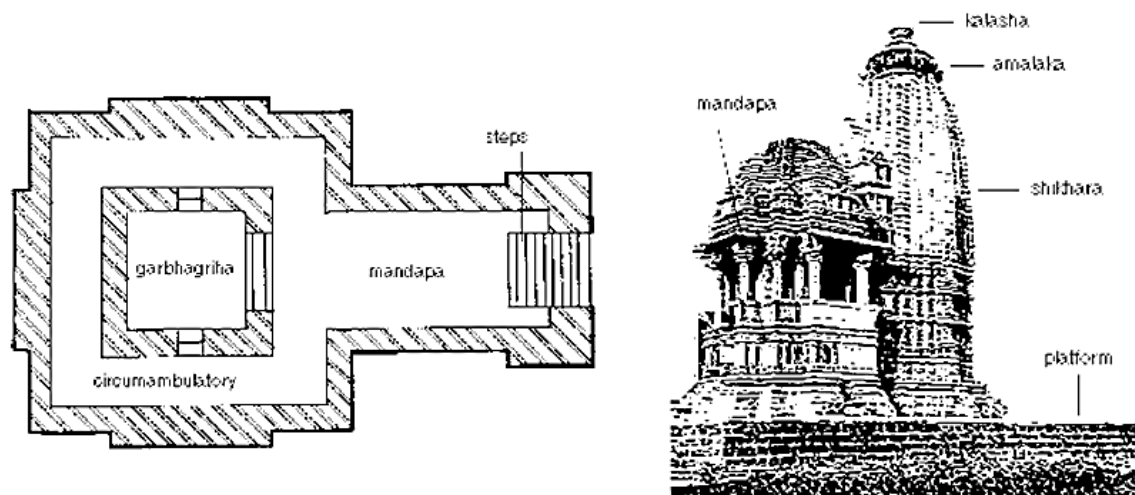


Figure 7 : The typical plan and the typical elevation of a Hindu temple illustrating various elements
Source: www.art-and-archaeology.com

3. **‘Pradakshina path** meaning the ambulatory passageway for circumambulation. It consists of an enclosed corridor carried around the outside of garbhagriha. The devotees walk around the deity in a clockwise direction as a worship ritual and symbol of respect to the temple god or goddess.

4. **‘Mandapa’**, is the pillared hall in front of the garbhagriha, for the assembly of the devotees. It is used by the devotees to sit, pray, chant, meditate and watch the priests performing the rituals. It is also known as ‘Natamandira’ meaning temple hall of dancing, where in olden days ritual of music and dance was performed. In some of the earlier temples, the mandapa was an isolated and separate structure from the sanctuary. In front of the doorway was a pillared hall, or mandapa, actually a pavilion for the assembly of those paying their devotions to the divine symbol in the cella. Some of the earlier temples indicate that the mandapa was a detached building isolated from the sanctuary by a definite open space, as in the "Shore" temple at Mamallapuram.

5. **‘Antarala’** meaning the vestibule or the intermediate chamber. It unites the main sanctuary and the pillared hall of the temple.

6. **‘Ardhamandapa’** meaning the front porch or the main entrance of the temple leading to the mandapa. In its plan, there is also some resemblance to the temple of the Greeks, with its columned naos before the interior cella, and its pronaos or porch acting the same as the *Ardhamandapa* of the Indian type.

7. **‘Mahamandapa’** shows the transept on each side of this central hall.

Some other essential elements found in the Hindu temples are

8. **‘Gopurams’** means the monumental and ornate tower at the temple complex entrance, especially found in south India.

9. **‘Pitha’**, the plinth or the platform of the temple and

10. The **Amalaka** the fluted disc-like stone placed at the apex of the sikhara. According to one interpretation, the amalaka represents a lotus, and thus the symbolic seat for the deity below.

It may be noted, also, that the basic intentions of the Greek and Indian temples were not dissimilar as neither was designed for congregational worship, each being a sacred monument and an object of devotion in itself. The Indian temple was, in the language of the people, a "dwelling place of the gods", for, in addition to the symbol of the deity within the cella, numerous niches, recesses, alcoves, and altars, were provided as part of the architectural scheme, within which were enshrined sacred images of the immortals, so that the whole structure resolved itself into a place of assembly of the Devas, or "Shining Ones". (Fletcher, *The History of Architecture*, 1992)

2.2.6 EVOLUTION OF TEMPLE FORM

“ It was an epoch which implied great religious concentration and intensity of purpose, coming in some respects to that wave of the passionate building which swept over much of Europe in the Middle Ages, and of which it has been said that it was as if the whole population had to a man, been apprenticed to the stonemason. And, to continue the occidental parallel, as Ralph Glaber in his famous history speaks of the "*white robe of churches which covered Europe in the eleventh century*", so in India, every hamlet had its cluster of shrines, and in every town, the tall spires of temples rose singly and in groups, as proved by the remains observable all over the country to the present day. These structural religious edifices were also rock-cut monuments, showing that this method, previously the monopoly of the Buddhists, was in the eighth and ninth centuries, continued by the Hindus and Jains, notably at such famous sites as Ellora and Elephanta.” (Fletcher, *The History of Architecture*, 1992)

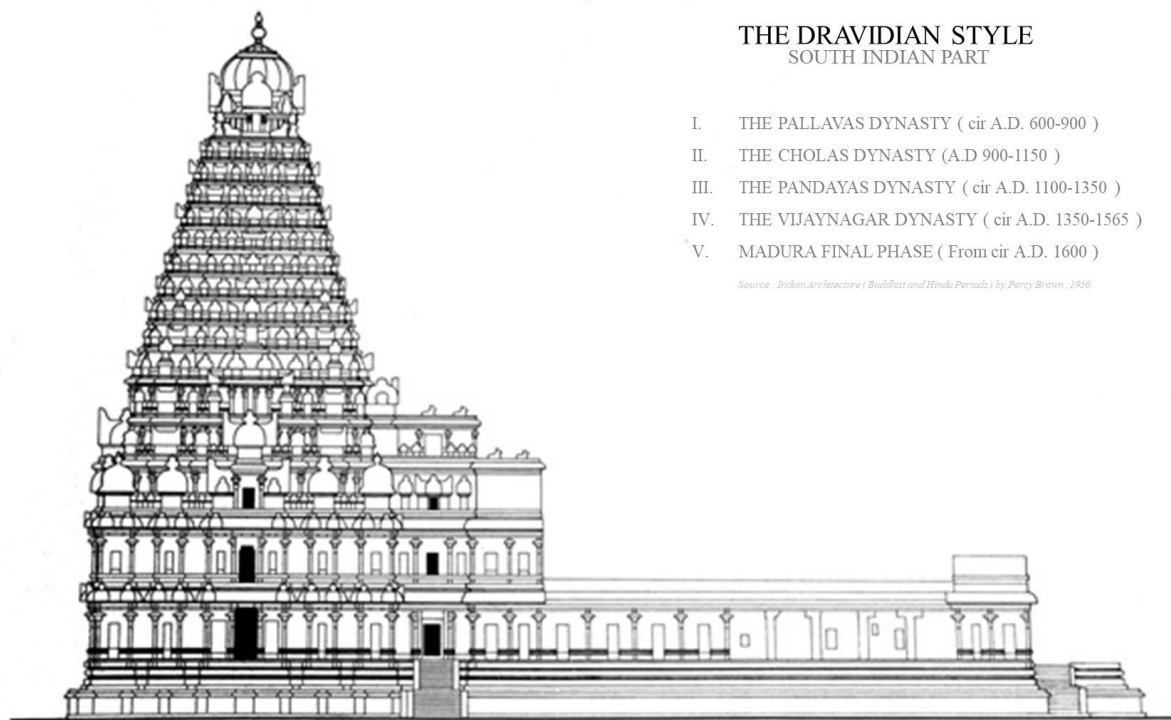
The people proceeded to embark on an era of temple building, with the formation of the temple type around the eighth century A. D. It should be realized that in all works of art, and particularly in the temple architecture of the country, the religious, philosophical, and metaphysical qualities of the creation was the primary concern where the artistic appeal being regarded as secondary. The intellect of the age, absorbed largely in divine contemplation, is reflected in the temple ideal, where the spiritual dominates the material. A comprehensive analysis of the temple organization will show that much of its architectonic character was obtained by the surfaces being treated as if they were an organism of repeating cells. In India there are two such orders, which emerge about the eighth century, and have been designated by Fergusson as followings:

- a. Dravidian Style (South India) and
- b. Indo-Aryan Style (North and Central India)

In its geographical aspect, the dividing line between the two regions occupied by the two styles cannot be categorically identified, as temples in the Dravidian style extend towards the north as far as *Ellora* (Aurangabad), while there are Indo-Aryan examples as far south as Dharwar on the upper Kistna. During the eighth century, both kinds of buildings were erected side by side in the town of the *Pattadakal* region. It should be also noted that the entire area in which Dravidian temples may be found comprises only one-fifth of the country as a whole, the Indo-Aryan being distributed over the remainder, and therefore buildings of the latter type are more numerous and more diversified. However, except for the regional and ethnological method of classification, the difference in the two styles seems to be more fundamental and to be consequent from some other sources deep down in the early culture of the people. (Brown, 1959)

a. DRAVIDIAN STYLE (SOUTH INDIA)

In support of the presumed very ancient derivation of these two architectural orders, it is possible to trace back the particular temple which will express its definite character of the Dravidian style. This traceback indicates that this Dravidian Style is generated from the rude shelter over the Naga altars, or those protecting the sacred fires of the Brahmins, as depicted on the Sanchi bas-reliefs executed before the Christian era. These operational features recall even a more primitive expedient for protection from the rain and allowing the smoke to escape, consisting of a large earthenware bowl inverted with its rim supported on blocks, thus providing a simple kind of chimney. There seems some probability that in Vedic times the sacrificial altar of each deity was roofed over by a particular form of shelter always associated with that deity, enabling the humblest worshipper readily to recognize each by its shape. So maybe explained the occasional appearance in later temples of a range of shrines for example Badami temples, Lad Khan temple and Durga temple, Aihole. (Fletcher, The History of Architecture, 1992)



THE DRAVIDIAN STYLE SOUTH INDIAN PART

- I. THE PALLAVAS DYNASTY (cir A.D. 600-900)
- II. THE CHOLAS DYNASTY (A.D 900-1150)
- III. THE PANDAYAS DYNASTY (cir A.D. 1100-1350)
- IV. THE VIJAYNAGAR DYNASTY (cir A.D. 1350-1565)
- V. MADURA FINAL PHASE (From cir A.D. 1600)

Source : Indian Architecture (Buddhist and Hindu Periods) by Percy Brown, 1956

Figure 8 : Brihadiswara Temple at Thanjavur (Chola Style) Plan and Side Elevation, Dravidian Temple

Source : <http://www.sahityasetu.co.in/issue49/anand.php>
Edited by the Author

Temple development in southern India started during the Chalukya rule in the early 7th century as previously mentioned. Buddhist architecture inspired These temples were inspired by the. The temples evolved from simple rock-cut shrines to large and complicated structures. The temples in this period were large square buildings with a projecting porch and decorative pillars. The roof of the temple had a small structure that later emerged as the sikhara. During the 7th -9th century under the rule of Pallavas the rock-cut structures were tremendously developing.

The Pallava rulers lead the way of the Dravidian style of temple architecture by establishing the five "raths" at Mamallapuram may be full-scale monolithic models exemplifying the same tradition. During the Pandyas rule, the south Indian temples were added with the lofty gateways gopurams at the entrance with the basic temple composition. The gopurams made the temple visually attractive and also provided the temples with an enclosure. The gopurams evolved from a rectangular base with a pyramid crowned with a barrel-vaulted form. In the 11th century, the Chola rulers built one of the tallest temples of that time the Brihadeshvara temple, Thanjavur with a height of 60 m (Hardy, 2007). In the later period, the temples extended and became more intricate. (Vardia, 2008)

b. INDO-ARYAN STYLE (NORTH AND CENTRAL INDIA)

Unlike the Dravidian Style, Indo-Aryan development was not confined to a relatively restricted area. The Indo-Aryan style was practiced in at least three-quarters of the northern portion of the subcontinent. Such an important architectural feature as the sikhara or tower, which figures in all the types of temple design in the country, has evoked several theories as to its origin, especially in the form it assumes in the Northern or Indo-Aryan-style. An attempt has been made to prove that this "spire" evolved from the peaked or domed huts of Eastern and Central India, which prevailed in those parts before the beginning of the Christian era. "It is quite evident that such huts, whether of bamboo or wood, were the prototype of the Nagara temple with sikhara." On the other hand, it has been endeavored to show that the sikhara of the Northern Indian type of temple developed out of the Buddhist stupa, gradually becoming elongated from the semi-globular mound, through the various credal changes that took place during the early centuries of the first millennium until it finally took the form of a spire or tower." This progress has been carefully traced using several graded authentic examples illustrating that as Buddhism merged into Hinduism so the symbol of the chaitya eventually merged into the sikhara from the ceremonial umbrella through the stupa to the tower. Another theory, based on the fact that the temple is not infrequently referred to as a ratha, or car, and so the sikhara may have been derived from the tall covering of the processional car (Ratha) which contains an image of the deity was carried about on ceremonial occasions. (Vardia, 2008)

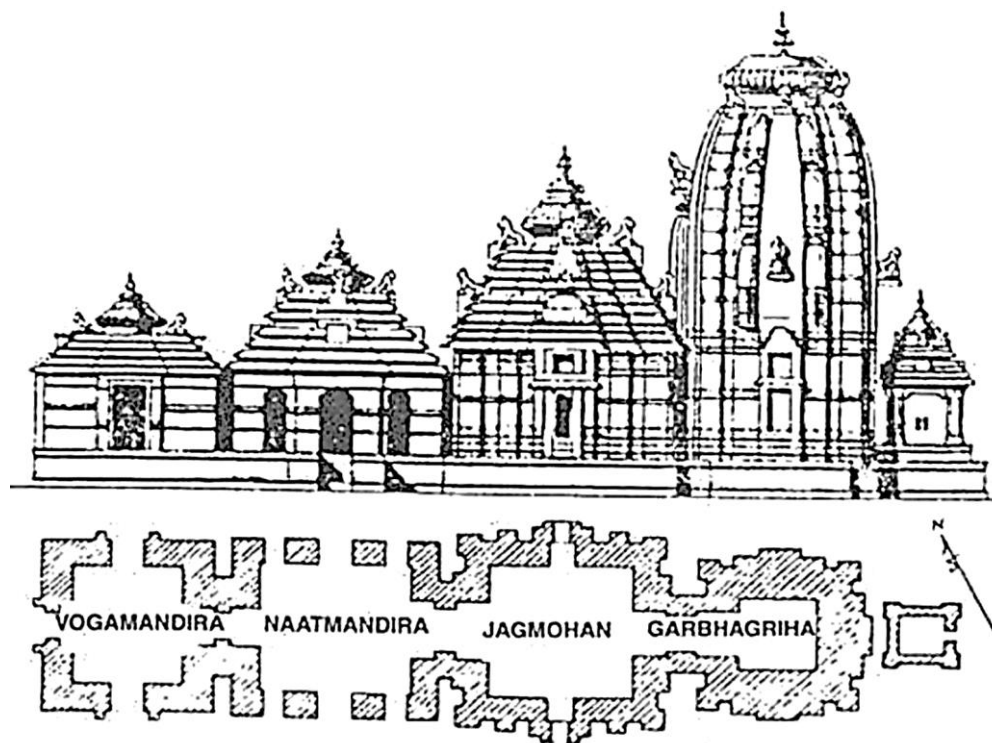


Figure 9 : Indo-Aryan Temples- ANANTA VASUDEV TEMPLE
Source: *Indian Architecture (Buddhist and Hindu)* Fletcher, 1952; plate no- LXXXI

There is little appreciable difference in architectural appearance between the temples of the Jains and those of the Hindus, except that the former preferred enclosed compartments instead of open columned halls, thus ensuring more seclusion for their ceremonial. Nor did the two major divisions of Hinduism, Sivaite, and Vishnuvite, affect to any extent the temple structure. The device on the final of the sikhara distinguishes the Temples of each system, three-pronged trident signifying a Siva temple, inside the cell of which will be a lingam or phallic emblem, and outside on the east, in front of the main entrance, an effigy, of the sacred bull (Nandi). On the other hand above the spire of the Vishnu temple will be a disc, or wheel, and inside the sanctuary a statue of the deity. In the course of the six centuries, both styles have considerably accumulated much with a satisfying composition. (Vardia, 2008)

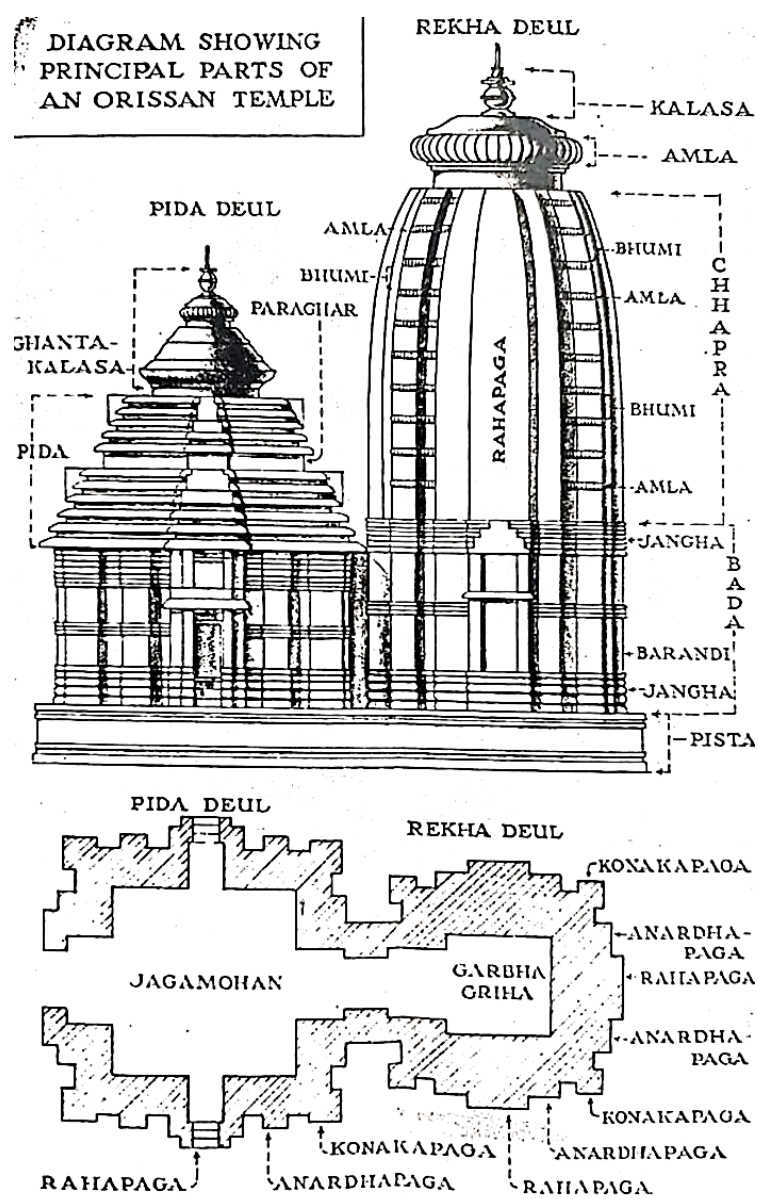


Figure 10 : Principal parts of an Orissan Temple
Source: Indian Architecture (Buddhist and Hindu) Fletcher, 1952; plate no- LXXX

2.2.7 COMAPARISION DRAVIDA AND NAGARA ARCHITECTURE

Of the different styles of temple architecture in India, most common is the Nagara architecture of northern India and the Dravidian architecture of southern India are. Other styles are also seen. For example, the rainy climate and the materials of construction available in Bengal, Kerala, Java and Bali Indonesia have influenced the evolutions of styles and structures in these regions. (Michell, The Hindu Temple: An Introduction to its Meaning and Forms, 1988) Adjacent temples may have features drawing from different traditions, as well as features in a common style local to that region and period. Many styles have been entitled after the magnificent dynasties in whose territories they were constructed.

Feature	Indo-Aryan Temple	Dravidian Temple
Main temple spire (tower)	Sikhara above main sanctum	Vimana that may be multistory (talas)
Mandapa spire (tower)	Most of the cases are seen	Most of the cases are not seen
Curvature of the spire	Curvilinear centred over the sanctum, also straight-edged pyramidal	Straight-edged pyramidal, sometimes curvilinear centred over the sanctum
Sanctum	Single or multi-storey	Typically single (Vimana may be multi-storey)
Plan	Mandapa, sanctum and tower plans are predominantly <i>Chaturasra</i> (square); uncommon: <i>Ashtasra</i> , <i>Vritta</i> , <i>Ayatasra</i> , <i>Ayata Ashtasra</i> , <i>Ayata Vritta</i> , <i>Hasti Prishtta</i> , <i>Dwayasra Vrita</i> (Vinayak & Krupali , 2014)	same, plus <i>Prana Vikara</i>
Gopuram	Not a prominent feature	Distinctive, but not essential; after 10th century often higher than the vimana. serving as landmarks for pilgrims
Other features	sacred pools, fewer pillared mandapas in temple grounds (separate dharmashala), prakara walls rare (e.g. Odisha after 14th century), single or multiple entrances into temple (Vinayak & Krupali , 2014)	sacred pools, many pillared mandapas in temple grounds (used for rites of passage ceremonies, choultry, temple rituals), single or multiple entrances into temple
Geography	northern, western and central of the Indian subcontinent	southern parts of the Indian subcontinent, southeast Asia
Chronology of surviving stone-masonry monuments	Late Kushana era, early Gupta: rudimentary archaic; 6th-10th century: zenith (Vinayak & Krupali , 2014)	Late Gupta era: rudimentary; 6th-10th century: zenith
Materials	Stone, Iron, Wooden doors	Stone, Iron, Wooden doors
Symmetry	Symmetry in plan, elevation (Madhusudan, 1977)	Symmetry in plan, elevation
Table 4 : Difference between Indo-Aryan and Dravidian		

2.3 TEMPLES OF BENGAL: TEMPLE AND BENGAL SOCIETY

Considering how even today many a 19th-century temple can be seen in the last stages of decay, we can easily assume that the great majority of temples built in the early post-Muslim centuries have disappeared without a trace. The fascinating question to which we can never know the answer is what style was carried to build these temples. The westernmost that still survive are all in the traditional North Indian or Orissan rekha style, but it was in this very period further east that remarkably new local styles emerged.

2.3.1 BENGAL ARCHITECTURE:

The architecture of Bengal, which encompasses the modern country of Bangladesh and the Indian states of West Bengal, Tripura, and Assam's Barak Valley, has an extensive rich history, blending indigenous elements from the Indian subcontinent, with influences from different parts of the world. Bengali architecture includes ancient architecture, religious architecture, and rural vernacular such as curved roofs, suitable for the very heavy rains, were adopted into a distinct local style of Indo-Islamic architecture and used decoratively elsewhere in north India in Mughal architecture. Traditional Bengali architecture mostly uses brick and wood, often reflecting the styles of the wood, bamboo, and thatch styles of local vernacular architecture for houses. Decorative carved or molded plaques of terracotta (the same material as the brick) are special. The brick is extremely durable and disused, ancient buildings were often used as a convenient source of materials by local people, often being stripped to their foundations over the centuries. (wikipedia)

Archaeological excavations have generated numerous artifacts made of clay, mud, stones, and rocks which were made by the available raw materials of Bengal's geographical surface. The extensive use of the objects of daily functional architecture such as bamboos, straw, reeds, and mud have been recognized. To quote Prof. Dani: 'Bamboo, cane, and reed are the God-given material to the Bengalis who have used them from household architecture to all kinds of beautiful furniture, tools, and plants, baskets and mats, bowls and plates, storage jars and luxury items for the poor as well as for the nobility. The evolution of an idiosyncratic curvature of the Bengal roof and its cornice which when carried across its facade in a series of parallel curves results in the form of a bow had been greatly influenced by these flexible indigenous building materials (like timber, bamboo, cane, and reed) which were abundantly available in the province. This is the typical architectural style keeping in mind that indigenous to the land, evidently derived from a bamboo framework, adapted to throw off heavy monsoon rain. This characteristic feature often termed folk architecture never rose to classical heights. Nevertheless, the style often transformed into masonry is invested with a freshness and spontaneity, expressive of a rural people keenly aware of the elements of nature affecting their daily life. It is the outcome of ingenious but practical minds. (Tabassum, 2019)

The fundamental fact is that from wet rice -production to material fabrication and to cultivating dwelling, living in the delta still means a deep tie to the land and the climate (Ashraf, 1997) The land being essentially deltaic and riverine, a rich deposit of alluvium is readily available for the manufacture of brick. The expansion of terracotta art, which is rationally encouraged by this economical but excellent flexible medium can hardly be equaled by any other country in the sub-continent of India. This explains why brickwork has been the building material that dominates the traditional architecture of Bengal, often embellished with intricate terracotta art on the surface.



Figure 11 : Kassimpore Village in Bengal - c1 186

Source: British Library; <https://www.oldindianphotos.in/2016/03/kassimpore-village-in-bengal-c1860.html>

2.3.2 FORMATION OF A BENGALI CULTURAL IDENTITY

The reconstruction of the history of Bengal in the pre-Muslim period is challenging due to a lack of sources. The difficulty is sensed more intensely for the earlier period, down to the 4th century AD, when Bengal came under the Imperial Guptas. Some insignificant references can be found as a source in the Vedic, Epic, and Puranic literature as well as on the available archaeological evidence. From the Gupta period onwards, written records in the form of epigraphs and literature can be found which contain evidence on the history of the 'region' of Bengal. (Banglapedia - the National Encyclopedia of Bangladesh,)

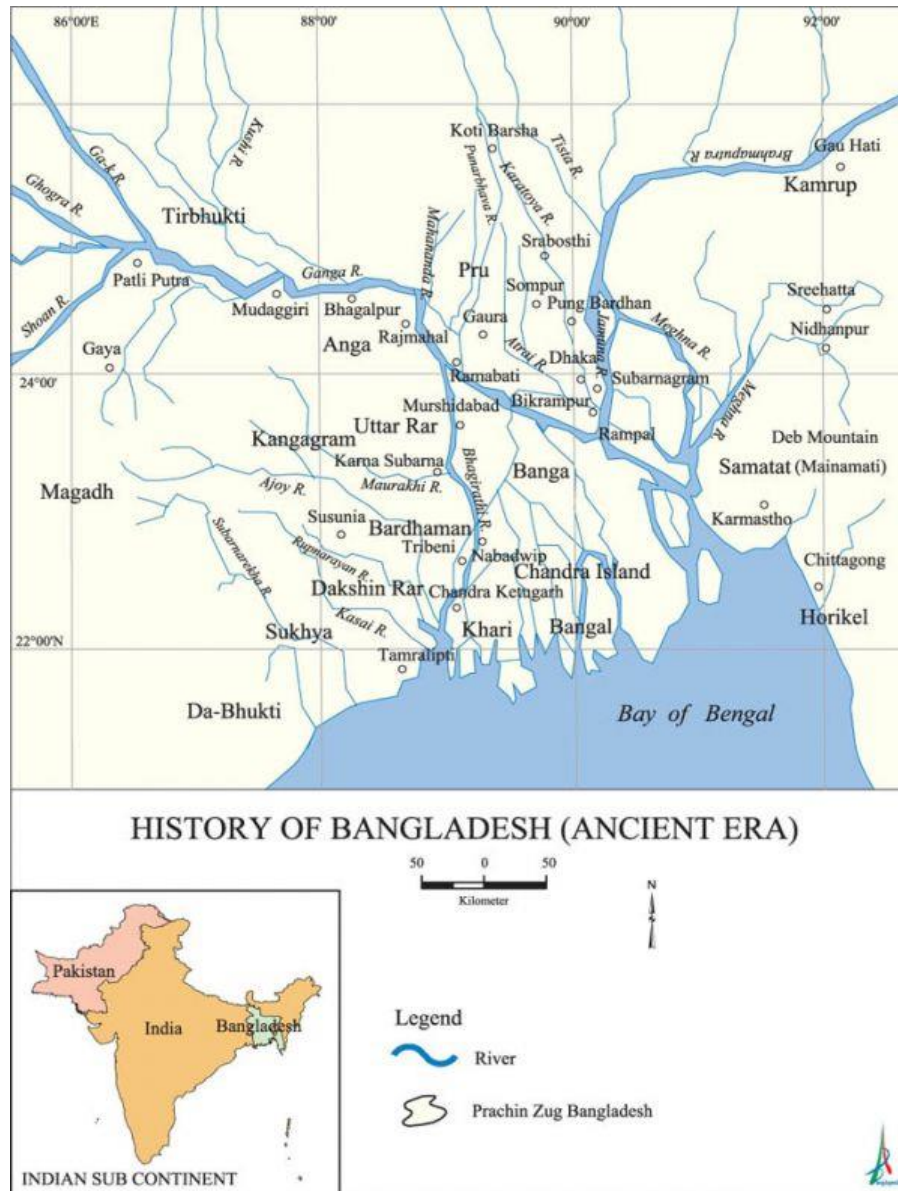


Figure 12 : History of Bangladesh (Ancient Era)
 Source: Banglapedia (National Encyclopedia of Bangladesh)

The geographic distribution of the temples is strictly confined to the alluvial delta of the Ganges River, which enlightens the popularity of clay material as well as the preference for curved roofs to protect from the heavy monsoon rains. Corresponding with the emergence of a new Bengali culture, the sequential duration of the temples is also substantial. Bengali temples may be observed as one of the most important indicators of this region's culture, closely associated with existing movements in religion, literature, and the arts, as well as with broader political, social, and economic developments.

Bengal experienced a reflective political, social, religious, and Cultural Revolution during the fifteenth and sixteenth centuries, leading to the formation of a distinct regional identity. The most important factors in these revolutions were

- The political unification and subsequent independence of Bengal,
- The development of a vernacular literary tradition,
- The widespread wave of local Hindu revivalism, and
- The creation of a uniquely Bengali style of monumental architecture.

There can be little doubt that the strength of this revolution and its pervasive effect on Bengali life was derived from the close interaction of these contemporary developments. Perhaps the most outstanding feature of this cultural efflorescence was its popular appeal, largely achieved through the medium of the Bengali language. This was the vehicle for the new religious movements and the countless dramas, songs, poems, and narrative texts that rapidly gained a wide audience throughout the region. The uniquely Bengali style of architecture and sculptural decoration evolved at this time was also an expression of these local idioms. Another important feature of this efflorescence was the combination of Muslim and Hindu elements as intrinsic parts of Bengali culture: thus, Muslim rulers and monumental Islamic architecture, but Hindu revivalism and religious poetry. This insistence on a regional cultural definition that unified disparate elements had a far-reaching impact in creating a dynamic and multifaceted Bengali society. (Michell, *Brick temples of Bengal : from the Archives of David McCutchoin*, 1983)

According to **David McCutcheon**, the history of religious architecture in Bengal may be conveniently divided into three periods:

- (a) Early Hindu (up to the end of the twelfth century, later in western areas);
- (b) Sultanate (fourteenth to early sixteenth centuries);
- (c) Hindu revival (sixteenth to nineteenth centuries).

a. EARLY HINDU:

It is very difficult to sort out the early temples of Bengal. Though numerous inscriptions dating from the Gupta period as well as literary works refer to temples, monasteries, and flourishing cities with magnificent palaces none of them now exist. The soft alluvial formation and its damp climate are not the only causes for almost total obliteration of such temples, the building materials are also responsible for this situation as mud, bamboo, reeds, wood, and such other fragile but indigenous materials were generally used.

For special cases, the medium was brick, which is certainly a much less durable material than stone. The erosion of rivers also causes the disappearance of the old settlement. Though some monuments have been identified to be demolished by the foreign invaders, either on account of their individualistic eagerness or for obtaining building materials to construct or decorate their own structures that may be true in very few cases. Rather a passage from Perween Hasan was recollected, where she observes: "In order to gain a correct perspective on the absence of temples from the early

mediaeval period, it is to be remembered that a similar break marks the early Muslim period in Bengal after the conquest of 1204. The earliest mosque in Bengal, which of Zafar Khan Ghazi in Tribeni, West Bengal, is dated by inscription 1298, almost one hundred years after the Muslim conquest, and the next one, the Adina Mosque of Hazrat Pandua, was built in 1375, showing a gap of about eighty years....historical accounts which gives evidence of intensive building by the new conquerors soon after their arrival. As there is no reason to believe that the Muslims subsequently destroyed their own religious buildings, local geographical conditions along with the impermanence of brick and mud construction must surely account for the absence of remnants from this early period (Hasan, 1997)

At present no temple of great antiquity exists in Bangladesh, except a few in West Bengal. So we get certain knowledge only about their features from the illustrated manuscripts as well as from several stone reliefs. In many cases, the deities are shown as installed in temples whose outlines are carved around the divine figures. Some references have been found about the early Hindu temples of Bangladesh from a few epigraphic records such as the Bhatera tila copper-plate from Sylhet dated 1049 AD, which refers to the erection of a Siva temple at Bhatta Pataka or Bhatpada. The temple is identified with the present Bhatera Tila mound In Sylhet. The great King Vijaya Sena is also said to have erected a lofty Siva temple in Varendra, which has not survived against the ravages of time. A few excavated temples in Bangladesh like the Govinda Swami temple at Baigram, the Lakhindarer Medh of Mahasthan, and the temple at Birat of Rangpur which has only their basement preserved and give very little information of entire configuration for classification or reconstruction of early temples of Bengal. (Ahmed & Chowdhury, 2005)

b. SULTANATE PERIOD (fourteenth to early sixteenth centuries):

The Muslim invaders increasingly reduced local forces to subjugation from the beginning of the thirteenth century until the third decade of the fourteenth century, while they were engaged with the conquest of Bengal. In the reign of Ilyas Shah (1342-1357), unification was finally accomplished and a political definition was given to the region for the first time. Bengal was controlled by an increasingly centralized administration, under the following Muslim rulers, particularly the sultans of the Husayn Shahi dynasty (1493-1538). The sultans found it convenient to widen the base of their rule by securing the support and sympathy of the local people due to the internal encounter of ambitious individuals, conspiracies, and court intrigues, which also shows their vulnerability to defend against attacks from neighboring kingdoms. The sultans appealed to the regional spirit of the people and even encouraged the new Bengali literature and architecture by acting as patrons. Thus was initiated a dynamic interaction between Muslims and Hindus, in which many Bengali cultural features came to be adopted by Muslim rulers. It was during this period that the strongest movements of Hindu revivalism took place, largely inspired by the teachings of Chaitanya (1486-1533). In 1575 with the Mughal conquest of Bengal, the political instability that followed the collapse of the Husayn Shahi

sultans came to an end. During the extended and fairly peaceful Mughal period, local superiors, both Muslim and Hindu, enjoyed a significant degree of independence. By the eighteenth century, Mughal control of Bengal had weakened, and power was mostly in the hands of the local governors or nawabs (such as Murshid Qali, 1717-1727), who reinforced the political independence of the region. Despite increasing European influence and the corresponding growth of overseas trade, Bengal's independent position was to continue into the nineteenth century. (Michell, Brick temples of Bengal : from the Achives of David McCutchoin, 1983)

Bengal became independent and formed a distinct culture within two centuries especially in the field of literature and architecture (In the middle of the 14th century). Muslims reintroduced some techniques like dome and arch and developed a distinct style by adding some local characteristics like curved cornice which was taken from the bent bamboo eaves of the village hut, and terracotta decoration. In the last quarter of the 16th century, Mughal took over Bengal, and Muslim architecture followed the imperial Delhi style. Terracotta and curved cornice tradition has been abandoned from the Muslim buildings and carried on by the temples. In the 15th century and first half of the 16th century, Hindu architecture reproduces the influence of cultural and religious traditions derived from neighboring Orissa, especially from the celebrated Vaishnava center at Puri. These lofty stone temples are roofed with curvilinear towers, known in Orissan terminology as *deuls*. The outer surfaces of the tower display deep ridging interrupted by niches in the middle of each side. Circular amlaka and pot-like finia's are placed on the top of the tower. This Orissan styled deul was largely practiced in Bengal through the 16th and 17th centuries AD. (Ahmed & Chowdhury, 2005)

c. HINDU REVIVAL (sixteenth to nineteenth centuries)

Of the various religious movements that swept Bengal in the sixteenth century, the Gauriya Vaishnavism of a local saint, Chaitanya, and his disciples and followers, had the most philosophical impact. Chaitanya proposed a democratic reorganization of Hindu society and attracted people of all castes and creeds by eliminating the caste system and removing all peculiarities between Brahmins and other classes. Fundamentally a monotheistic religion, Chaitanya's Vaishnavism concentrated on one god, Krishna, the worship of whom was based on bhakti or devotion, Love was emphasized as the principal means of spiritual fulfillment, and an intensely emotional spirit approaching trance was achieved by chanting the name of Krishna and dancing to the accompaniment of musical instruments. Gauriya Vaishnavism was an instant popular success with its broadly based congregational system and its well-organized sect practices, including rituals, rules of life, pilgrimages, and assets. During the sixteenth and seventeenth centuries, it became the most important religious movement in Bengal, a truly unifying cultural dynamism that attracted admirers from various strata of society, especially the lower castes, even spreading among the tribals. (McCutchion, 1972)

“ The resulting moral reformation, particularly of the lower ranks of society, was an important factor in the profound influence that Gauriya Vaishnavism was to have on the religious life of Bengal, Probably the most significant manifestation of the new regional culture of Bengal was the remarkable development of a **vernacular literary tradition**. The usual medium of aesthetic and intellectual accomplishments, the new Bengali literature also served as a vehicle for popularizing religious and secular stories as well as the teachings of religious movements, such as **Chaitanya's Vaishnavism**. In the late fifteenth century, and particularly in the sixteenth century, the sultans acted as patrons of Bengali literature, substantially supporting scholars and writers. Many of the epics and Puranas were translated into Bengali at this time, including the celebrated Bengali version of the Ramayana by Krittivasa. Following these translations came a profusion of biographies of Chaitanya, and Vaishnava lyric songs and narrative verses. Countless treatments of Krishna legend in lyric and narrative verse were popular, as well as poems on the goddesses Chandi and Manasa.” Michell, George. (1983) quotes in his book *Brick Temples of Bengal from the Archives of David Mccutchion* (Vol pp.6,).

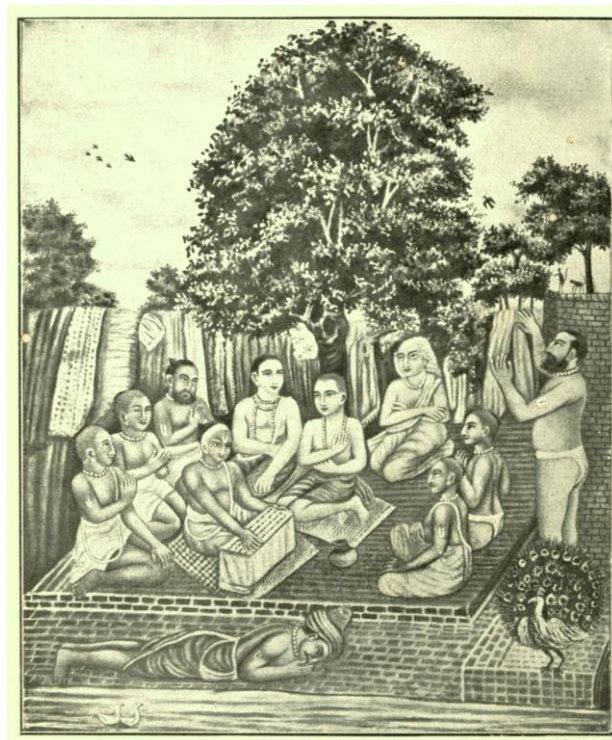


Figure 13 : A Hindu revival movement led by Chaitanya Mahaprabhu emerged during the Hussain Shahi dynasty

Source: https://en.wikipedia.org/wiki/History_of_Bengal

Repetition of Vaishnava songs and poetry, the continuation of epic themes and narrative poetries about various deities, and the appearance of romantic and secular tales in verses had been seen in the following centuries. This vital tradition did not get affected by the emergence of literary prose in the

nineteenth century under the influence of English literature, rather it was assorted effortlessly for its profusion of literary forms and the wide appeal of its works among the population barely equaled anywhere else in India. (Michell, *Brick temples of Bengal : from the Achives of David McCutchoin*, 1983)

“One of the most remarkable features of the history of monumental architecture in Bengal is the sharp break in tradition that coincided with the Muslim conquest. The few temples preserved in Bengal dated earlier than the fourteenth century indicates that Bengali architecture was closely associated with contemporary traditions that flourished throughout northern and eastern India. This is true for the eighth- and ninth-century Buddhist monastic complexes in brick (Paharpur, Mainamati), as well as the towering temples in brick or stone dating from the tenth to the fourteenth centuries (Telkupi, Bolara).

Only under the Muslim rulers does a distinctly regional style of architecture evolve for the first time: the buildings erected by the sultans combined traditional Islamic techniques (arches, vaults, domes) and types (mosques, tombs, forts) with local materials (brick and terra cotta) and forms (the hut). The credit for first translating the vernacular idiom mud, bamboo, and thatch into a monumental expression in brick belongs, therefore, to these rulers. Thus at Pandua (Eklakhi tomb, late fifteenth century), Gaur (Tantipara mosque, 1480), and Bagha (mosque, 1523), for example, domed brick structures incorporated curved cornices derived from the outer walls of the village hut, Bangla vaults reproducing the internal roofing system of the hut, and plans that included chambers with open porches in imitation of village houses with verandas. In addition, architects working for Muslim patrons developed a preference for covering entire wall surfaces with finely worked terra-cotta plaques that incorporated traditional decorative motifs such as the lotus. Several elements from pre-Islamic traditions especially carved doorways in stone and pilastered niches were also retained.”

..... Michell, George. (1983) quotes in his book *Brick Temples of Bengal from the Archives of David McCutchion* (Vol pp.6).

During the Mughal period, Bengal maintained its independent artistic traditions: only a few buildings at Dacca attempted to reproduce the imperial Mughal style, although several technical features, such as vaulting and stucco decoration, became widespread.

2.3.3 TEMPLE AND BENGAL SOCIETY

By the end of the sixteenth century, The Hindu artistic expression of the new social, religious, and Cultural Revolution was recognized by a uniquely Bengali style of temple architecture and sculpture. The temples were closely connected to the popular cultural idiom as expressed in cult affiliations, vernacular forms, and illustrations of religious texts, and were never detached from developments in contemporary society. The wide range of temple styles incorporated elements of both modification and continuity, distinctive in the dynamic but traditionally based Bengali society. This is best perceived in the crucial role of temple patrons, especially in the eighteenth and nineteenth centuries, a period of considerable economic and social change. Furthermore, the depiction of everyday life, aspects of contemporary society, particularly the ambitions of temple builders was reflected in temple decoration. Temples erected between the sixteenth and nineteenth centuries show a noticeable profusion of temples built from about the middle of the eighteenth century to the end of the nineteenth century, with a peak period in the first half of the nineteenth century. Fewer temples built before the first half of the eighteenth century usually had extensive constructions, often with extravagant terra-cotta decoration. After the middle of the eighteenth century, temples with the tendency to be smaller have less terra-cotta decoration, usually limited to a single facade, and even to adopt cheaper stucco work. Predictably, such a pattern of temple building was meticulously allied to the economic and social changes that Bengal experienced during this period. (Michell, Brick temples of Bengal : from the Achives of David McCutchoin, 1983)

In the seventeenth century and first half of the eighteenth century, especially under the Mughal rule, heritable lords of the land, often the descendants of princely houses, and powerful landlords (Zamindars), adored almost full freedom within their territories as long as they sent revenues to the provincial court. In a predominantly agricultural society, these individuals controlled the economic authority at the local level and were accepted as leaders of society. The temples surviving from this period are thus foundations of powerful individuals, often located in or near the provincial capitals. Temple building was the result of an intense absorption of economic and artistic resources, as well as a public means of conveying power: imperial patrons never hesitated to build monuments with lengthy inscriptions and recorded their crucial role as patrons. Such temple building was part of an older practice, as proved by the discovery of numerous dedicatory inscriptions from temples no longer existing.

During the eighteenth century, mostly due to the remarkable escalation in overseas trade, Bengal experienced a reflective economic and social change. Instead, the existence of the Portuguese, Dutch, French, and British in Bengal can be seen from the beginning of the sixteenth century, but it took some time for the effects of these overseas traders, especially the British, to become fully apparent. The emergence of a class of Bengalis dependent on the services of the East India Company perhaps

was the most important result of their activities in the company. The rise of a well-to-do new class, the entrepreneur-traders was led by the expansion of local crafts and native traders intermediating between the manufacturers and the Europeans. During the second half of the eighteenth century, these newly rich people gradually turned to purchase land as a means of investment, with the decline of nawabs control and the British experiments in land revenue administration and thus earned the title of zamindar for themselves. Most of these new landholders were local merchants, manufacturers, agents of traditional landlords, or officers of local governors: many belonged to the business class that had leaped up in the new profit centers and were actually from the lower strata of society. Purchase of land was one of the major steps toward consolidating their recently acquired position of social prominence. George Michell also mentioned in his book *Brick Temples of Bengal*, (Michell, *Brick temples of Bengal : from the Achives of David McCutchoin*, 1983)

“Temple building was also considered a means of providing the founder with influence and prestige, the decorated temple was a visible symbol of newly acquired wealth, and the dedicatory temple inscription clearly proclaimed the name and family of the founder. Temples also had a social significance in the numerous festivals that took place there, when groups of people gathered under the auspices of the founder and his family. The great number of temples erected in Bengal at this time, especially in those areas closely linked with foreign trade by way of various river routes, was thus directly related to the rise of this new middle class, who clearly wished to match their piety with their social ambitions. Most of the temples are, therefore, located in or adjacent to the great houses from which these landholders governed their estates, often as outsiders from the commercial centers where they spent most of their time. Another indication of change during this period, and especially of the increasingly significant status of particular groups in society, is the inclusion of the names of architects and builders in the dedicatory inscriptions with which so many of the temples were furnished.”

From the late sixteenth century and the seventeenth and eighteenth centuries, most temples were dedicated to Krishna and Radha, in direct response to the new wave of Gauriya Vaishnavism that swept Bengal. Only toward the end of the eighteenth century, when other gods and cults reached eminence, temples were dedicated to Shiva and the Goddess, for example. Temple building was thus directly related to the movements of Hindu revivalism. Temple art, too, mirrored such cult affiliations, and much sculpture was specifically devoted to demonstrating various relevant mythologies, especially those drawn from the Ramayana and Krishnalila stories. The sculpture also focused on decorative themes that interconnected something of the blissful spirit of the new Vaishnavism, such as Radha and Krishna with dancing and singing gopis. Illustrations of Shiva and the Goddess in their

various aspects only became predominant in later temples, as a direct consequence of the increasing popularity of these deities in temple worship. Sculptural ornamentation of temples was closely connected with corresponding developments in Bengali religious literature as many iconographic compositions were visualizations of Bengali versions of the epics and Puranas. The evolution of temple sculpture, generally in terra cotta, thus provided a pictorial accompaniment, as it were, to the growth of an intense literary tradition. Related to the above-mentioned fact George Michell explained by the following lines,

“Terra-cotta or stucco sculpture functioned as a kind of permanent record of many of the dramas, songs, poems, and narratives that were performed in front of the temple at festival time. Not only this, certain temple types (dolmancha, rasamancha) were specifically intended for such public occasions, as their prominent locations at the centers of villages and towns clearly suggest. The open and raised forms of these structures permitted the deity within to be visible from all sides, promoting social interaction between devotees, priests, and the founder of the temple. In illustrating aspects of popular religion and literature, temple sculpture was closely connected to the other arts, particularly textiles, woodwork, manuscript painting, scroll painting, metalwork, and ivory.”

In the fifteenth century, the evolution of uniquely Bengali Islamic architecture had a definite impact on later Hindu temples. Plans incorporating a central domed chamber and multiple vaulted side chambers, lobed arches on squat columns were the most obvious Islamic features which were borrowed by temples. Terra-cotta-covered wall surfaces; vaulted brick roof forms derived from village huts were also adopted in temples. Temple architecture reflected an increasing preoccupation with local vernacular forms, some of which had already achieved a monumental expression in earlier Islamic architecture. The hut types with their characteristic curved roofs, especially the *bangla* and *chala* forms, were always popular, and are found in some of the earliest temples, such as the Gokarna Narasimha temple (1580) and the Bishnupur Keshta-Raya temple (1655). Another temple type established in later centuries that incorporated a native vernacular form was the *dalan* or flat-roofed temple, the religious equivalent of a simple rectangular house with a columned veranda. Despite extensive experimentation and improvisation over some two centuries and more, architects never lost their fascination for these hut-like temples. Temple sculpture is related to the broader context of the Bengali popular arts, of which it is the most monumental and durable example. (Michell, *Brick temples of Bengal* : from the Archives of David McCutchoin, 1983)

“The impulse to create temples in imitation of the vernacular idiom is partly explained by the evolution of local cults that occurred at the same time. Most popular deities in Bengal were worshiped in thatched huts in the villages. When worship of some of these deities came to be transformed into orthodox cults that incorporated the services of Brahmins, their images were

housed in brick temples that copied their original settings: in this way brick temples came to imitate vernacular forms. In fact, the close relationship between monumental and vernacular architecture reflects a direct connection between the orthodox deities of the brahminical pantheon and the popular deities with whom they were amalgamated.”

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“The impulse to create temples in imitation of the vernacular idiom is partly explained by the evolution of local cults that occurred at the same time. Most popular deities in Bengal were worshiped in thatched huts in the villages. When worship of some of these deities came to be transformed into orthodox cults that incorporated the services of Brahmins, their images were housed in brick temples that copied their original settings: in this way brick temples came to imitate vernacular forms. In fact, the close relationship between monumental and vernacular architecture reflects a direct connection between the orthodox deities of the brahminical pantheon and the popular deities with whom they were amalgamated.”

Although the temples exemplified the new Bengali culture and provided it with an actual architectural expression, they sometimes also well-preserved previous old-fashioned temple forms. In this respect, the constant socio-cultural contacts with Orissa are particularly relevant which depended on the popularity of pilgrimages to Puri encouraged by the new Gauriya Vaishnavism. Some of the earliest brick temples are merely developments of older stone *Rekha deul* or *pirha* types (the terminology is Orissan), characterized by tapering towers with horizontal ridging. Bengali architects never surrendered their attachment to these towered Orissan forms, and soon provided them a characteristic indigenous expression in brick. Mainly widespread was the miniature reproduction of this towered temple as a pinnacle (*Ratna*), often multiplied in different groupings. The *Ratna* series proved to be

one of the most popular of all temple types developed in Bengal. The appearance of the Jagannatha trio on temple façades, usually as part of Vishnu's incarnations was another effect of this cultural contact with Orissa

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*Figure 14 : Orissan Temple Style was followed in early Bengal temples
Source: Prepared by the Author*

After the middle of the eighteenth century, in contrast to these references to earlier temple traditions, startlingly new and foreign elements also evolved, especially the fashion for neoclassical forms. Many neoclassical details of these neoclassical Italianate urban and country houses that sprang up all over Bengal from the end of the eighteenth century were copied in nearby temples, reinforcing the link between religious and domestic architectural traditions. Rapidly imitated by Bengali craftsmen, neoclassical elements were transformed into a "tropical" style. The striking evolution of spired temple forms began to establish in close resemblance to contemporary church architecture.

With an importance on courtly themes, foreigners, and religious subjects, temple art was devoted to illustrating only particular aspects of everyday life. It is not surprising that ornamental subjects closely linked with aristocratic themes, as well as the new social elite (Europeans) had been proved so popular, as the intentions of temple founders were closely bound up with more worldly ambition by the achievement of social status and the display of wealth. By depicting the pursuits of the upper strata of society on his temple, the patron associated himself with this powerful, aristocratic, and leisurely class. In the second half of the nineteenth century, the increasing Westernization of the

wealthy Bengali middle classes, and the emergence of Calcutta as the capital of the new British India caused the declination of temple patronage. At least until the 1930s, the art lingered on, though by the middle of the nineteenth century, the terra-cotta sculpture was being widely replaced by cheaper stucco work. With the adoption of new materials, such as concrete and steel, temple building in both traditional and neo-classical styles continued well into the twentieth century and dealt the final blow to the brick and terra-cotta tradition. (Michell, Brick temples of Bengal : from the Archives of David McCutchoin, 1983)

2.3.4 ORIGINS AND DEVELOPMENTS: BENGAL TEMPLES

As already mentioned earlier in this chapter, according to George Michell, the history of religious architecture in Bengal may be conveniently divided into three periods: (1) early Hindu (up to the end of the twelfth century, later in western areas); (2) Sultanate (fourteenth to early sixteenth centuries); (3) Hindu revival (sixteenth to nineteenth centuries). At the beginning of the thirteenth century the coming of the Muslims marked a sharp break with the past and after an initial century or so of iconoclastic destruction and militant Sufi proselytizing, Hindu chiefs and Muslim overlords settled down to some sort of negotiation in a common front against Delhi: under Sikander Shah, Bengal became a self-governing entity for the first time. A distinctive Bengali culture developed, which was especially evident in literature and architecture during the following two centuries. The basic form of a large domed chamber with corner minarets was imported in addition to the predominant architecture of Muslim mosques, tombs. But to this architectural features were added with local characteristics: the curved cornice taken from the bent bamboo eaves of the village hut, and terra-cotta decoration indigenous to land without stone. Many ornamental motifs were copied from the previous Hindu tradition, such as the stumpy many-faceted pillars, or the Hindu image niche adapted for the Mihrab. But structurally there was a momentous shift from the old Hindu corbeling system to Islamic vaults, domes, and keystone arches. On the subordination of Bengal to Mughal authority, Muslim architecture imported the imperial Delhi style, abandoning terra cotta and the curved cornice, at the beginning of the seventeenth century. The indigenous tradition was carried on by the temples. Regarding the above-mentioned subject, George Michell writes in his book, (Michell, Brick temples of Bengal : from the Archives of David McCutchoin, 1983)

“What Dineschandra Sen has called the "Pauranic Renaissance" in Bengal had been steadily building up from the late fourteenth century through the popularization of the Sanskrit scriptures in Bengali translation, but the Hindu revival, which gave the most popular Bengali cults (of Krishna, Kali, and Durga) their modern forms, dates from the sixteenth century. Its chief initial impetus came from Chaitanya (1486-1533), the exponent of Gauriya Vaishnavism, whose active life in Nabadwip largely coincided with the reign of the last notable sultan, Husayn Shah (1493-1538), who generally has a reputation for tolerance

despite the accusations of the Vaishnavas. Although the Radha-Krishna cult had been fermenting in Bengal from at least the time of Jayadeva at the court of Lakshmana Sen, the last Hindu king of Bengal (c. 1178-1206), it finally came to a head in the early sixteenth century and was undoubtedly the main inspiration behind the revival of Hindu art and architecture that coincides with that period. Nearly all the surviving richly decorated temples of the sixteenth and seventeenth centuries are Radha-Krishna temples, and their terra-cotta decoration is Vaishnava, not merely in subject matter but in spirit—the rhythmic abandon and profusion."

It would be wrong to presume that no temples were built during the earlier Sultanate period, rather it would be most unlikely that the powerful Hindu chiefs did not build temples during this time. Though subject to occasional intrusions, their territory was largely beyond the sphere of Muslim influence. Seeing how even currently many a nineteenth-century temple can be found in the last stages of decay, it is easy to assume that the great majority of temples constructed in the early post-Muslim centuries have vanished without a trace. David Mccutchion has described the temples in four major following styles from the origin of the Bengal Temples to their later developments,

- a. TRADITIONAL STYLES
- b. HUT STYLES
- c. PINNACLED STYLES
- d. FLAT-ROOFED STYLES

a. TRADITIONAL STYLES

Though temples of the pre-Muslim period have nearly all extinct, but from the few that continue standing and the excavated relics of others and from the evidence of miniature replicas or depictions on images, several different designs may be classified. The predominant feature in the western parts is the tall curvilinear Rekha Deul, the common north Indian type in Orissa seems to have achieved its standard preliminary form in the late seventh or early eighth century in central India and spread to places as far apart as Aihole (Deccan), Osia (Rajasthan), Roda (Gujarat), Jagatsukh (Kulu valley) and Bhubaneswar (Orissa). The earliest temple Siddheshvari temple at Barakar still standing in Bengal belongs to this group.

The type went on developing over the next four centuries, increasing in height and complexity, but retaining its basic features: square shrine with vertical ratha projections carried through the lower walls and tower; horizontal moldings, especially at the base in "vase" form and as a cornice (baranda) where the tower meets the top of the lower walls; image niches in the projections surmounted by tower replicas, occasionally with pilasters similarly surmounted on the subordinate projections; curvilinear shikhara with chaitya mesh decoration, surmounted by a large amalaka and kalasha finial,

with bhumi-malakas at intervals down the corners. Examples of later complexity in Bengal are the dilapidated deuls still standing. (Michell, 1983)

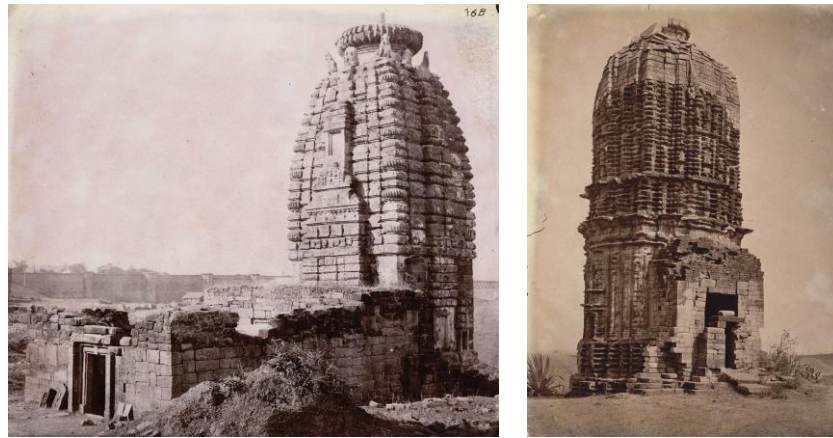


Figure 15 : Siddheshvari temple at Barakar

Source: <http://www.bl.uk/onlinegallery/onlineex/apac/photocoll/g/largeimage58304.html>

With the imposing Orissan tradition, it seems likely that the pre-Muslim Rekha deuls of Bengal were in a tradition coming down through Magadha, which was part of the same empire. On the other hand, though after the Muslim incursion took the Pala-Sena tradition to an unexpected close, the western areas were even predominantly affected by the neighboring Orissan influence. David McCutcheon includes in his book: *Late Medieval Temples of Bengal Origin and Classification*.

“Between the earlier and later Hindu period, astonishing religious changes took place in Bengal: the worship of Vishnu gave way to that of Radha Krishna, of Chamunda to that of Kali; Surya fell entirely out of favor; curious folk cults like that of Dharmaraja or Dakshina Raya arose and the Mangala literature supporting them. So too in temple architecture only one of the above designs the Rekha deul-continues to be built in large numbers; the pirha is rare, and the others have disappeared altogether.”

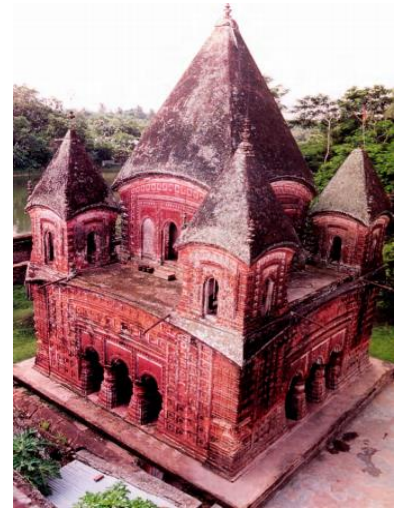
b. HUT STYLES

The simplest form of the domestic hut is composed of an elongated base with two edges to the roof and gable ends. In Bangladesh, a hut is most commonly found in villages, which consists of a bamboo frame filled in with jute stalks, reed or lattice framework, and a thatched roof curved both along the lower edges. Supportive struts of the gable ends are often replicated as a decorative feature in temples of brick or stone, and Dani has suggested that the patterning of the walls derives from the bamboo frame. Even the bamboo rafters on which the thatch rests may be reproduced on the inner vault and the supporting poles on the inner walls. (Dani, 1961) This design is referred to as Ek-Bangla or do-Chala. Two such huts, one as a porch in front of the other as a shrine, constitute the jor-bangla design-Bengal's most distinctive contribution to temple architecture.

The majority of char-chala mud huts built in Bengal currently have straight cornices, but the temples retained the traditional curved cornice which includes the side edges curved too where the roofs are met. With due respect to the local context, these hut roofs were built curved to throw off the heavy monsoon rain more effectively using the flexibility of bamboo. And it can be easily predicted that when this curved cornice was imitated in brick or stone the result is not constructional or utilitarian but decorative.



these hut roofs were built curved to throw off the heavy monsoon rain more effectively using the flexibility of bamboo



(b) The curved cornice was imitated in brick or stone the result is not constructional or utilitarian but decorative.

*Figure 16 : showing temples influenced by the indigenous materials
Source : (a) Village Scene in Bengal with Men and Women Engaged in Various Tasks - c1860 - Old Indian Photos
(b) Captured by the Author*

The rudimentary forms of Bengal hut-style temples might search back to the ancient period like Mauryan granaries or the leaf-thatched structures on Gandhara bas-reliefs which appear like at-chala temples. It is assumed that Adris Banerji has imitated a jor-bangla design from a Shunga pillar found at Sarnath. But the earliest dated hut-style temple in Bengal is the temple of Simhavahini at Ghatal (1490) which has a small char-chala design with an attached char-chala porch and is the only example of a char-chala equivalent of the jor-bangla. (Michell, Brick temples of Bengal : from the Archives of David McCutchoin, 1983) During the time of Husayn Shah, such at-chala or char chala temple may be found in the sixteenth century. In construction, all these char-chala and at-chala temples belong to a post-Muslim practice, as these superstructures are supported on arches and vaults. To depict how this traditional hut style continued in the temple construction George (1983) writes,

“An actual example of an image standing in an at-chala hut seems to figure in the Cambridge manuscript (Add. No. 1643) of the Ashtasahasrika Prajnaparamita which was copied in Nepal in 1015. (One of the eighty-five illustrations shows the god Lokanatha of Champitala (a

village in Comilla District) standing in what is evidently an at-chala hut. The picture clearly presents the probable structural origin of this type of temple: a tall central char-chala with mud walls from which project veranda roofs at a lower level supported on bamboo poles-precisely the principle of the large domestic at-chala hut today.”

According to Saraswati, the miniature pirha is a common ornamental motif around the entrance arches, but as well as the miniature at-chala, from which it is clearly distinguished. It might be more reasonable compared with the storied structures of Nepal and Burma, from which Saraswati has derived the pirha, or with the division of the Orissan jagamohana roof into two sets of tiers (first and second Potala) divided by a low wall (beki). That the Nepalese type of duplication extended down to Orissa through Bengal. (Saraswati, 1963)

Fundamentally, the basic form of char-chala design is consisted of a square chamber surmounted internally by a dome on pendentives, which is built on the outside with a typical hut-shaped roof. Sometimes the internal construction can be a four-sided dome or pyramid, which may hark back to an earlier tradition of corbeling. Large at-chala temples are usually on an elongated base and have the chamber roof extended lengthwise from a central dome on arches and narrow corbeled vaults, whereas, the rare examples of char-chala temples on an elongated base have a vault built up from the four sides with a ridge down the center which is used for the towers of at-chala temples. This sort of vault was previously introduced in the mosques when the space to be covered was quadrilateral and not square, for example, the central row of domes on the Shatgumbaj mosque at Bagerhat (mid-fifteenth century), or on the Chhota Sona Masjid at Gaur, which was built during the reign of Husayn Shah. The earliest bangla temple still standing in Bengal is perhaps the jor-bangla temple of Chaitanyadeva at Guptipara, which is claimed to have been built at the time of Akbar. (Fig)

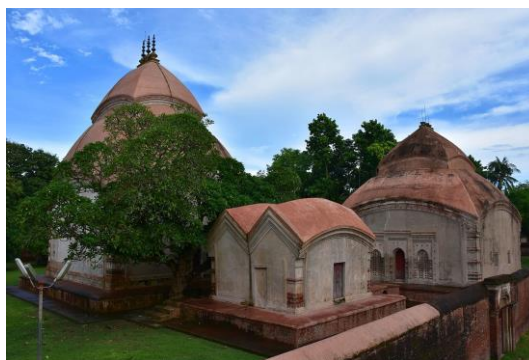


Figure 17 : Brindaban_Chandra's_Math_Complex_Chaitanya Deva temple at Brindaban Chandra's Math
Source: https://commons.wikimedia.org/wiki/Category:Brindaban_Chandra%27s_Math

In the eighteenth century, the small Ek-bangla design with terra-cotta decoration was popular for the dargahs and mazars or local pirs in Rajshahi and Dinajpur districts. Regarding the popularity of these bangla hut style Michell (1983) writes elaborately,

“It is curious that in the Mughal period when mosque design abandoned the Bengal tradition, the characteristically local do-chala roof should have been taken up by the Muslims, and even exported to other parts of India where it became a prominent feature of seventeenth-century architecture at Delhi, Lahore, or Gulbarg, from where it passed in the eighteenth century on to the palace balconies and garden pavilions of Rajasthan. In Bengal, too, apart from the specific temple types it characterizes, it is a favorite form of decorative roof for the nahabathhana or entrance gateways to temple enclosures.”

c. PINNACLED STYLES

The pinnacled or ratna design comprises the same lower structure as the chala series oblong box with curved cornice, but the roof is more or less flat (following the curvature of the cornice), and is surmounted by one or more towers or pinnacles called ratna (*jewel*). The simplest form has a single central tower (*ek-ratna*), to which may be added four more at the corners (*pancharatna*). By thus increasing the number of levels and corner turrets, the number of ratnas can be multiplied through nine, thirteen, seventeen, and twenty-one, up to a maximum of twenty-five (*panchavimshati-ratna*). This multiplication of turrets can vary as a Hindu or Muslim feature. Through clustering of chhatris or domes at different roof levels are common Islamic practice, but there is ample Hindu precedent. Another closer example is the placing of miniature towers or stupas at the corners of the tiered roofs at Pagan, culminating in a topmost central tower. There is sufficient reason to assume that this practice was taken from Bengal along with the architectural type on which it appears. In Hindu art, this principle of ornamenting the tower with miniature temple duplicates is very ancient, an entire double-storied temple an entire double-storied temple, and in the southern temple style, they are boldly defined, in the northern temple style they merged into the curvilinear shikhara. David McCutcheon writes,

“The ratna style has also been derived from the Hindu ratha (chariot), but no ratha of this type has survived from earlier than the earliest ratna temples. In going integrated and truly Indian a tradition as what Percy Brown called the “Indo-Islamic,” it is perhaps futile to attempt to disentangle the specifically Hindu and the specifically Muslim; the buildings of this period do not look like those that survive from the earlier period, any more than European Renaissance architecture looks like medieval architecture, yet much of the previous tradition has been creatively adapted. It is in this Indo-Islamic period that the origins and precedents of the ratna style are to be sought.”

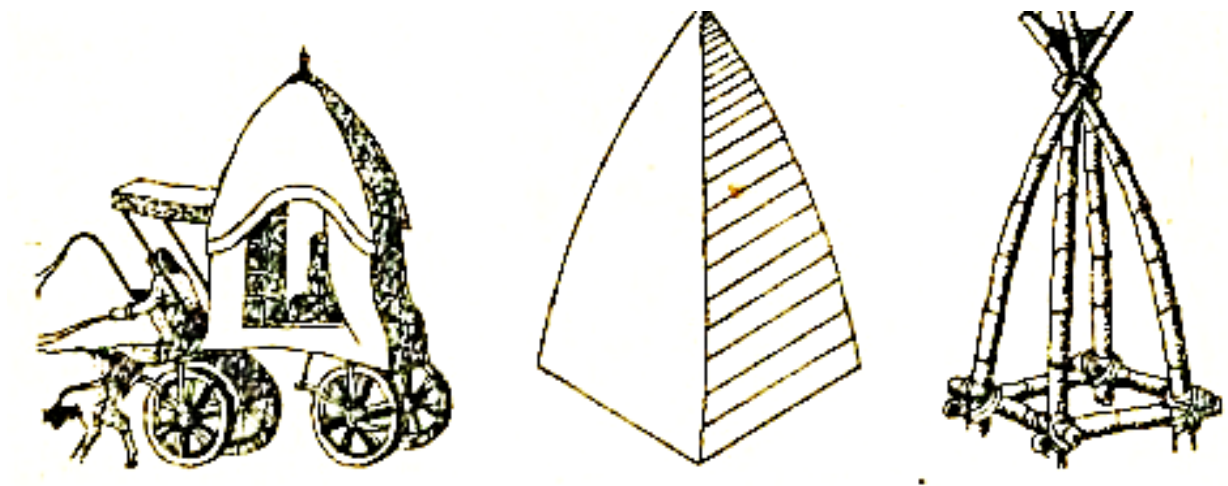


Figure 18 : Image of ancient Ratha

Source: Grover, Satish. 1988. *Buddhist and Hindu Architecture in India*: page- 90

Although there are no existing examples from earlier the seventeenth, the ratna style seems to develop in the sixteenth century like the bangla and chala styles. It was the desired style of the Malla kings of Bishnupur, whose temples provide the earliest, dated 1638. In the East Bengal region, at Naldanga may still be seen at present the remains of a huge pancha-ratna temple probably built near the end of the seventeenth century. Another pancha-ratna temple in the same tradition was the well-known Harekrishna temple built by Sitaram Ray at Muhammadpur (present Magura district) in 1703.

The ek-ratna design does not appear to have evolved in this eastern area but instead, a massive type of nava-ratna is found, of which the earliest standing (none with the minas intact) belong to the early eighteenth century, for example, Hatikumrul, and Kantanagar. But according to tradition, the Bangladesh nava-ratna goes back much earlier. Raja Vikramaditya is reported to have built a terra-cotta-decorated nava-ratna temple at Damreli in Khulna District "in the third quarter of the sixteenth century", the shell still can be viewed in Satischandra Mitra's photograph, but little can be made out of the ruined superstructure. (Mitra, 1922). McCutcheon writes,

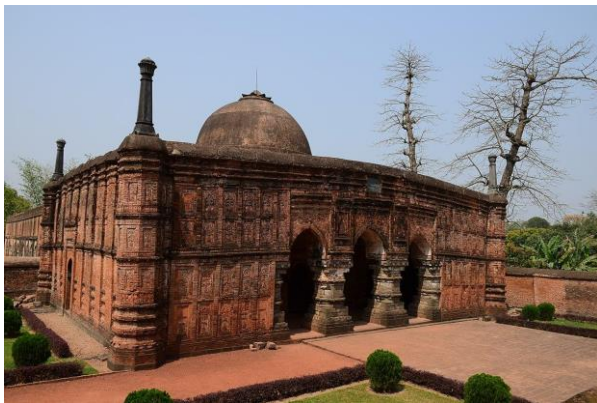
"The very size of these Bangladesh ratna structures (there are two more from the mid-eighteenth century-one a rasamancha with twenty-five turrets at Gopalganj, another at Sonabaria (81), and others at Bhusana-Gopalpur and Naniksir) suggests a tradition which must go back a century or more, whereas apart from the anomalous Raghunathbari temple (87), no such massive nava-ratna design is found further west until the second half of the nineteenth century (Dakeineswar, etc.)."



Figure 19 : A southern view of Kantojiu Temple in 1871 shows the nine spires that were subsequently destroyed in an earthquake

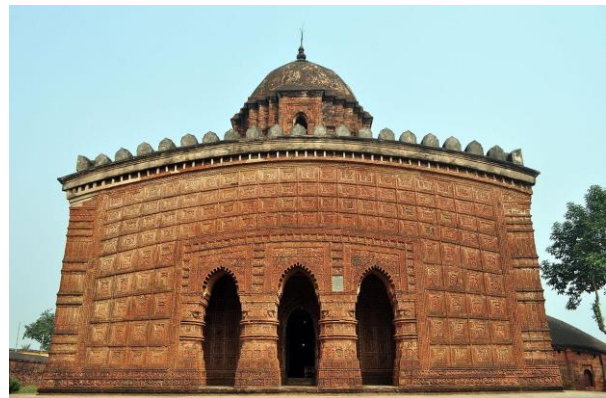
Source: https://commons.wikimedia.org/wiki/File:Kantaji_Temple_1870%27s.jpg

Three possible origins or patterns for the ratna design may be presumed. The ek-ratna temple allows a close similarity to the single-domed mosque or mausoleum of the previous Muslim tradition in Bengal. The tower consists of a miniature rekha deul or char-chala temple, in place of the Muslim dome. In the sixteenth-century Qadam Rasul shrine at Gaur with the single entrance or triple entrance divided by sections of wall of the distinctive mosque, has given direction to a triple entrance on the typical pillars of the later Hindu temple. The porch on four such pillars and pilasters, terra-cotta layout of the façade, and small dome set well in from the roof edges create a prominent similarity between the Qadam Rasul building (1531) and such ek-ratna temples like the Madana-Mohana temple (1694) at Bishnupur or the Radha-Ballabha temple at Krishnanagar. But two structural features accurately differentiate the ratna temples from the mosque tradition, like a porch or corridor on all four sides, and a stairway to the upper tower, which organizes a second shrine chamber around the Garbhagriha (main sanctum).



Qadam Rasul building (1531)

Source: https://commons.wikimedia.org/wiki/File:Qadam_Rasool_Mosque_15.jpg



Madana-Mohana temple (1694)

Source: [https://commons.wikimedia.org/wiki/File:Madana-Mohana_Temple,_Bishnupur_\(8383348339\).jpg](https://commons.wikimedia.org/wiki/File:Madana-Mohana_Temple,_Bishnupur_(8383348339).jpg)

Figure 20 : Prominent similarity between the Qadam Rasul building (1531) and such eka-ratna temples like the Madana-Mohana temple (1694) at Bishnupur

The porch or corridor on all four sides recommends that the ek-ratna might have originated from a rekha deul provided with an enclosed circumambulatory veranda all around. Samples of such a design exist, though from a later period. This circumambulatory tradition had long been implemented in the domestic architecture of building verandas with lean-to rooftops. After this traditional design had become recognized as an integrated whole, the idea of using the upper portion of the deul as a subsidiary chamber could simply have developed. But an even more probable model is found in certain late temples of central and upper India. For instance, a form of panchayatana temple in which the four corner shrines are connected by a veranda on all four sides may be seen around Rewa. The roof of which abuts the central chamber, above which rises a rekha tower, a chhatri is elevated above

each corner shrine to give a distinctive "pancharatna" appearance. One of the earliest of the pancha-ratna temples of the Malla kings, that at Gokulnagar, has turrets on four columns which is like a kind of chhatri (umbrella) instead of the usual corner wall sections. According to Spooner, the porch organizes around the basic rekha design, to which the four corner shrines and towers are added, and by the additional set of porches with four more towers, a style similar to the nava-ratna is evolved. Similar temples are found with this traditional design seems common across the whole of upper India. While extending into Bengal, it adopted indigenous characteristics and was artistically transformed. Since the temples were founded for the Radha-Krishna cult the corner chambers ceased to be shrines. However, the remains of one such panchayatana temple built in 1545-1546, where the plan follows the typical upper Indian type and presuming the shrines (to Surya, Ganesha, Parvati, and Shiva, with Vishnu in the center) were each topped by a tower, this would be the earliest pancha-ratna temple (indeed the earliest ratna type) for which there is dated evidence in Bengal. In the Inter development of the ratna style, the central tower tended to develop purely ornamental like the al-chala tower, and in many small examples, both porches and stairways were finally abandoned.

d. FLAT-ROOFED STYLES

Minor groups with lotus-shaped domes or spires, another category is constituted by flat-roofed temples, apart from the three main groupings-traditional, hut-styles, and pinnacled. In the nineteenth century, these temples came strongly under European influences and rented themselves most easily to modern building techniques along with their Indo-Islamic characteristics and temple tradition. The roofs may be domed internally, but more usually spanned by a shallow vault, and latterly flat-ceilinged. Almost habitually they have a porch on two or more pillars-initially of the traditional kind, but in the nineteenth century, these were gradually replaced by the clustered pilaster type. The cusped arches with the façades patterned and terra-cotta cusped decoration were subsequently replaced by plasterwork. Losing its traditional characteristics, this type gradually becomes a simple paka ghar (brick-built room), indistinguishable from modern domestic architecture. Countless such temples have been built in the late nineteenth and twentieth centuries.

This type must have been taken up long before a direct adaptation of the Sultanate or Mughal palace style and this type of architecture schematically exemplified in the temple terra cottas. Previous to that it seems likely that all temples had to have a shikhara, only the earliest Gupta temples are flat-roofed. Another common type of flat-roofed temple established in the sixteenth century is the Durga or Kali dalan built for the annual pujas, where such large halls may also house permanent deities. Rajas and zamindars sometimes built an entire double-storied temples with courtyards for their deities where there are adjoining rooms for guests, cooking, and so forth-with monumental façades as impressive as that of the family mansion itself. Such examples are the two eighteenth-century thakurbaris of Raja

Nabakrishna Dev in north Calcutta. At this point, temple architecture concludes to be distinct from domestic architecture.



(a) Thakur Dalan - Maharshi Bhavan - Jorasanko Thakur Bari - Kolkata

Source: https://commons.wikimedia.org/wiki/File:Thakur_Dalan_-_Maharshi_Bhavan_-_Jorasanko_Thakur_Bari_-_Kolkata_2015-08-04_1739.JPG



(b) Durga Dalan of Roy Family at Gohogram of Purba Bardhaman district in West Bengal

Source: https://commons.wikimedia.org/wiki/File:Durga_Dalan_of_Roy_Family_at_Gohogram_of_Purba_Bardhaman_district_in_West_Bengal_02.jpg



(c) Flat-Roofed Hindu Temple near the Awasghar Temple, Midnapore, Bengal - 1869

Source: <https://www.oldindianphotos.in/2016/04/flat-roofed-hindu-temple-near-awasghar.html>

Figure 21 : (a), (b), (c) Flat-Roofed Temples

TEMPLE AND BENGAL SOCIETY

Time line

During the following two centuries a distinctive Bengali culture started to took shape-especially evident in literature and architecture.

14th century AD

Early Hindu

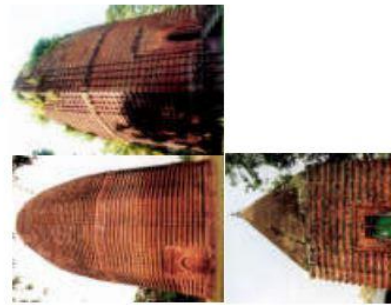
It is very difficult to find any early temples of Bengal due to material constrain, extruders abduction and climatic conditions.

Shri Chaitanya
(1486 -1533), the
expotent of
'gauriya' Vaishnavism

Epics translated in Bengali.

Hindu Revival

16th century AD



17th century AD

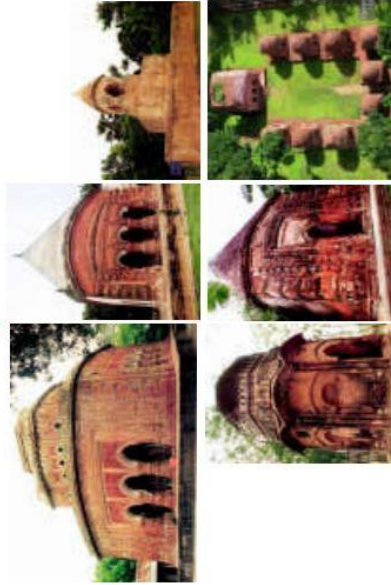


During 18th century Bengal experienced a profound economic and social change due to overseas trade

East India Company

Pick Time For Bengal Temple

18th century AD



19th century AD



20th century AD

The flat roofed temples were common in the 19th and 20th centuries.



Plate 1 : TIMELINE OF TEMPLES IN BENGAL

Source: Prepared by the author

2.3.5 CLASSIFICATION OF TYPES BY David McCutcheon

The Classification of temple types by David McCutcheon is based on appearance, instead of structural characteristics. These types are limited to observation or clear information. All the divisions are not always clearly defined, except the major groupings; the divisions are somewhat random in detail (for example, between large and small). Entire double-storied temples. David McCutcheon describes in his book *Late Mediaeval Temples of Bengal*,

“The subdivisions are built up independently within each section solely according to convenience depending on what actually exists (for example, a temple with a single entrance is a large section under pancha-ratna, but insignificant under nava-ratna; the division of char-chala temples into a square and elongated is matched in importance by the division of at-chala temples into single- and triple-entranced). Slender turrets of the kind singled out for nava-ratna temples do not have a separate section under pancha-ratna, as they are so few (rare examples at Haripal and Darhatta). A strictly scientific analysis might have placed jor-bangla under "attached porches" along with the twin deul and twin char-chala, but empirically the jor-bangla is as much a recognized temple type as the at-chala and pancha-ratna, and so is included under temples. Designs may develop in certain directions which lead them to overlap with others.”

The terms used by David McCutcheon are largely a systemization and logical extension of common parlance and technical tradition. Inscriptions were not enough to get any clue for words like mandir, devayatana, prasada, and so on, which led the author to an entire double-storied temple that makes no distinction of type. The terms rekha and pirha are from the Orissan Shilpashastra tradition, whereas the rest are local. In Bangladesh, to differentiate a tall-spined temple from a pinnacled type, the words math and nava-ratna are in current use. Deul is recognized all over Bengal for a big temple with a tall shikhara, usually old. Chau-chala (char-chala) and ar-chala are the common expressions for single- and double-storied huts (depending on the number of roof edges), hence by extension for a similar type of temples. The term dalan is unspecified, as it can refer to any brick-built house or even to the porches of chala and ratna temples. But usually, it is used for the standard Durga-dalan is a type of large hall of modern masonry, open on one side where the annual puja is held securely. David (1 also added,

“As might be expected, there is a good deal of confusion in the use of these terms. Satischandra Mitra, for instance, refers to at-chala as eka-ratna; Roy Choudhury describes the Daksineswar temple as of the "gauriya order. Two char-chala roofs are superimposed on one another. Each corner is ornamented by a turret. This is a nava-ratna temple." Here the ratna series have been Sanskrit-Ezed, although temples with thirteen, seventeen, and twenty-one towers are commonly referred to as tera-ratna, satara-ratna, and ekush-ratna,

respectively In the villages, pancha-ratna temples are better understood as pancha-churá, and even rekha deuls are referred to as eka-chura. “

It would be thought-provoking to identify what the architects themselves named these various designs. Unfortunately, the tradition has been departed for a generation, and most of the sutradharas have been involved in other work like carpentry. The temple type here referred to as eka-ratna (by extension from pancha-ratna and nava-ratna), was termed as algochtungi, and the flat-roofed temple as chandni by those sutradharas and a type of rekha deul was labeled utkalio, and the low-towered at-chala was known as Bishnupuri at-chala. More curious is the little rekha deul which is termed as islamiya, along with the ridged expanded shikhara. The traditional multiple-faceted pillar (which should have thirty-two different-shaped bricks) was called imarati and the nineteenth-century pillar with smaller pilasters round it (gothic, composed, or clustered pier) was called kalagechhya, with four to sixteen Chambas. These pillars also distinguished by "round" (gol) and "square" (chatuskon) pillars. The various kinds of arches were also given terms, such as darun (traditional cusped), or hang-gala (hollowed cusps); the pointed gothic arch they called haikat (High Court) khilan, and the four-centered arch chamchika.

THE BASIC DIVISIONS by David McCutcheon

(Late Mediaeval Temples Of Bengal, 1983)

TRADITIONAL STYLES	A) REKHA 1. smooth curvilinear (Orissan) 2. Birbhum variant 3. Ridged curvilinear (Burdwan) 4. Straight-edged pyramidal.
	B) PIRHA
HUT STYLES	C) BANGLA 1. ek-bangla (do-chala) 2. jor-bangla 3. ek-bangla/char-chala combination
	D) CHALA 1. char-chala 2. at-chala 3. baro-chala 4. multi-corniced
INDO-ISLAMIC	E) RATNA 1. ek-ratna 2. pancha-ratna 3. nava-ratna 4. trayadasa-ratna 5. saptadasa-ratna 6. ekavimsa-ratna 7. Panchavimsati-ratna
	F) DOMED 1. dome of Muslim type 2. inverted lotus dome

EUROPEAN-INFLUENCED

G) SPIRE

1. single spire
2. pancha-ratna spires

H) OCTAGONAL

1. ridged rekha
2. chala
3. duplicated chala
4. pinnaced
5. double-storyes
6. inverted lotus dome
7. domed+verandah
8. Spired

J) FLAT-ROOFED

1. without superstructure
 - a. small
 - b. large
2. with superstructure
 - a. + flat-roofed
 - b. + rekha
 - c. + chala
 - d. + ratna
 - e. double-storied
3. Triangular

K) PORCHES

1. pirha porch
2. twin deul
3. ek-bangla porch
4. char-chala porch
5. flat-roofed porch
6. rounded pyramidal porch
7. neo-classical porch

L(1) DOLMANCHA, TULSIMANCHA, ETC.

- a. rekha
- b. char-chala
- c. at chala
- d. pancha-ratna
- e. nava-ratna
- f. Terraced

L(2) RASHMANCHA

- a. octagonal +curved cornice
- b. octagonal + strait cornice
- c. square
- d. anomalous

M) TEMPLES OUTSIDE REGULAR CLASSIFICATION

1. stepped
2. anomalous combination
3. modified designs

N) GROUPINGS

1. joramandir
2. group of four
3. panchayatana
4. group of nine
5. dvadasa mandir (group of twelve)
6. one hundred and eight

Here we will discuss the types which were observed by David McCutcheon and further researches had been done by George Michell to explain how these temples have been merging their styles with the local context. This classification has been done according to the appearance of the temples like the formation of the roof and overall built form.

2.3.5.1 TRADITIONAL

As previously been said, the predominant feature in the western region is the tall curvilinear Rekha Deul which was the common north Indian type in Orissa. This traditional style seems to have achieved its standard preliminary form in the late seventh or early eighth century in central India and spread to places as far apart as Aihole (Deccan), Osia (Rajasthan), Roda (Gujarat), Jagatsukh (Kulu valley) and Bhubaneshwar (Orissa). With the imposing Orissan tradition, Rekha deuls of Bengal were blending with local vernacular forms, context, and the culture which expressed its own style of traditional Deuls.

A) REKHA

A/1 Smooth Curvilinear ("Orissan")

Extending east into Hooghly and northeast into Burdwan districts, this style is predominant in the western districts bordering on Orissa and Bihar. Though shikhara is free of horizontal bars, the ratha/paga projections (three to nine) are deep and spaced, the straight baranda cornice projects out boldly (one or several bars), there are generally one or several more horizontal bars between the baranda and the base moldings (pabhaga), and the capping amalaka is large and flat, surmounted by a pot finial or series of spheres. The lower walls may have central niches, and even pilasters surmounted by miniature spires, in the bigger examples. Occasionally a single bhumi-amalaka may take place in the center at the corners, and Soaring lions of Orissa proximate the top, where the central pagas of the tower may also have niches and finials. The smaller examples, especially common in the nineteenth century, usually Shiva temples are generally quite plain, but may also be decorated with terra cotta or stucco above or around the entrance, as typical of other temples. The amalaka and finial are reduced to insignificant proportions and this type was sometimes given a curved cornice in the nineteenth century. (McCutchion, 1972)



*Mathurapur Deul, Faridpur
A/2 Birbhum Variant*



*Kodla Math, Bagerhat
A/3 Ridged Curvilinear*



*Handial (Jagannatha temple), Pabna
A/4 Straight-Edged Pyramidal*

Figure 22 : Rekha Deul Temples, Source: Selected Hindu Temples of Bangladesh. Dhaka, UNESCO.

Although there are prominent transformations between individual examples (some stunted, others tall, some flat-topped, others pointed, some fussy with decoration, others almost plain), it is difficult to divide the larger temples into convincing clusters without generating a clumsy number of subdivisions.

A/2 Birbhum Variant

Almost restricted to Birbhum District, the towers of these temples sweep in from comparatively low down, developing a rather pointed shape having no distinction between shikhara and lower walls. The towers of these temples are either completely smooth or draped with spaced horizontal ridges from top to bottom or to just above the entrance. Forming an inverted V, these temples have shallow projections and in some cases not spread the full length of the tower. Usually with little ornamentation, the uppermost of the tower is sharply cut off with comparatively small capping elements.

A/3 Ridged Curvilinear

Especially concentrated in the Burdwan-Birbhum area, scattered examples of this type can be found near Dinajpur District, across into Bangladesh, and in connecting Midnapore-Hooghly. The shikhara is more or less closely ridged with bars, initially relieved with circles but finally no more than straight lines. But the typical ridged deul has neither wall nor *shikhara* niches; the *baranda* is retained (sometimes barely distinguishable from the ridging) but the shikhara ridging may prolong down to the base, as on the Kodla math. The ratha projections are shallow and cluster to the corners leaving a wide central rathal paga where the crowning elements are small. These large early deuls prepare the way, through smaller intermediate examples, for the common nineteenth-century Shiva temple of Burdwan and Birbhum. On this, the facade adopts the terra-cotta layout developed on the contemporary chala and ratna types. A simplified version, separated by narrow grooves; this type is usually plain and increasingly found as the nineteenth century progresses, replaces the ridges by wide banda. All rekha deuls have single entrances, usually a pointed archway except on a few of the earliest.

A/4 Straight-Edged Pyramidal

Shallow ratha projections with straight cornices are the main characteristics of this rare type of temple with no particular locality. The two early examples at Amadpur (Gopala temple) and Handial (Jagannatha temple), the spires may be a later renovation. A similar spire to that of Handial with shallow rathas or pagas has been raised above the seventeenth-century char-chala Kapileshvara temple at Taras, and the much later one beside it. (McCutchion, 1972)

B) PIRHA

Pirha type temple is more or less confined to Midnapore and Bankura districts. Similarly, as Orissa, it is mainly used for the tower of the jagamohana and hardly ever for the temple itself. Though in the earlier examples, it still looks remarkably related to the Orissan model, it subsequently developed in three ways:

- a. the low pyramidal form was reserved but the "roof-end" sections were made broad and more or less steep, considerably reduced in numbers (even only two, as on the Ekteswar temple at Ekteswar, three of four is quite common)
- b. occasionally the tiers are so steep and the numbers so increased that the tower takes on a high pointed appearance
- c. differing from above, the grooves widened without becoming deeper, causing a general upsurge in height together with a curvilinear tendency which gives an appearance similar to widely ridged early shikhara of type. All forms preserve the large crowning ghanta features. (McCutchion, 1972)

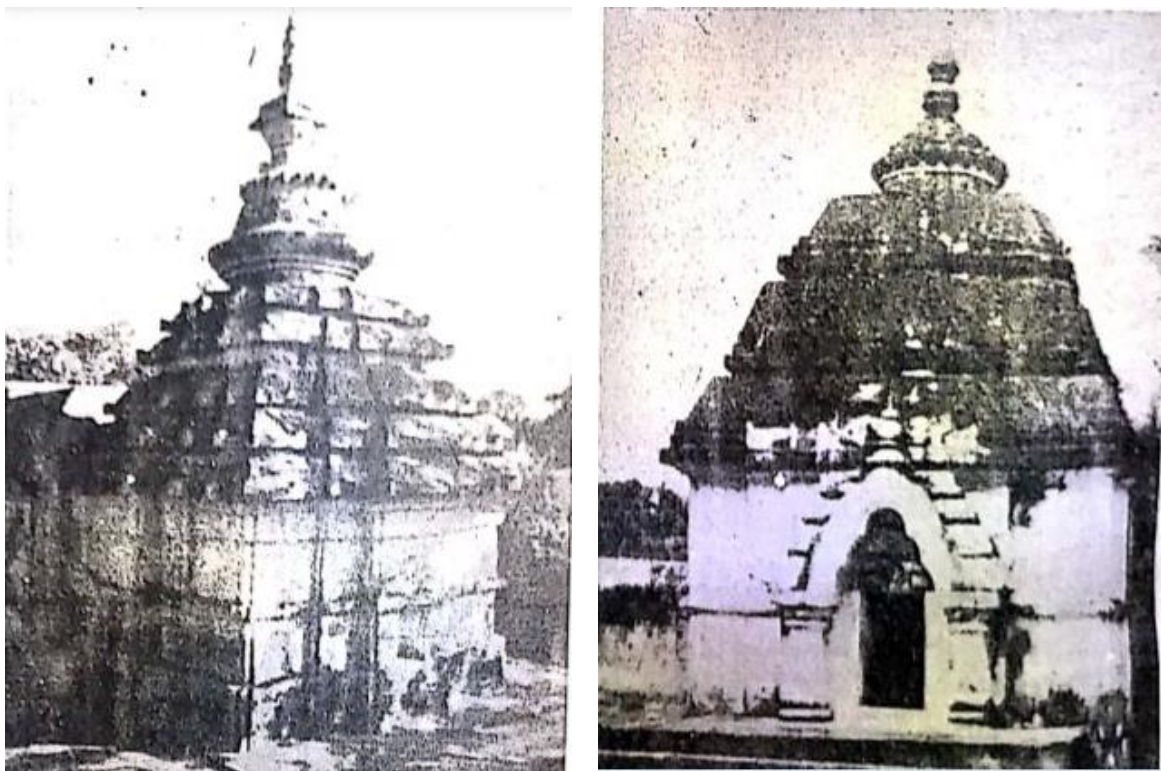


Figure 23 : Archived photo by David McCutchion, Late mediaeval temples of Bengal (1972)

2.3.5.2 HUT STYLE

This style is originated from the aboriginal hut style of Bengal which is made of bamboo and thatch. The simplest form of the domestic hut is on an extended base with two sides to the roof and a gable end. This order is mentioned as ek-bangla or do-chala. Two such huts one as a porch in front of the other termed jor-bangla which are common in Bangladesh. In West Bengal, the do-chala house is comparatively less. The wall construction is of mud and the roof generally has four sides and On this model char- chala temple is built usually on a square base and if a miniature replica is built onto the roof, the temple is named at-chala. In construction, char-chala and at-chala temples belong to a post-Muslim tradition as mentioned earlier in this chapter. The earliest char-chala has been originated not in Bengal but the Deccan. The free-standing stone-built Draupadi Ratha of Mahabalipuram was assembled in char-chala style in the 7th century AD.

C) BANGLA

C/1 Ek-Bangla (Do-Chala)

This design is comparatively rare than the jor-bangla, which itself is much less common than chala and ratna temples. Both ek-bangla and jor-bangla designs are more widespread in Bangladesh (especially Jessore and adjoining districts) than in West Bengal. The fully developed ek-bangla usually consists of a single rectangular chamber where it may have either a single entrance or triple entrance on typical twin columns, with or without extensive terra-cotta decoration. The roof is surmounted by three finials bearing the signs of the god, which Dani (Dani, 1961) has derived from the straw tufts of the domestic type.

C/2 Jor-Bangla

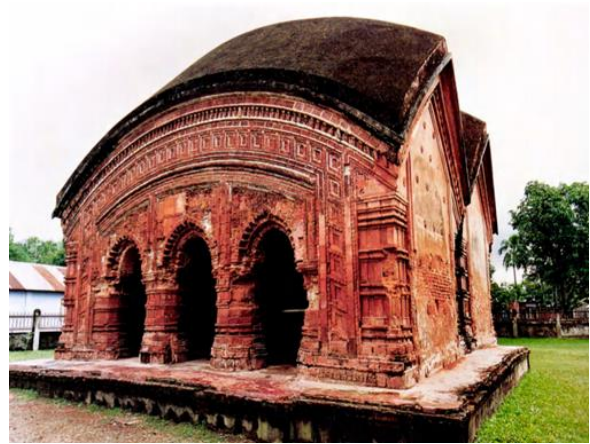
Though particularly concentrated in Jessore District, the jor-bangla design is found spread over a very extensive area from Purulia to Faridpur. Many early temples, especially in Bangladesh as known from Satischandra Mitra's researches, have been vanished. Surviving examples range in appearance shows its basic form where the porch is invariably on three arches, and there is often a side entrance to the back chamber. As the ek-bangla, there are three finials on each of the bangla roofs, but the largest examples have a tower rising between in chala or ratna style.

C/3 Ek-Bangla between Two Char-Chala

The three structures are combined in an integrated design. Only two examples are known-both in Bangladesh. In the case of the Khalia example, the design has been elevated on a flat-roofed dalan, the front portion of the roof of which functions as a terrace, the whole consist of six rooms below and three above is also classified under flat-roofed style. From the terracotta decoration, they would appear to belong to the first half of the eighteenth century. (Michell, Brick temples of Bengal : from the Achives of David McCutchoin, 1983)



Choto annaik Temple, Puthia, C/1 Ek-Bangla



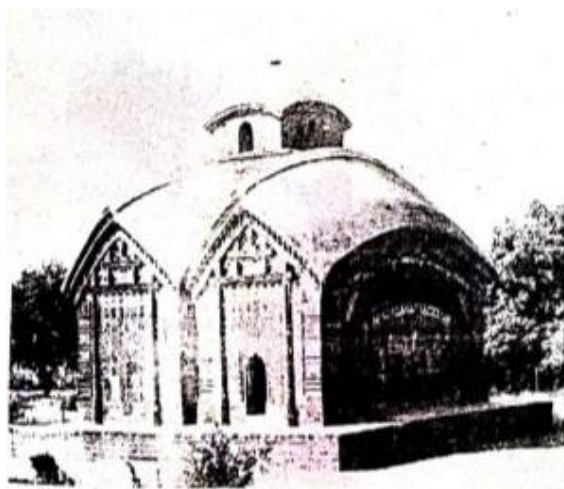
Gopinath Temple, Pabna, C/2 Jor-Bangla



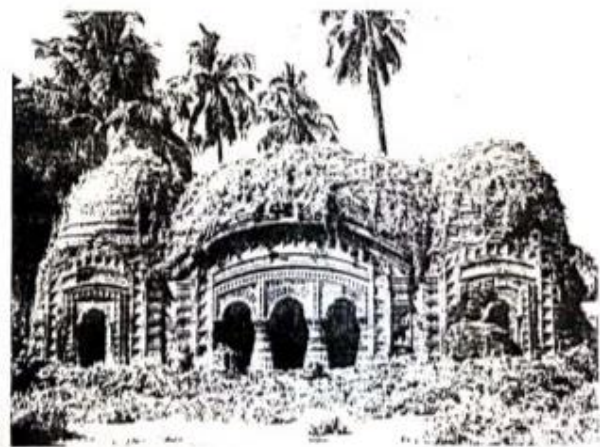
*Choto annaik Temple, Puthia,
C/3 Ek-Bangla between Two Char-Chala*



*Rajaram Temple, Faridpur
C/3 Ek-Bangla between Two Char-Chala, Flat roofed J/2*



*C / 2 / b (i)
32. Bishnupur, Keshta-Raya temple*



*C / 3
33. Puthia*

Figure 24 : Bangla Temple; Archived photo by George Michell, Brick temples of Bengal : from the Achives of David McCutchoin (1983), Princeton University Press

D) CHALA

D/1 Char-Chala

Most commonly found in Birbhum and Murshidabad districts, some remote examples can be found in further east. Generally, they can be small or enlarged, decorated or plain, often in clusters. All these have a single entrance often with a side entrance as well. Sometimes very rarely does the facade of a char-chala temple have a porch on a triple entrance. Char-chala roofs may take two forms-straight-edged pyramidal or rounded. A certain amount of diversity is achieved by varying the proportions between façade and tower; in extreme cases, the façade may be noticeably extended than the roof, while in other cases the tower may be elongated into a spire where the proportions of both are increased to that of a large rekha deul. Alternatively, the straight cornice was applied to chala designs. All these are on a square base, but occasionally a char-chala roof with a ridge along the top surmounts an elongated lower structure. Large examples with a porch on three archways and side chambers were built in the Hooghly-Midnapore area, and there are also rare examples of small shrines of this type with single entrances. (McCutchion, 1972)

D/2 At-Chala

Probably the most widely scattered of Bengal temple types. Though the smaller ones have a single entrance and single chamber, the larger examples have a triple entrance creating a porch. Except for the smallest, the big ones are generally on an elongated base, and noticeably with the topmost roof approaching a short ridge with three finials. As in the case of char chala temples, the roof edges may be rounded or straight. Eighteenth-century Burdwan examples tend to be straight, where nineteenth-century Midnapore examples are invariably rounded. A tendency to create height, either the facade of the tower may be lengthened, or both is especially evident in Bangladesh. An early type of at-chala favored by the Bishnupur kings has an upper tower with so short a wall as to be hardly distinguishable from char-chala. Such low-towered or "stunted" at-chala temples are on a square base with the tower coming to a point, were initially quite large, with a triple entranced porch giving onto a single elongated chamber. But when smaller, often single-entranced examples came to be built disproportionately high, they developed a hunched appearance. A few late temples of Birbhum District, which have a very tiny but fully developed upper tower perched on what is basically a large char-chala design and this tendency is also apparent in other nineteenth-century temples. Some at-chala temples were even given ratna pinnacles.

D/3 Baro-Chala

Uncommon and mostly late, these temples can be divided into two categories. Either development of the low-towered Burdwan at-chala with tiny space between the roof section, or of the at-chala with ratha projections. The latter seems to have developed in the Midnapore-Hooghly area, the solitary example of the former low-towered is found further east.

D/4 Multiple-Corniced

Basically, a char-chala temple, where the curve of the cornice has been repeated as a pattern all the way up to the roof (eight segments). In Dacca, this type of patterning is found on a more ambitious scale, surmounted by a miniature char-chala. Dani illustrates this type with subsidiary shrines from the Dhakeshwari temple. Also in Bangladesh, the repeated curves may be carried all the way up a spire as on the extraordinary double-storied Gobindaganj math, Barishal. (McCutchion, 1972)



*Govinda Temple, Puthia,
D/1 Char-Chala*



*Choto Shiva temple, Puthia,
D/1 Char-Chala*



*Shiva temple, Khulna
D/2 At-Chala*



*Dhakeswari Shiva temple, Dhaka,
D/4 Multiple-Corniced*



*Damodar Temple, Hawrah
D/3 Baro-Chala*

Figure 25 : Examples of Chala temple; According to McCutchion Classification, 1972

2.3.5.3 INDO-ISLAMIC

Pinnacled and domed temples belong to this Indo-Islamic group. The ratna temples have square or rectangular lower structures surmounted by one or more towers or pinnacles named ratna (jewel). The simplest form has a single central tower (ek-ratna), to which may be added four more at the corners (Pancha-ratna). By Increasing the number of stones and corner turrets, the number of ratna can be nine, thirteen, seventeen, twenty-one, up to a maximum of twenty-five (panchavimshati-ratna). The clustering of chhatris (kiosks) or domes at different roof levels is a common Islamic practice. Tajmahal is even pancha-ratna. But there are ample Hindu precedents. The panch-ratna might be compared with panchayatana grouping of five shrines on a single platform, Like the bangla and chala style, the ratna style seems to emerge in the 16th century, although there are no extant examples from before the 17th, The Muslim domed temples are very rare In Bangladesh but inverted lotus dome is commonly found over the octagonal temples, which seems to have developed round about the 18th century AD. (Ahmed & Chowdhury, 2005)

E) RATNA

E/1 Eka-Ratna

The variations may be eminent by their differing towers, and by their size. The largest and most impressive group is constituted by those built by the Malla kings of Bishnupur. A very few temples of this type are seen in Bangladesh. These massive structures generally have a pillared porch on three sides and a corridor at the back. The towers of all but two consist of a small rekha deul with pronounced ratha projections and a ridged shikhara. Experimental variants are seen with a veranda all round supported only on pillars.

Smaller versions of the Bishnupur type with rekha towers (the shikhara ridged or smooth) are spread in the east and south, in some cases the tower being displaced to the back. A tendency to gain an impression of height by reducing the space between the tower and the roof edge is already apparent, where the tower is also much taller and the (rekha) tower emerging directly from the curved cornice completely dominates the design. In Hooghly District chala towers were preferred, either square or octagonal, and these are also found on smaller temples of the Daspur area where the towers are sometimes set back flush with the rear wall. In a few exceptional cases, a rekha deul surrounded by a pillared veranda takes on the appearance of a design.

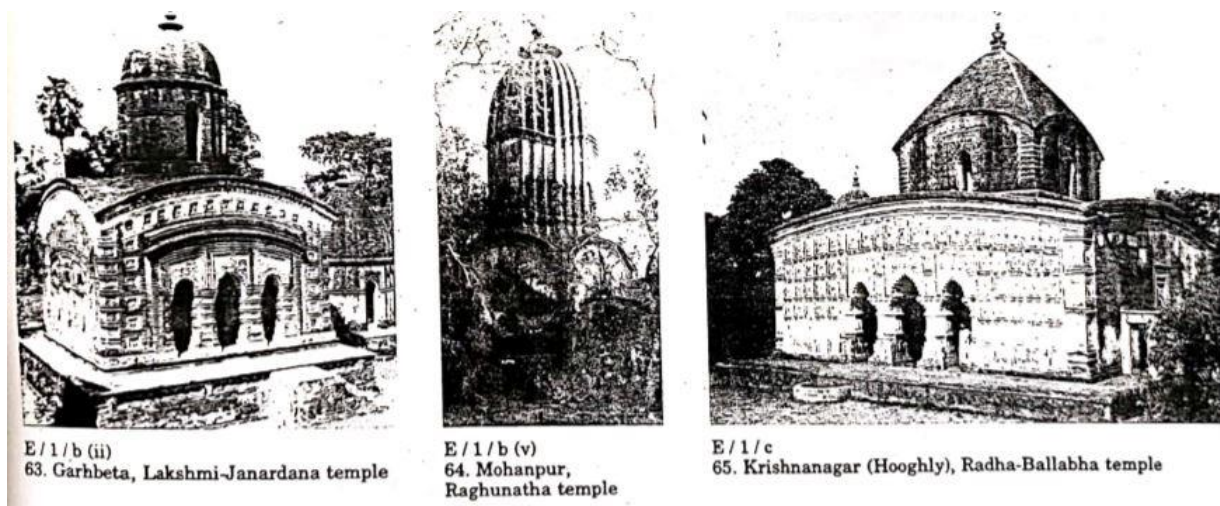


Figure 26 : Ek Ratna Temple , Archived photo by George Michell, *Brick temples of Bengal*Archives from the Archives of David McCutchoin (1983), Princeton University Press Archives

E/2 Pancha-Ratna

In the nineteenth century, with the at-chala, the pancha-ratna is the most popular type of Bengal temple where it is more numerous than all others. The simplest form has a single central tower (ek-ratna), to which may be added four more at the corners (pancha-ratna). In West Bengal, the turrets are miniature rekha deuls, but in Bangladesh often minuscule chala temples. The type is rare in Bangladesh, and largely confined to massive early examples, large dolmanchas, and experimental late designs. Many further subdivisions would be possible according to the shape and proportions of the turrets to each other and the facade, but only the broadest have been attempted here: ridged or smooth, with or without a curvilinear cornice. The turrets of the early Bishnupur pancha-ratna temples have ridged pyramidal shikhara and the central towers are octagonal, but later they become curvilinear, and the central towers on large copies of the corner ones. Towers with curved ridging may be combined with straight ridging, or octagonal corner towers with square central towers can be seen.

Smooth rekha turrets are largely confined to Midnapore District and adjoining areas, and their cornices are much more often curved than not. Many of these later temples abandon the traditional pillars for a European type with clustered pillars. Occasionally, in the nineteenth century, single-entranced temples are given ratha projections on all four sides a development of the slightly projecting entrance. In the same period, pancha-ratna temples are sometimes given straight cornices and these have been included under flat-roofed temples with superstructures when the elevation is low, elongated base, and towers inset from the corners. Corner turrets are combined with inverted lotus domes-an echo of the corner minarets of Islamic practice. This was another nineteenth-century development as a specialty of Bankura District (although there is an example opposite the Lalji temple at Kalna). (McCutchion, 1972)

E/3 Nava-Ratna

As a renowned design and conveying much reputation to the possessor, the nava-ratna is basically a pancha-ratna with an extra story. It has much a similar distribution, following analogous groupings, but in smaller numbers. It varies in size from very large to quite small and almost invariably has at least one porch on three archways. The turrets of ruined nava-ratna temples of Bangladesh were of the chala types (not at Kantanagar) which are now almost vanished. The possible transformations between their various shapes and sizes, and in the proportions between the stories, are even greater than in the case of pancha-ratna temples, creating considerable variety within specific groupings. The lowest four turrets are octagonal with curved ridging, and the upper five are pancha-ratha with straight ridging.

E/4 Trayodasha-Ratna (Thirteen-Pinnacled)

Ratna temples with more than nine turrets are very rare. The standard thirteen-pinnacled type is formed by adding another story to the nava-ratna. Quite different are the little trayodasha-ratna temples of Dubrajpur is complicated by an at-chala in relief projecting from the with single entrances, where eight extra turrets are added to a basic pancha ratna design by placing them two each side on a low platform around the central tower.

E/5 Saptadasha-Ratna (Seventeen-Pinnacled)

The turrets may feasibly be organized in various ways. In some cases, two are placed across each lower corner and one at each corner of an upper story clustering round the topmost. In Bangladesh, the octagonal Jagannatha temple of Comilla has spires and projecting chala huts which may constitute the ratnas. The ruined temple at Ichchapur with an octagonal upper story may have had thirteen, seventeen, or twenty-one pinnacles.

E/6 Ekoximshati-Ratna (Twenty-One-Pinnacled)

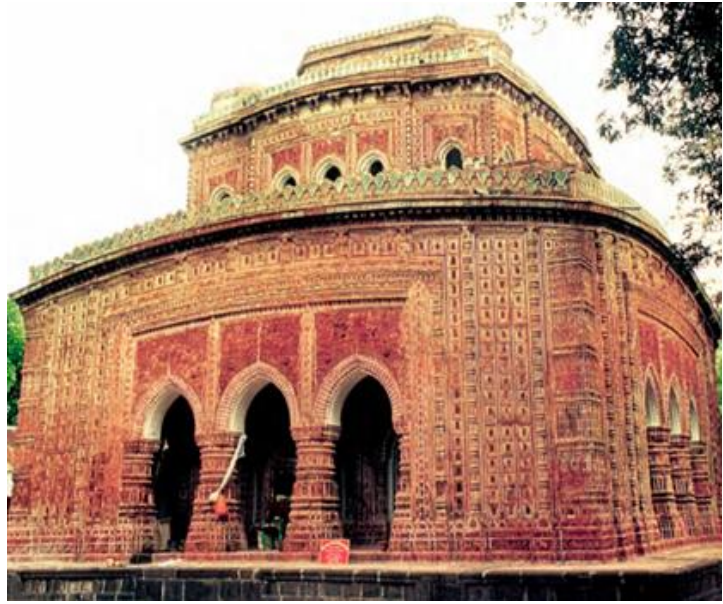
In West- Bengal, no examples of this kind of design are found. The term ekusha-ratna is used regarding two temples in Bangladesh, now destroyed: the eighteenth-century Lakshmi-Janardana temple of Kisorganj combined spires with ek-bangla turrets above a large plain square lower structure with a straight cornice; the temple at Rajnagar presented a facade of tall spires.

E/7 Panchavimshati-Ratna (Twenty-Five-Pinnacled)

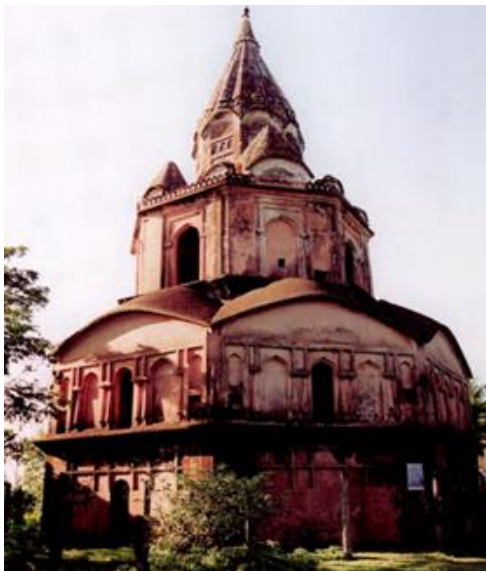
The large stand and three-storied type organize its turrets in groups of three at each corner of the first story, two at each corner of the second (or one at each corner if octagonal), and one at each corner of the third story, surmounted by the topmost tower. The Kalna temples all have an elongated porch with a char-chala roof but the Sukharia Ananda-Bhairavi temple (95) is without any appended porch. The unique Shridhara temple of Sonamukhi (96) is hardly bigger than a normal pancha-ratna and crushes its twenty-five towers round and above a single upper story. (McCutchion, 1972)



*Pancha Ratna Govinda Temple, Puthia,
E/2 Pancha-Ratna*



*Kantanagar Temple, Dinajpur
E/3 Nava-Ratna*



*Jagannath Temple, Comilla
E/5 Saptadasha-Ratna (Seventeen-Pinnacled)*



*E / 4 / a
92. Bali, Mangal-Chandi temple*



*E / 4 / b
93. Dubrajpur, Shiva temple*

*E/6 Ekoximshati-Ratna (Twenty-One-Pinnacled)
Archived photo by George Michell, Brick temples of Bengal : from the Archives
of David McCutchoin (1983), Princeton University Press*

Figure 27 : Ratna temples

F) DOMED

F/I Muslim-Domed.

This type is very rare. In Bengal, the common domed shrine of upper India (round Delhi, for instance) or Rajasthan is not found. The few temples with domes in Bengal are somewhat inconsistent and hardly constitute a separate type. Martin in his *Eastern India* (Martin, 1838) gives an illustration of a Shiva temple at Jalpesa (Maynaguri subdivision of Jalpaiguri), which shows a tall domed tower

increasing from a flat roof with domes at the corners. According to Buchanan, (Martin, 1838) it was built by a Muslim architect who was from Delhi.

The Adinatha temple in Murshidabad city has tall onion-shaped domes, and the Kiriteswari temple is a low onion-shaped dome on a square base. A modern temple is said to have a large rounded dome. There are no other examples from the past hundred years or so, but the only temple of traditional design with a dome is the overgrown ruin at Bindol.

F/2 Inverted Lotus-Domed

The inverted lotus dome is more commonly found in octagonal temples and round about the eighteenth century in Murshidabad, it seems to have developed, presumably as a Hindu adaptation of the Muslim dome. The examples at Lalbagh and Murshidabad are rudimentary, the big dome at Kasimbazar-Byaspur is fully developed and an apparent degenerate form is used above a combined jora-mandir at Saidabad. The topmost dome portion (eight-sided with or without an "onion" curve) procedures the lotus chalice, below which the tiny outermost petals are turned back, and the larger petals like chala roofs with curved cornices, descend to clutch the structure below.



Shiva temple Hatirmukul, Sirajganj *Photo from Ahmed, Babu, Chowdhury, Nazly. (2005) Selected Hindu Temples of Bangladesh. Dhaka, UNESCO.*
Inverted Lotus-Domed

Figure 28 : Domed Type

2.3.5.4 EUROPEAN-INFLUENCED

Spired, Octagonal, and Flat roofed temples belong to this group. The spired tall math was very popular in Bangladesh. In the nineteenth century, probably under the influence of the European church architecture the octagonal spire came into fashion and presumed a multiplicity of patterns. Over one or two drums or most commonly above an octagonal lower structure these type is commonly built on a square base. When the temple was built on a square base it was often accompanied by four or more miniature spired turrets at the corner appearing as panch-ratna or nava-

ratna pattern. The flat-roofed temples were common in the 19th and 20th centuries. In Bangladesh, the octagonal structure tends to be large and widely scattered as rashmancha but is also used for temples. The designs of dolmancha and rashmancha are substitutable but generally, a rashmancha is octagonal whereas the other is square. A rashmancha is larger than a dolmancha. As their prime purpose is to enable the deity to be seen from all sides, they stand on a high plinth with arch openings on four or eight sides. A dolmancha either stands on four columns or four corner wall sections and a rashmancha is built upon eight walls with arch openings. The dolmancha was most commonly built in the 18th century and the rashmancha in the 19th century. They are spread all over Bengal, wherever Krishna was worshiped. (McCutchion, 1972)

G) SPIRE

It has previously been discussed how the char-chala may prolong itself into a spire, or how the smooth rekha may assume a tall pyramidal shape. In Bangladesh, this instinct to height is especially noticeable, where the tall math was so popular and both at-chala and pancha-ratna were similarly expanded. Furthermore, probably under the influence of the European church, the octagonal spire came into vogue in the nineteenth century. Especially east of the Padma, and expected to have a variety of patterns and can be found in groups also. It could be built directly above a square base, on one or two octagonal drums, or, most commonly of all, above an octagonal lower structure. When the Pancha-ratna pattern was crested, above a square base often accompanied by four miniature spired turrets at the corners. Conceivably this could be increased to nava-ratna by the addition of a further story.



Shashana Temple of Kali Narayan, Gazipur



Sonarong Jora Moth, Munshiganj

Figure 29 : Spired type, Photos from Ahmed, Babu, Chowdhury, and Nazly. (2005) Selected Hindu Temples of Bangladesh. Dhaka, UNESCO

H) OCTAGONAL

For the rasamancha, an octagonal plan is most common but it is sometimes also used for other temples. These octagonal practices follow the preceding types, and might equally well have been included under them as separate subsections. The octagonal temples of Bangladesh tend to be large and widely distributed those of West Bengal small and confined to the Burdwan-Birbhum-Murshidabad tract. The little char-chala equivalents tend to be very plain, but those with a duplicated tower after the manner of at-chala are often more extravagant and decorated. The equivalent of the late rekha is, like its model, the most elaborately decorated of all. The octagonal ratna type, so common for rasamanchas, does not seem to have been used for temples except in instances of extraordinary design like the huge Jagannatha temple of Comilla, which adopts the pinnacles uniquely developed for the late rasamancha. The inverted lotus-domed type was a favorite of Rani Bhabani in the eighteenth century, and examples are found throughout her domains and adjoining areas, from Murshidabad to Rangpur and Jessore. Large octagonal temples with verandas all around, and had a variety of superstructures: like central dome plus eight chhatris or an iron dome. At Kantanagar an overgrown sixteen-sided Shiva temple has a stairway up to a second story within the thickness of the walls: the superstructure is distorted beneath the trees. Many curious octagonal designs were attempted in the nineteenth century, like the pinnacled Shiva temple at Siroil. Beyond the Padma octagonal spired maths may be quite simple, growing directly from a low plinth or the plinth may be high and ornamented with turrets; other architectural complexity may be acquainted. (McCutchion, 1972)



Rashmancha, Puthia



Baranagar, Murshidabad

Source:
https://commons.wikimedia.org/wiki/File:Rani_Bhawani_Temple_at_Baronaagar.jpg



*Ananta Basudeba temple, Hooghly
Octagonal pinnacled Temple*

Source:
https://en.wikipedia.org/wiki/Ananta_Basudeba_Temple

Figure 30 : Octagonal Temple Examples

J) FLAT-ROOFED

J/1 Without Superstructure

With traditional features often condensed to a least, this type was very common in the later period. Temples of this type are comparatively rare before the nineteenth century. Of the smaller type, an earlier and a later group may be distinguished: i. those with traditional pillars and terra-cotta decoration (or stone in the rare case of Kotulpur Damodara temple); ii. those with modern pillars (pilastered or square) and primarily stucco decoration. The latter is very common in Midnapore District, less so further north (where temples anyway are less common), and hardly at all to the east, where the flat-roofed temples are largely characterless. In the nineteenth century, a single row of terra cotta is often retained up the sides and across the top of the façade, and there is usually a small finial at the front of the roof in the center. Flat-roofed temples are generally on an elongated base, but with an exception where the square base is sometimes given a Bengali look by a curved cornice, making it like a ratna temple without any towers. It might be possible that the ruined elongated char-chala temples were also of this type.

Only in very rare instances does a flat-roofed temple have a single entrance discounting the nondescript shrines. The smaller chandni temples have a porch on two pillars, which on the larger temples (often called dalan) are increased to four or five, considerably taller. Every zamindar's house had an example of Durga dalan, which is almost invariably stucco-decorated. Pillars are generally of the kalagechhya type leading to pointed gothic arches, but may also be rounding (neoclassical) with architraves. Many a kali bari of Bangladesh is of this late dalan type, as also temples of other deities. Such temples have often replaced earlier temples in traditional styles. These large nat-roofed temples or dalans are generally modern or to give more than the briefest coverage. Some of them are quite complicated, which has a porch on five arches both at the back and the front; others, like the Radha-Kanta temple at Puthia, have a smaller upper story which is like a European neoclassical palace. Often, they are joined up with larger complexes; the Thakur bari at Balihar consisted of five of six such temples attached around a courtyard. (Michell, Brick temples of Bengal : from the Archives of David McCutchoin, 1983)

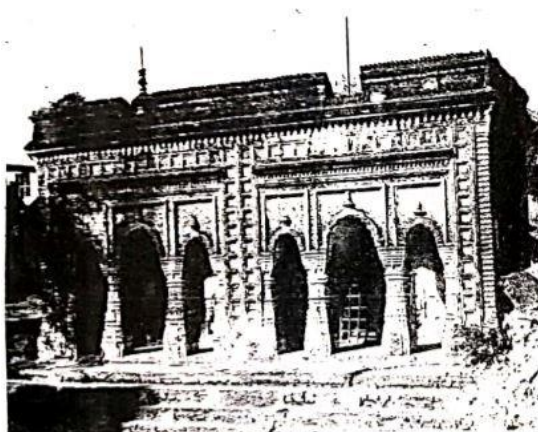
J/2 With Superstructure

Flat-roofed temples are occasionally given superstructures in various temple forms already discussed, usually setback to provide a roof terrace on three sides. As in the case of the earliest flat-roofed example, these upper temples are most commonly flat-roofed with single entrances. It is easy to see that if the small upper flat-roofed temple were placed centrally, the addition of turrets at the corners of both stories and a central tower on top would result in a straight-corniced nava-ratna. So too a smooth or ridged rekha deul may be placed on a flat-roofed temple, forming a kind of eka-ratna, and if, as on the four turrets are added within the confines of the roof (not directly above the corners), the

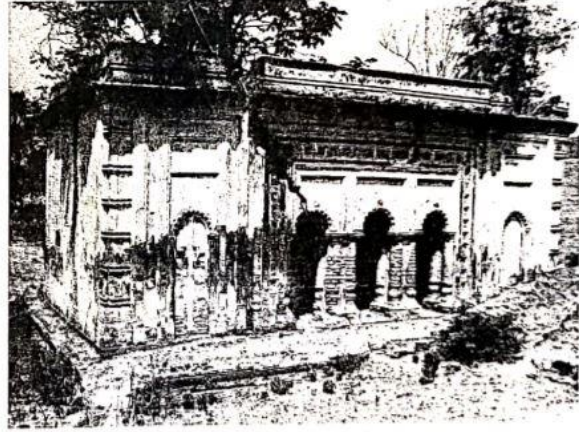
resemblance to a pancha-ratna is only superficial. But pancha-ratna or nava-ratna temples themselves may also be used as superstructures, or char-chala or at-chala, for they are upper temples, not towers (which open on four sides). Finally, there are double-storied flat-roofed temples, in which the upper temple (with a similar porch on columns) rises flush with the lower walls. This is a later addition with an exterior approach stairway. Most superstructures are upper continuations of the lower shrine evolving from the flat roof of a veranda on three or four sides. A classification emphasizing structure would have included with them the ek-ratna temples and distinguished them from the double-storied flat-roofed temples, or others in which the superstructure is not continuous with the lower walls.

J/3 Triangular

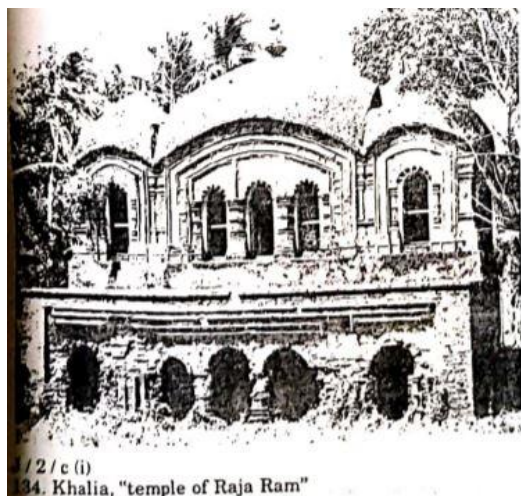
According to certain notions of tantric, the three-sided Chandra Bhairava temple at Iswaripur was formerly built by Rala Pratapaditya. This was an exceptional type of flat-roofed temple. (McCutchion, 1972)



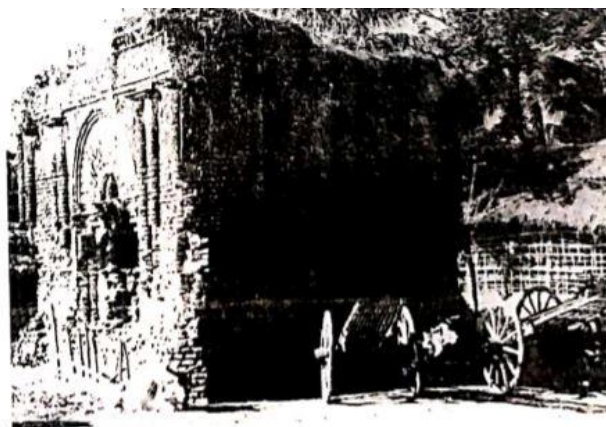
J / 1 / b (i)
123. Ramjibanpur, Shridhara-Shiva temple



J / 1 / b (ii)
124. Bahadurpur



J / 2 / c (i)
134. Khalia, "temple of Raja Ram"



J / 3
135. Iswaripur, Chandra-Bhairava temple

Figure 31 : FLAT-ROOFED; Archived photo by George Michell, *Brick temples of Bengal: from the Archives of David McCutchoin* (1983), Princeton University Press

PORCHES

In the Orissan tradition, the porch (jagamohana, a kind of assembly hall) is under a separate roof and as large as or larger than the base dimensions of the main shrine, to which it is connected by a passageway (antarala) and correspondingly attached a nata-mandapa and bhoga-mandapa. Eventually, the shrine is in rekha style and the subsidiary buildings are in pirha style. As this Orissan tradition intensely influenced temples of Bankura and Midnapore districts (bordering Orissa and Bihar), the rekha temple and pirha porch arrangement are quite common. The pirha is mostly reformed by either steepening its sides and reducing its grooves, or increasing height and taking on a ridged impression. Under the latter, and sometimes also under the previous examples, the jagamohana reduced its base dimensions to little more than those of an entry porch. Sometimes, the porch was almost as high as the temple itself, giving the impact of twin deuls, which see what is found in the seventeenth century. But, the porch in all cases is somewhat lesser and smaller than the main temple. This practice of doubling up has already been prominent in the jor-bangla design or the double char-chala. Another Bengali evolution was to curve the tiers or ridging of the pirha roof. Further east, in the large at-chala or ratna designs, the Bengali practice was to consist of the porch under the same roof as part of the inclusive design of a single edifice. Nevertheless, additional porches were sometimes built onto the temples, creating a double veranda, or a large porch preceded by a smaller one. Even the jor-bangla, may have an additional porch built onto the front. Such porches are of the bangla, chala, or flat-roofed designs. Generally, they are much smaller than the main temple, but the ek-bangla porch may even dwarf the temple behind or largely hide it. Such porches are sometimes attached later, but equally often they are conceived as part of an innovative design sometimes very richly carved. (McCutchion, 1972) A common combination in Midnapore District is the Orissan rekha deul with a Bengali char-chala porch. In the nineteenth century, flat-roofed porches on neoclassical pillars were occasionally built onto existing temples, generally of at-chala design. George (1983) writes,

“In Bengal, the nata-mandapa, where the mangala songs are sung and the villagers may rest in the shade, is built separately. Traditionally, it was a structure of bamboo poles and thatch, now often replaced by an open flat-roofed hall of brick on pillars. The bhoga-mandapa is generally an inconspicuous mud hut or brick room, only occasionally of artistic appeal, with its carved stone entrance. Some of the more important temples of the Malla kings still stand within the original enclosures at Bishnupur, but elsewhere the walls have collapsed or largely disappeared. At Birsingha the nahabatkhana still stands with a curved roof above the entrance, and the ridged turrets at the corners of the thick-walled enclosure with a passageway all round. The bangla design was probably quite common for the entrance, only a few examples surviving ek-bangla gateway to the Radha-Madhava temple at Bishnupur, jor-bangla gateway to the Jogadya temple at Kshirgram. ”



K / 3 / b (i)
144. Panchra



K / 3 / d
145. Dumra, Shiva temple



K / 4 / a (iii)
148. Janardanpur, Raghunatha temple



K / 4 / b (ii)
149. Kalna, Shyama-Chand temple

Figure 32 : Temples with Proches; Archived photo by George Michell, *Brick temples of Bengal: from the Archives of David McCutchoin* (1983), Princeton University Press

L DOLMANCHA, RASAMANCHA, TULSIMANCHA, ETC.

Through generally a rasamancha is octagonal whereas the others are square; the designs of these structures are interchangeable, as are also the title mancha or mandira. Usually, a rasamancha is larger than a dolmancha, and a dolmancha is larger than a tulasimancha. As their major purpose is to enable the deity to be seen from all sides, they stand on a high raised plinth, with archway openings on all four or eight sides, as the case may be. The dolmancha and rasamancha are extremely common (the latter especially in the nineteenth century), jhulanmandira and snanamandira comparatively rare, and the tulasimancha often quite insignificant—merely a molded base without superstructure. In the eighteenth century, the dolmancha was most commonly built, and the rasamancha in the nineteenth. Wherever Krishna was worshiped, these manchas are spread over the whole of Bengal. A dolmancha either stands on four columns or four corner wall sections, but a rasamancha is assembled upon eight walls with archway openings. The walls or pillars are often ornamented on one or more sides with terra cotta or plasterwork after the norm of the temples, and the majority of nineteenth-century rasamanchas have large terra-cotta figures on either side of each entrance. (McCutchion, 1972)

Superstructures follow the established temple forms such as rekha, chala, ratna. The shared forms of dolmancha are char-chala and pancha-ratna, but ridged rekha and at-chala are also not uncommon. Rasamanchas are nearly always pinnacled—eight turrets around a large central tower in the case of a single story, making nine altogether, or seventeen in the case of two stories, and can be miniature rekha deuls. As in European Baroque art, the turrets are a kind of expanded vase design crowned by an inverted flower and set off with decorative flourishes. From its resemblance to a garlic bulb, the Daspur sutradharas termed it rasun-chura. If the turrets are omitted, the result is a large central tower with a veranda all around (rathmandir at Puthia); the ruined rasamancha at Sadipur may have been this type. George (1983) Writes,

“In Bangladesh, west of the Padma, a type of large pancha-ratna dolmancha developed, richly terra-cotta decorated like a temple, with triple archways giving onto porches on all four sides; the five turrets are of char-chala design on four pillars: unfortunately most of them are now in ruins. The original dolmancha, examples of which may still be seen in mud, was a pyramidal series of steps or platforms: the dolmancha of Sitaram Ray at Muhammadpur recalls this, consisting of two high platforms culminating in a char-chala kiosk. At Puthia and Taras are two enormous pyramidal structures of receding verandas with terraces (four stories at Puthia, three at Taras, including the topmost kiosks) variously called rasabari or dolmancha—remotely reminiscent of the Paharpur tradition. A type of large square rasamancha is also found in West Bengal—like a nava-ratna temple, with either both upper and lower cornices curved (as at Harmasra) or the lower cornices straight (as at Gopalpur and Dihibaliarpur). A larger development, with both upper and lower cornices, straight-like the Bangladesh terraced type, but smaller and set with turrets along each edge (that is, panchavimshati-ratna)—is the rasamancha at Narajol.”



*Rasamancha, Puthia
L/2 Ek ratna Rasamancha*



*Dolmancha, Sita ram Ray, Magura
L/1 Char chala Dolmancha*



*Rajbari Dolmancha, Puthia
L/1 Terraced Dolmancha*

Figure 33 : Dolmancha and Rasamancha Ahmed, Babu, Chowdhury, Nazly. (2005) Selected Hindu Temples of Bangladesh. Dhaka, UNESCO.

M) TEMPLES OUTSIDE REGULAR CLASSIFICATION

M/1 Stepped Designs

It has been distinguished that when a veranda is built all-around a tall tower, the tower appears like a second story. If the tower is well inset, the impact may be that of an eka-ratna design, but on the Gopala temple at Kulingram, or the renovated pre-Muslim deul at Jaugram, the break-in continuity between the tower and the lower wall is no more than a step. Sometimes, the step has been repeated a second time as an aesthetic feature. Often, it has built up its tower in a receding series, adding small octagonal turrets above the corners of the veranda.

M/2 Anomalous Combinations

It is obvious enough that the Bengali architect sought to convey his basic forms together in ever new combinations applying the curved cornice to the rekha designs, the straight cornice to the chala designs, and so forth. This experimentation, equally evident in the remarkable diversity of inner vaulting arrangements, is especially prevalent in the later period, although of course, the recognized forms themselves derived from such experimentation in an earlier period. Some of the uncommon combinations have been incorporated in the regular classification; others, less vulnerable of coming under a specific type or more likely to be unique instances, are seen in temples of Bengal.

M/3 Modified Designs

In some cases, standard designs are modified in curious ways. There are so many examples of Bengal temples which have been modified in various ways. For example, the so-called Hanuman temple in the Mirbazar of Midnapore town is a double-storied structure with an upper veranda on pillars, rather like a low pancha-ratna on a low dalan: the upper cornice is curved, the lower straight. At Hadal-Narayanpur the nava-ratna Radha-Damodara temple is radically transformed in appearance by having its cornices half straight, half curved, and its turrets ridged at the corners but plain down the center ratha, the top ones sweeping down to the level of the lower ones; inside, the front (and only) porch is given the three sides of an octagon, but the chamber is square.

The Hamseshvari temple of Bansberia can only superficially be placed in the ratna class, for its thirteen lotus-capped towers are unlike any others in Bengal, and its cruciform plan is far more pronounced than those of the Lalji and Gopalbari temples at Kalna; with its plain walls and straight cornices, it has no specifically Bengali feature. The flat-roofed Shiva temple at Ikra encloses an octagonal cella and circumambulatory within a square exterior. (Michell, *Brick temples of Bengal* : from the Archives of David McCutchoin, 1983)

N) GROUPINGS

Temples often cluster together around a holy spot, as at Bakreswar, or near a rich family mansion, as at Naldanga—as succeeding generations build for their own merit. But there are also acknowledged numerical arrangements which are built at the same time in a more or less geometric layout.

N/1 Two (Jora-Mandir)

Two temples, invariably Shiva temples, side by side. These cases are very common in East Bengal region and usually are small in size. These temples are maximum char-chala or at-chala temples.

N/2 Group of Four

Facing into a courtyard which they form, the most eminent examples are the char-chala bangla temples at Baranagar. At Sribati there are only three temples and the fourth side is left open. Such groups need not be of the same design.

N/3 Panchayatana

A central shrine with four smaller shrines toward the corners of the courtyard is the usual arrangement. Examples are at Baikunthapur and Panchthupi as both are from eighteenth century, the former at-chala, the latter in rekha style.

N/4 Group of Nine

Nine is one of the sacred figures, as in the nine offerings made to Brahmins, to which the "nava-ratna" of the Bishnupur inscriptions may mention. Nine lingas are connected in the panchayatana group at Panchthupi, and at Dayanagar nine char-chala temples housing lingas are combined into a single structure: three by three, with the central tower rising twice as high as the others.

N/5 Twelve (Dvadasha)

Sometimes in connotation with other superior temples, twelve Shiva temples are seen at Daksineswar and Talpukur. Sometimes the number is amplified to fourteen, as with the nearby Harasundari-Kali temple, or reduced to ten, as at Abhaynagar in Jessore district. Twelve Shiva temples may also be arranged symmetrically around a courtyard. (Michell, *Brick temples of Bengal : from the Archives of David McCutchoin*, 1983)

N/6 One Hundred and Eight.

There are two examples of this sacred grouping, both in Burdwan District built by the Burdwan rajas. At Nababhat, all at-chala Shiva temples are arranged in a large rectangle, and at Kalna in two concentric circles. Those at Nababhat were built in 1788, those at Kalna in 1809. (Michell, *Brick temples of Bengal : from the Archives of David McCutchoin*, 1983)

2.4 FINDING THE GAP

From the detailed literature study, it can be very clear that there are a lot of scopes to continue research in the field of temple architecture. As we can see due to the vast range of temples with different styles, it was quite difficult to document these all types. During the Colonial period and post-colonial periods, many foreign and native scholars attempted to document these magnificent temples through photographs, writings, and drawings (very rare). But there is a lot of scope for proper documentation and research so that we can bring out our glorious past. Here we have seen only some photos and descriptions have been documented. But how our context and regional influences have molded these temples can be a part of deep research.

Even in the recent past, very few attempts have been initiated to preserve these magnificent cultural heritages. This study will provide a clear analysis of the regional influence behind the development of these temples through the proper process. This study will also create a scope to continue the process of conservation in the future.

CHAPTER 03

CASE STUDY: PUTHIA TEMPLE COMPLEX

3.1 INTRODUCTION TO PUTHIA

- 3.1.1 Location and volume
- 3.1.2 Rivers
- 3.1.3 Climate

3.2 HISTORY OF PUTHIA

- 3.2.1 Panch aani dynasty
- 3.2.2 Char aani dynasty
- 3.2.3 Three and a half anni and others

3.3 PUTHIA MASTERPLAN

3.4 EXISTING TEMPLE CASES

3.1 INTRODUCTION TO PUTHIA

The capital of the Zamindars of Puthia is situated one mile south of Rajshahi-Natore Highway, 18 miles and 10 miles from Rajshahi and Naiore respectively. On the east lies the Natore Sadar Police Station, on the west Pabna and Boalia, on the north Bagmara and Durgapur Police Stations, and on the south, there is Charghat Police Station of the Rajshahi district. As it was the capital, it became the abode of different castes and creeds including the Brahmin, the Kayestha, the Vaidya, and others. On the east of Puthia at the village Paikpara a canal connected the Boral and the Hoja rivers. The southern part of that canal was known as Musa Khan. In the rainy season of 1838 A.D, the river Musakhan overflowed and submerged the south-eastern part of the Padma. Since then the Musa Khan and the Hoja were united and became familiar with the name of the Godai River.

Puthia is surrounded by the river called Hoja on the north, the Narod on the south, and the erstwhile Musakhan on the east. The river Narod came out of the Padma (Mahanada) and is united with the Nandakubja on the south of the headquarters of Puthia and Natore. Once these rivers were navigable. As a result, these rivers played a vital role in the communication system. Besides this, there were no metalled roads and as such, the capital of the Natore Raj Family flourished on the side of the rivers. Many other Zamindaries grew up along the rivers of which Puthia, Chapilla, and Santul are remarkable. In course of time, the rivers were silted up. At present, a scanty flow can only be traced. Among the ancient Zamindars of Rajshahi, the Santul and the Tahirpur Raj families were famous. Of the zamindars of Rajshahi, the family (Raj Family) of Puthia was one of the oldest. This Raj Family was founded during the reign of Emperor Akbar. (Rahman K. M., 2017)

3.1.1 LOCATION AND VOLUME

Puthia is an upazila headquarters under the present Rajshahi district at 24 ° 20 'and 24 ° 31' north latitudes and 8 ° 42 'and 8 ° 57' east longitudes. It is located approximately one kilometer south of the Rajshahi-Natore highway, 30 km east of Rajshahi city. Puthia is bounded on the north by Bagmara and Durgapur upazilas, on the south by Charghat upazila, on the east by Natore Sadar thana and on the west by Bayalia thana. Although the village of Puthia is now a mouza, it used to be a collection of mouzas. Although the palace is located in Puthia mouza, it is considered to belong to Puthia east of the adjoining mouzas such as Baraipara, Pirgachha, Ramjivanpur, Kanthalbaria, Kandra and Krishnapur. Its extent was 3196.48 percent acres. However, at present, the total land area of Puthia Mouza is 91.09 acres (according to the latest survey, Puthia Mouza, Jail L No. 30). Puthia is surrounded by huge moats around the palace and the market. These trenches are known to the locals as Shivsarabar or Shivsagar, Gaepal Chowki, Bekichouki, Gavinda Sarabar and Mara Chowki. The total land area of the moat is 25.93 acres (excluding the 6.00 acre Shyamsagar in front of the Char Ani palace). Puthia was first considered as a police station during the British rule in 183 AD. Then in 1984, during the rule of Hussain Muhammad Ershad government, it was upgraded to an upazila. The

present area of the upazila is 194.0 sq km (64.9 sq mi) with rivers and the total land area is 46,000.61 acres. It consists of six unions, 129 mouzas and 183 villages. Puthia has 192 sq km (64 sq mi) of plains and 3 sq km (1 sq mi) of rivers. There are no forests or mountains here. (Rahman K. M., 2017)



Figure 34 : Map of Puthia Upazila

Source: <https://www.thebangladesh.net/rajshahi-division/rajshahi-district/puthia-upazila-rajshahi.html>

3.1.2 RIVERS

Naraid to the south of Puthia, Musakha to the east and Haeja River to the north. A large amount of water flows through these three rivers at one time. These rivers are said to have died as a result of changing geographical boundaries at different times. Once a river, Narad was one of the waterways in the northern part of undivided Bengal. Nawab of Murshidabad in this river - money in the treasury, Nawari-army, plow-tool. Etc. used to travel. Nawabs of Murshidabad, Raja-Maharaja, Amir-Umrh Puthia, Chapila and Santul used to travel to Dhaka by boat on this river. But now that the river is full, Erie paddy is being cultivated there. His old glory is lost in the sand. The same is true of the Musakha and Heza rivers. The Mushakha River is now nothing more than a narrow and lifeless stream. A small

amount of water flows during the rainy season. The eastern part of the canal connecting Baral and Haeja rivers from Paikpara to the east of Puthia is called Musakha. In the rainy season of 1838, Musakha spread and caused a great water revolution in the Padma in the south-eastern part of Rajshahi. Since then, the Mushakha and Haeja rivers have been merging and flowing under the name of Gadai. However, at present, during the monsoon season, a small amount of water flows in these rivers of Puthia, but in the dry season, there is no water in the soil. (Rahman K. M., 2017)

3.1.3 CLIMATE

As Puthia belongs to Rajshahi district, the existing climate of the entire northern region is also applicable to Puthia. The climate here is never extreme. Just as there is no shortage of depression in the Bay of Bengal, the effects of winter are not too great as it is far from the Himalayas. Humidity increases during the monsoon season and gradually decreases from August. Humidity in the region is 72 percent in June, 73 percent in July-August, 72 percent in September and 6 percent in October. At the end of March 12, with the wind blowing from the south-west, the heat wave in the region started and continued till mid-October. From the end of October, the south-westerly winds stopped blowing and with the Uttara winds blowing, winter came to the region and continued till mid-March. However, the cold and hot corners in this region are not extreme. The rainfall here from November to February is negligible. Due to this slight rainfall in the Bay, the region felt quite cold at this time. But it starts raining in the region in March-April and continues from June to September. At this time it rains about ten inches and all the fields and ghats are submerged. The rainfall rate in October is five inches. However, due to the low pressure created in the Bay of Bengal, cyclones also occur in this region at this time. The average annual rainfall in the whole of Rajshahi region is fifty-seven inches and the highest record of rainfall here was measured in 181 AD at ninety inches. (Rahman K. M., 2017)

3.2 HISTORY OF PUTHIA

Among the ancient Zamindars of Rajshahi, the Santul and the Tahirpur Raj families were famous. Of the zamindars of Rajshahi, the family (Raj Family) of Puthia was one of the oldest. This Raj Family was founded during the reign of Emperor Akbar. History has shown that the ancestor of the Puthia dynasty was Saint Batsaracharya. And the founder is his son Pitambar. Before the establishment of the Puthia dynasty, it was part of the vast Rajshahi zamindari. In terms of antiquity, the Puthia dynasty is the third of the zamindar dynasties of Rajshahi. At that time Puthia was not just a mouza; There were several mouzas. Namely- Puthia, Baraipara, Pirgachha, Ramjivanpur, Kanthalbaria, Kandra, and Krishnapur.

It is known that during the reign of Emperor Mahamati Akbar, most of the Rajshahi zamindari was occupied by Pathan Jaigirdar Lashkar Khan (a resident of Alaipur). Puthia Pargana was once known as Lashkarpur after this Lashkar Khai. When Lashkar Khan died, Lashkarpur Pargana again belonged

to the emperor. Many of us know that during the reign of Emperor Akbar, our Bengal was conquered by Subadar. Suba means province and the ruler of the province is called subadar. The task of the subadar was to collect revenue from the people and pass it on to the emperor of Delhi. These subadars of Bengal once started a conspiracy against the emperor. They continue to divide themselves without collecting revenue or rent and sending it to the emperor and resolve not to send revenue. To curb the arrogance of such subadars, the Mughal emperor Dillishwar Akbar sent General Mansingh with his army in 156 AD. On the way, General Mansingh secretly met the Tantric devotee Batsaracharya. Batsaracharya was a pious man and an expert in astrology. Saint Batsaracharya gave instructions to General Mansingh to suppress the rebellion of Subadar. Under his direction, it was possible to suppress the subedar rebellion very easily. Mansingh Subadar met Batsaracharya after suppressing the rebellion and requested him to take charge of Lashkarpur Pargana. But he refused to take responsibility. In this situation, Pitambar, the eldest son of Batsaracharya, expressed interest in taking charge. Although Pitambar was young then, he was very clever. His mother was a very intelligent woman. So his mother advised him to take zamindari. But due to his young age, Mansingh took him to Delhi. Provided training for some time. Then he made Pitambar a suitable person to run the kingdom. Delegates responsibilities; Zamindari of Laskarpur Pargana. And by the grace of Mansingh, this Pitambara became the founder of the Puthia dynasty. Pitambar then left his ancestral home at Chandrakala and came to Puthia and established his capital. He chose Puthia, a short distance from the Padmanabha, as his capital, taking into account the means of transportation and security. He built a palace at Puthia and dug trenches around the palace to protect it from external enemy attacks. Rajbari dug a huge reservoir in the courtyard and improved the place with excavated soil. Though there was a plan to name the reservoir Yellow Sea after King Pitambar, it was not done in the end. The two words 'yellow' and 'black' have the same meaning - the name of that body is Shyam-Sagar. Shortly after the death of Emperor Akbar, King Pitambar also died childlessly. Emperor Jahangir gave him the title of 'King'. And this dynasty has been known as 'Rajbangsha' since the time of Nilambar.

After Nilambar's death, his son Pushparaksh got zamindari. Pusparaksha was childless. After his death, his elder brother Anandaram inherited all the property. Anandaram was also conferred the title of Raja by the Mughal emperor. After the death of King Anandaram, his only son Ratikanta became the zamindar. Tikanta was given the title of 'Thakur' by the emperor of Delhi. Ratikanta Tagore had 3 sons. When the last two of them died childlessly, the eldest son Ramchandra became the zamindari owner. It is known that Ramchandra Tagore is famous in Puthia. Govinda established the temple. Ramchandra was a pious prince. He had a reputation for generosity and generosity. 4 sons of Ramchandra. Their names are Roop Narayan, Nar Narayan, Darpanarayan and Joy Narayan. Among them, Roop Narayan and Joy Narayan died childless almost prematurely. Darpanarayan received the zamindari of Chowpukhuria and continued to live in Chowpukhuria. So after Ramchandra's death, his son Naranarayana inherited all his property. After the death of Nar Narayan, his only son Prem

Narayan inherited this dynasty. Anup Narayan is the only son of Prem Narayan. When Prem Narayan died, his only son Anupnarayan inherited the zamindari. At that time Nawab Murshid Quli Khan ruled in Bengal. During the reign of Anup Narayan, the Puthia zamindari was settled with Murshid Quli Khan at an annual rent of Rs. 1,25,517. After the death of Anup Narayan, the seventh male member of the dynasty, the Puthia dynasty was divided into Panchani, Charani, and other bodies by his 4 sons namely Narendra Narayan, Maed Narayan, Rupendra Narayan and Pran Narayan.

It is known that after the death of his father Anup Narayan, his eldest son Narendra Narayan deprived himself of 3 other younger brothers and engaged himself in a nefarious conspiracy and mischief to inherit all the zamindari. When the matter came to light, Baraibhai Narendra Narayan and 3 other brothers agreed to share his father's zamindari based on mutual understanding. And due to this division, the Puthia dynasty was divided into Panchani, Charani, etc. The brothers (three brothers) left Narendra Narayan with half of their share to protect the eldest brother's whim. As a result, the distribution of the property of the kings of Puthia stood:

(1) Narendra Narayan = four annas + one and a half annas (by bringing half of three brothers) = five and a half annas;

(2) Maednarayan = three and a half annas;

(3) Rupendranarayana = three and a half annas;

(4) Pranarayan = he brought half;

This division of property took place in 1844. So although the exact date of death of King Anupnarayan is not known, it can be assumed that he died in 1643-44 AD based on the year of distribution of the said property. (Moitraya, 1953)

3.2.1 PANCH AANI DYNASTY

It has already been said that after the death of Anup Narayan, his eldest son Narendra Narayan tried to take all the property in his name. In this situation, in 1844, due to the obstruction of Anuj Bhai, the property (18 annas or annis) was divided into four parts as charani. When Narendra Narayan demanded seniority, the sixth brother brought half and gave it to the elder brother. We know that zamindari as Panchani; It is five and a half. And Anigulae 3 and a half ani. After the division of zamindari, the dominance of the five-ani zamindar dynasty can be noticed. 5 sons of Narendra Narayan. Bhupendra Narayan, Shivendra Narayan, Rudra Narayan, Surendra Narayan, and Raghu Narayan. Among them, Surendra Narayan died prematurely. After the death of his father Narendra Narayan in 1213 BS, the eldest son Bhupendra Narayan and Sejo (3rd) son Rudra Narayan inherited the zamindari. The other two sons Shivendra Narayan and Raghunaryan did not inherit the property; we do not know that information.

After the death of Bhupendra Narayan (died 1618 AD), his only son Jagannarayan inherited his father's zamindari. On the other hand, Rudra Narayan's only son Krishnendu Narayan also got zamindari after his father's death. From this time onwards, the Puthiya Panchani dynasty was called Baraye Taraf and Chheto Taraf. Jagannarayan is the first king of Panchani Bara and Krishnendu Narayan is the first king of Panchani Chheto. When Krishnendu Narayan of the sixth party died childlessly, Bhairabendra Narayan was adopted to manage the zamindari. Bhairabendra Narayan, the adopted son of Krishnendu Narayan, had no children. So after the death of Bhairabendra Narayan, his daughter Sarat Kamini Devi managed the zamindari. Biswaswar Sanyal is known for managing the zamindari after Sarat Kamini. The later history of this dynasty is not so bright. Harendra Narayan was adopted by Jagannarayan, the king of Panchani Bara, as he had no children. When Jagannarayan fell in love, Harendra Narayan took over the throne. One of the daughters of Jagannarayan is known as Kashishwari Devi.

Yogendra Narayan was the only son of Harendra Narayan. After the death of his father, the responsibility of zamindari was entrusted to his son Yogendra Narayan. Yogendra Narayan was childless. He was adopted. His adopted son's name was Jatindra Narayan. Before his death, Yogendra Narayan wrote the zamindari in the name of his wife Sarat Sundari. Then in 1272 BS, the beautiful goddess of autumn took charge of the Puthia estate and became a novice in the administration of the kingdom. He gained a reputation for prajahitaisana. We can discuss Maharani Sarat Sundari in the next chapter of the book. Kumar Jatindra Narayan, the adopted son of Sarat Sundari Devi, could not study far. Bad company and excessive motherly love led him astray. Kumar Jatindra Narayan married Hemanta Kumari Devi, daughter of Bhubanmahen Roy of Dhullagram in Dhaka district (now Manikganj) in 180 AD. After the marriage, Maharani Sarat Sundari Kumar gradually started handing over the property to Jatindra Narayan. But after some time Jatindra Narayan passed away prematurely. Hemanta Kumari Devi became a widow at the age of 15 with a 6-month-old child in her womb. Hemanta Kumari took charge of Puthia Estate when she turned 18 years old. His only daughter is Surendra Bala. Princess Surendrabala was married to Bisweshwar Sanyal.

3.2.2 CHAR ANI DYNASTY

Rupendra Narayan was the first king of the Puthia Charani branch. King Rupendra Narayan was childless and adopted to manage the zamindari. The adopted son's name was Rajendra Narayan. Rajendra Narayan, the second man of the Charani dynasty, received the title of Raja during the English period. He was a very charismatic king. His wife's name is Rani Suryamani Devi. After the death of her husband, Rani Suryamani Devi took over the reins. After Raja Rajendra Narayan, Charani was succeeded by his only son Bhupendra Narayan. Son of Bhupendra Narayan. Prasanna Narayan (untimely death), Paresh Narayan (childless), and Srish Narayan (untimely death). After the death of Raja Bhupendra Narayan, Paresh Narayan took charge of the zamindari. Paresh Narayan, the

4th prince of the Charani dynasty, was childless. He had to adopt two people to protect the zamindari. After the untimely death of his first adopted son Suresh Narayan, he adopted Naresh Narayan as his second adopted son. After Raja Naresh Narayan, the name of Puthiyaraj Charani Estate is no longer known. (Moitraya, 1953)

3.2.3 THREE AND A HALF ANNI AND OTHERS

Maed Narayan (Maiden Ranayan), the second son of Anup Narayan, the seventh man of the Puthia dynasty, became the owner of three and a half ani properties and managed three and a half zamindari. Maed Narayan had 3 sons. Lakshmi Narayan (Ekani), Mahendra Narayan, and Rabindra Narayan (childless). Gaepalendra Narayan, son of Lakshmi Narayan of Ekani Zamindari and Nripendra Narayan and Yogendra Narayan, two sons of Gaepalendra Narayan, conducted zamindari in the dynasty tradition.

Like Anup Narayan's 4th and youngest son Pran Narayan and Mejo's brother Maed Narayan, Tinani inherited the property. Pran Narayan was very pious and prajabatsal. Of his death. Later his son Anand Narayan got zamindari. Son of Ananda Narayan. Namely- Mahesh Narayan, Girish Narayan, and Ishwar Narayan. After the death of Ananda Narayan, they were also involved in the management of the zamindari. (Moitraya, 1953)

3.3 PUTHIA MASTERPLAN

The complex is surrounded by water bodies namely Shiv Sagar, Govinda sagor, baki sagor, mora choki & hogla choki. At present, the complex consists of temples, two zamindar houses, a market, two schools, one degree (diploma) college, madrasas, a residential zone, etc. Some of the structures have completely disappeared with time, like the full bangle temple, jagadhatri temple, Durga mandir, kali mandir, astabal, revolving theater, rath mancha, and clubhouse, and so on.

The complex consists of two main parts, one the Char Annie state which contains Char anni place, Char Annie temples, Char Annie bazaar, a residential area, and a school. Another part was Panch Annie state which contained Panch Annie place, Panch Annie Temple, panch Annie bazaar, Puthia Degree College, school, and so on.

All the important religious structures are surrounded by these moat-type water bodies and a large water body is placed in the center of the complex. The roads have divided the entire zone into four parts. On the northeast zone there is Pancha Ratna Shiva temple, Ek ratna Rasmalacha, Dolmancha and Kesto khepar math at a distance to the east. This zone is known as the panch ani zamindari region. Another panch ani zone which is the southeast zone includes the panch ani puthia palace, the Pancha

Ratna Govinda temple, Choto annik temple, and the Rani Hemanti palace near the hemanti rani ghat. There are some ruins of destroyed temples that had been a part of the panch ani palace compound. The southwest zone includes the Char ani palace, Boro annik temple, Choto Gobindo temple, and the Radha Kanta temple. And the Northwest zone is known as the Sare Tin-ani Zamindari region. The Tarapur temple or the Hawakhana is on the far west side of the main complex. There are also two chuchala temples at krishnapur mouza which are also located on the west side of the main complex.

In this chapter, we will discuss the existing temples in the Puthia Temple complex. For the understanding of analysis, all the temples are numbered as case 01, case 02, and so on.

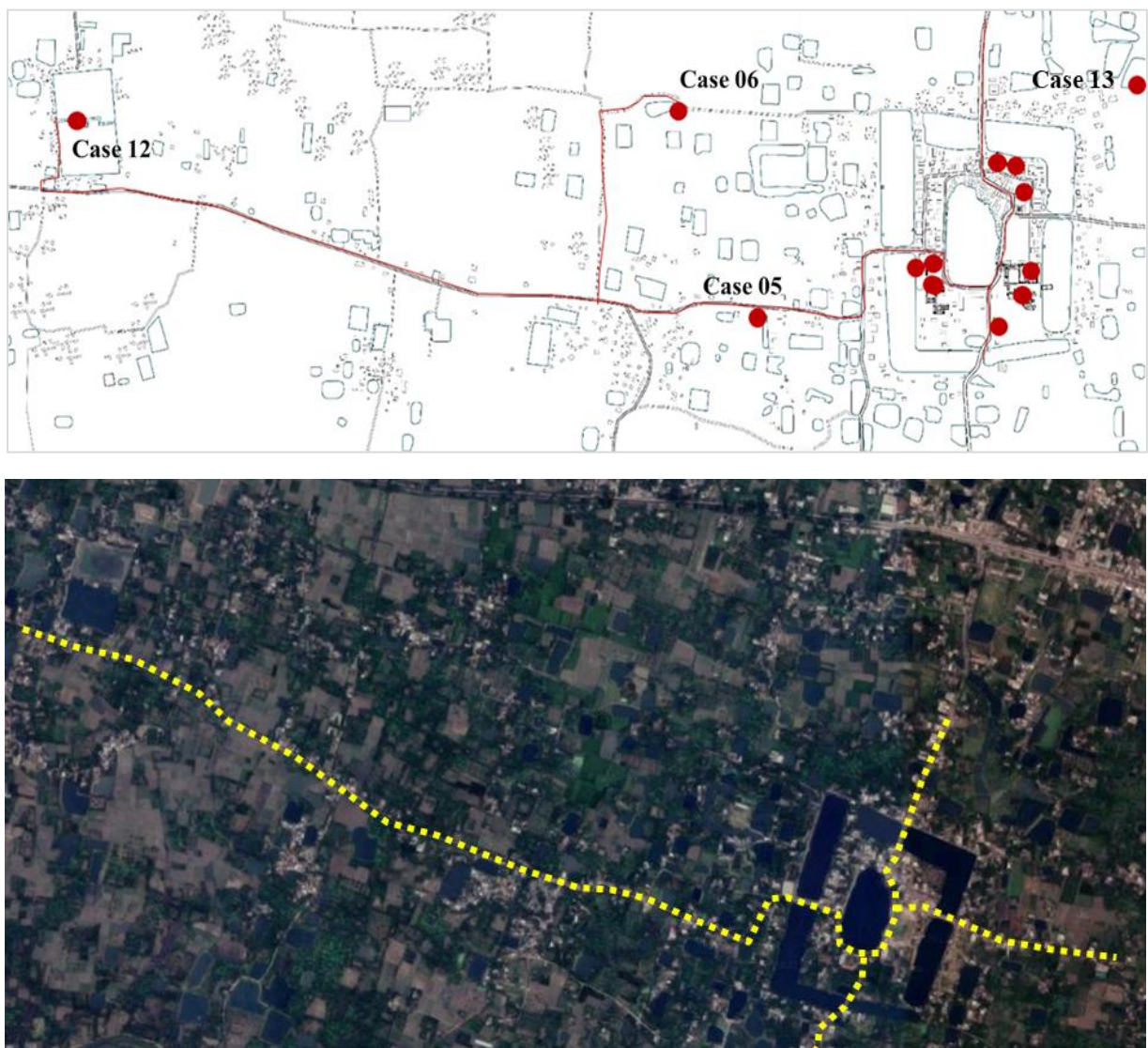


Figure 35 : Master plan of Puthia
Source : Prepared by Author; Reference from Google Maps

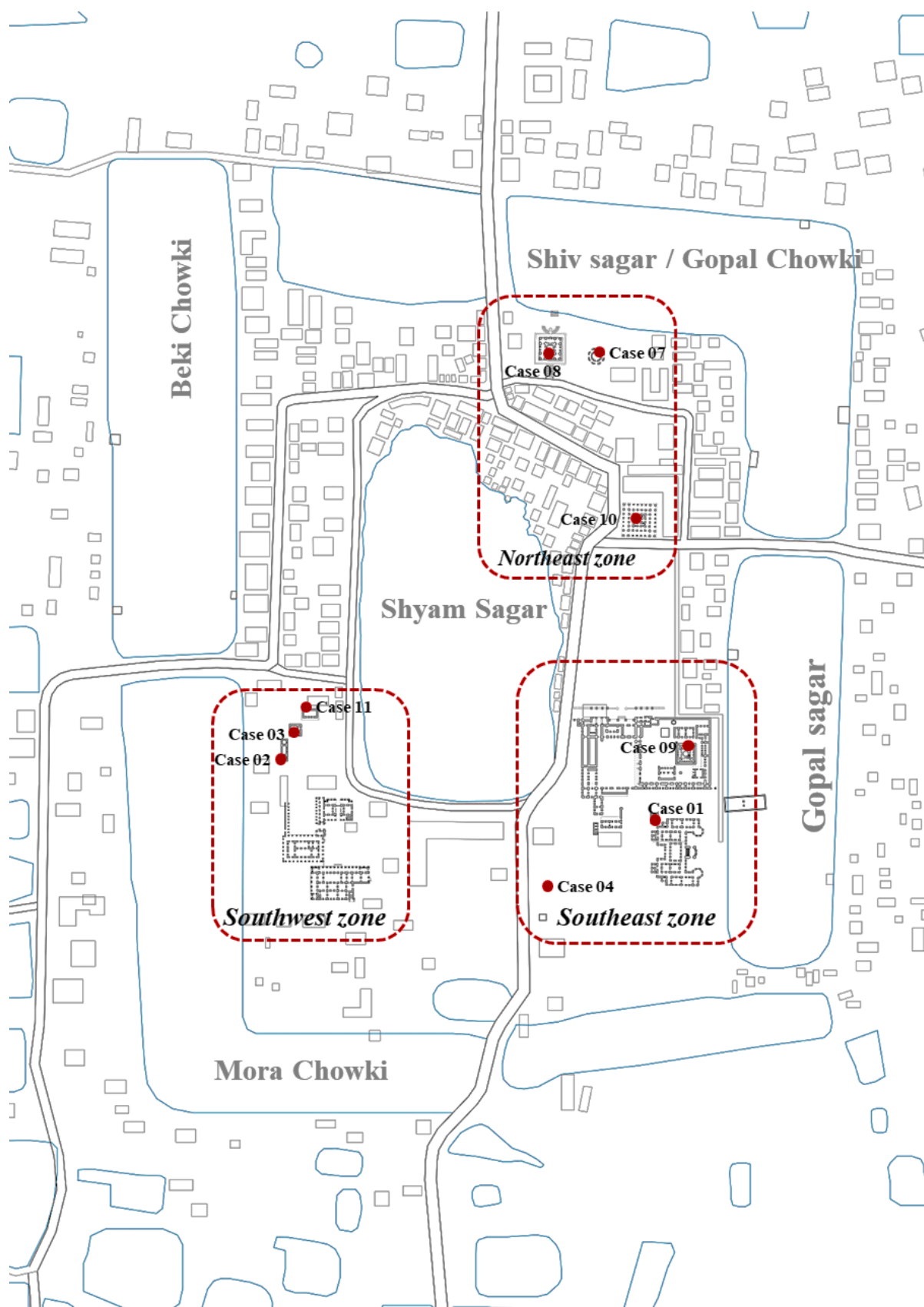


Figure 36 : Zoom view around Shyam Sagar

Source: prepared by the Author; <https://contextbd.com/puthia-temple-complex-heritage-cultural-condenser-buet>

3.4 EXISTING TEMPLE CASES

3.4.1 CASE 01: SMALL AHNİK TEMPLE

Located in the northwest corner of the *Hemantakumari* residence in the south-eastern vita (area) of Pachani Rajbari, this temple still stands in its old form as a unique example of the architecture of the **Dochala-Ek** Bangla temple in Bengal. The temple is made of a combination of bricks and limestone. However, a small amount of wood is used somewhere. It is difficult to say exactly when and who built it in the absence of documents relating to the period of construction. However, a half-broken inscription is observed on the central panel of terracotta fruits placed on the tri-archway of the eastern entrance of the temple. According to this inscription, the temple was built in 1644 Shakabo (Bengali Year), i.e. 1722 AD. But **Bimalacharan Maitreya** mentions in his book that Raja Premnarayan built a carved temple like a Bengali hut. Although this temple was originally built during the time of *Premnarayan*, it may have been built after 1722, during the period of the Pancharatna Boro Govinda temple in the temple complex of Panch Ani Rajbari, in the mid-eighteenth century. However, there is no doubt that it was built by the five Ani kings as it was housed in the Panch Ani palace.

The temple is rectangular and has one room. It measures 24'-2" in the north-south axis and 16'-6" in the east-west axis from the outside. The size of the uterus is 18'-2" x 6'-6". The height of the temple from the ground to the moon is 17'-2". There is one entrance to the sanctum sanctorum on the south and three on the east wall with a total of four arched entrances, and slightly larger in between (2'-4" x 8'-0"). Two arched columns are strong and short. All entrance arches are semicircular and slightly pointed in a rectangular structure. The lintel is made of wood, with two niches on the inside of the north wall and one on the west side of the south wall entrance. There are three iron fins on the roof. The middle vertex is relatively large. The walls of the temple are 4'-0" thick and the cornice is curved like a bow.

Facade Decoration of the temple:

The interior of the temple is completely covered with plaster. Only one or two at the top of the north and south walls, four at the top of the west wall, and one at the top of the east wall, a total of seven low relief carvings are not seen in the interior. However, the temple is richly decorated with terracotta plaques used on the exterior. The exterior of the temple faces its southern and eastern facades with terracotta plaques of various shades of red. Moreover, there are terracotta plaques in some parts of the north and west walls. There are six vertically panels from the cornice to the bottom on either side of the tri-archway or tri-archway on the east side and a curved panel row exists at the bottom of the cornice above. The number of panels in this panel row is eleven. The lower part of these panels is divided into three panels along north-south by a long strip of ornamentation and a triangular spandrel between the lower part and the two arches. These panels are of different sizes (ice, square,

rectangular, etc.) and are decorated with terracotta plaques. The terracotta plaques are engraved with Hindu mythological texts such as the Ramayana and the Mahabharata, social scenes, and various inheritances. The short arched pillars are also covered with terracotta. The edges (lines) on both sides of the paneled panels are adorned with rows of *tasbi* (small dots) grains, flowers, and geometric designs. In the terracotta plaques placed on the arched pillars, there are portraits of Rama, Lakshan, Durga, Saraswati, Kartik seated on a peacock, Krishna dancing, images of Balaram and Gop-Gopini, elephants, dancing peacocks, horses, musical instruments, cow milking scene, palaki and there are portraits of monster Putna, flutist Krishna, various leelas of Radha-Krishna, Lakshman horse, rat, etc. There are portraits of three horses and a peacock in a triangular panel at the bottom two corners of the cornice. (Rahman K. M., 2017)

The rectangular area above the tri-archway is decorated with anecdotal sculptural plaques of Krishna Leela in various poses. There is also a portrait of Krishna and his companions and two flowers of Kinnar-Kinnari (exceptional Kinnari, the lower part of which is peacock-shaped and the upper part human-shaped and harp in hand). The swollen bracket lines on either side of the rectangular structure of each entrance are decorated with spiral designs or arabesques, dental designs, and geometric designs. Scenes of Vaishnava dance are engraved on plaques placed vertically on the triangular ground adjacent to the arch and horizontally above the rectangular field. Each blade is embellished with an abstract floral design. In the plaque below the north wall of the three-arched gate (slightly above the floor) there are portraits of Krishna's various anecdotes such as Krishna's butter theft, milk seller, King Kangs's wrestler Chanur and Mushtik's wrestling fight with Krishna and Balaram. In the lower row of plaques on the north wall of the archway, there are eye-catching portraits of cowherd cow milking, Radhakrishna, two women with children, herdsmen, and herds of cattle, musicians, etc. Every corner of the exterior of the temple is covered with terracotta plaques. The edges of the blade are decorated with flowers and geometric designs. The terracotta plaques at the two corners of the north wall have Hanuman, Rama, flower designs, dancing women, cows, Rama or Lakshman with arrows, Vaishnava dancers of Krishna with his companions dancing, and scorpions on two triangular panels in two corners below the cornice. (Monster-faced or celebrity-faced) portrait. In the Vaishnava plaques on the western wall, there are portraits of Rama and Hanuman with arrows standing on Capricorn, and in the triangular section of the two corners, imaginary portraits resembling two monstrous faces. The rectangular top of the archway of the southern house faces the demonic forces of Ravana on the right and the battle of Lanka, Rama, and his Hanuman forces on the left. The portraits of Rama and Ravana seem inconsistent with the story of Ramayana. Because it is observed in Ramayana that Rama and Ravana fought in Capricorn. This Capricorn may have been used in a decorative sense. The plaques on either side of the archway have roses or lotus designs and images of other flowers, and the triangular panel at the two corners (below the cornice) depicts two mysterious imaginary creatures like the northern wall. The lower part of this house is decorated with two rows of

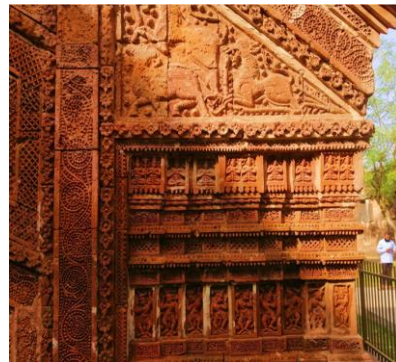
abstract floral and leaf designs. The arches of the temple are carved in three steps in front of the intrados and the last step is embossed in the groove design. The top of the archway is decorated with interlocking latticework on the surface of the Lankan war-covered rectangular area and the archway pattern is decorated like an alpina pattern. (Rahman K. M., 2017)



Front view of Small Annik Temple; East Side View



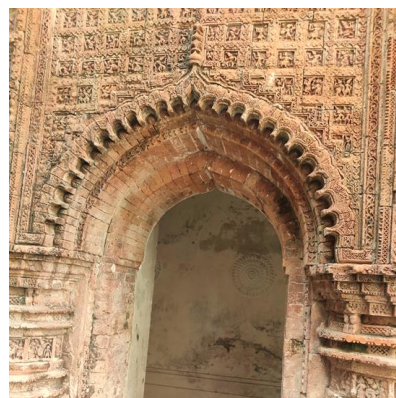
Back view of Small Annik Temple; West Side View



Corner terracotta details



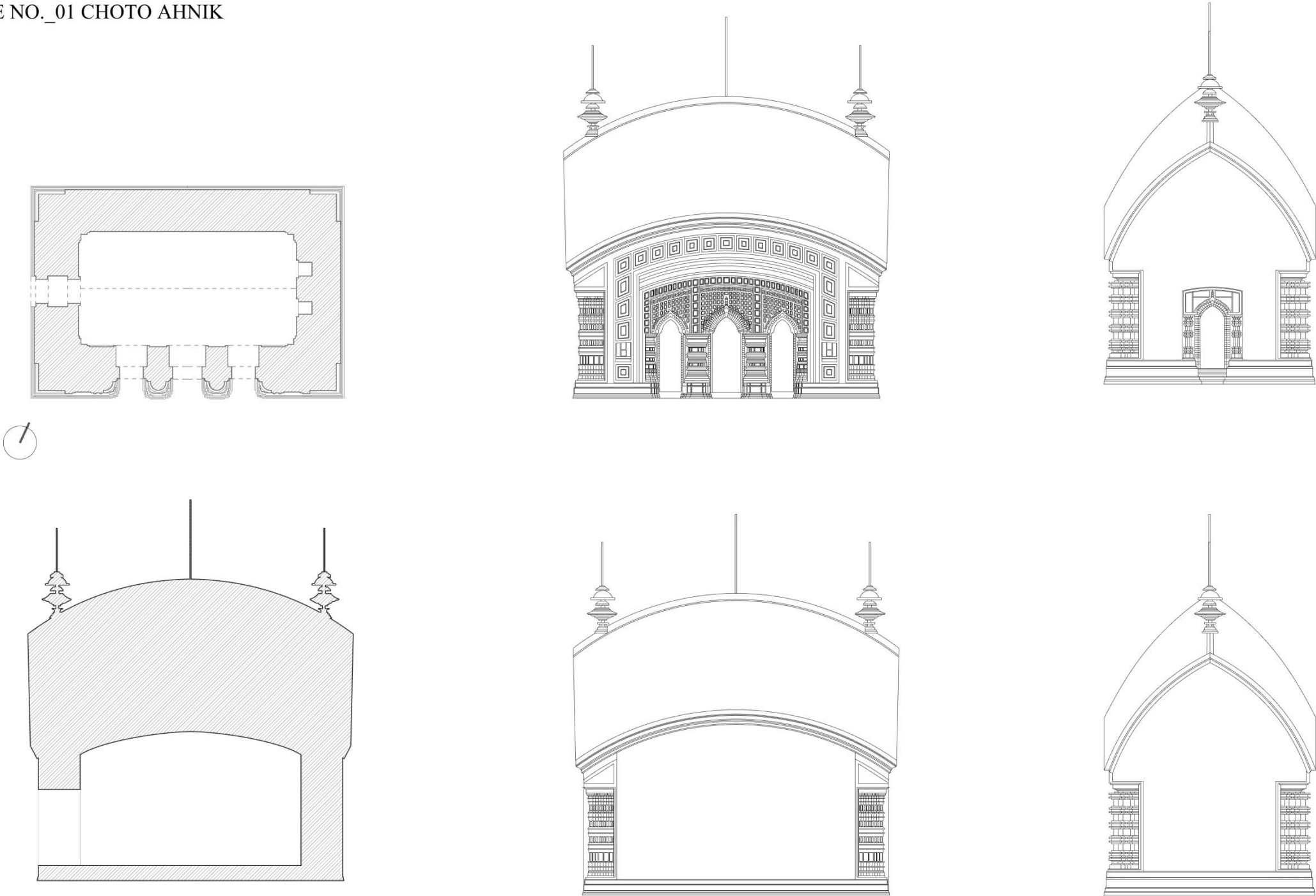
Terracotta details of Small Annik temple



Arch Details

*Figure 37 : Photos of Small Annik Temple
Source: Author's Collection*

CASE NO._01 CHOTO AHNIK



Choto Ahnik, Rajshahi, 18th century AD

Plate 2 : Choto Annik temple
Source: Prepared by the Author Reference: Haque, Saif Ul . (1997) Pundranagar to Sherebanglanagar: Architecture in Bangladesh . Dhaka, Chatana Sthapatya Unnoyon Society.

3.4.2 CASE 02: BORO AHNIK TEMPLE

Dochala and Chauchala infrastructure in Puthia, known as the Boro Ahnik Temple, is a mixed temple of the tri-temple type. The temple is located on the west bank of Shyam Sarovar Lake in front of the Char Ani Raja's palace. Only bricks and limestone have been used as construction materials.

The temple was built by four Ani kings. However, due to lack of written information, it is not possible to say exactly when and who built it, but the style of construction suggests that it may have been built in the latter half of the eighteenth century after the small Ahnik temple. There are many examples of temples in Bengal in the shape of two *chauchala* rooms attached on either side, which have already been mentioned in the descriptions of the ***dochala*** temple and the chauchala temple.

However, the tri-temple that is built by adding two square rooms on either side of this ***dochala*** infrastructure is very fancy. An example of the construction of such a tri-temple is probably not found anywhere else in Bangladesh except the Rajaram temple (of the eighteenth century) at Khalia in the greater Faridpur district. Even the construction of such a tri-temple is not known to have taken place anywhere else outside of Bengal. Thus, in the history of the Chala temple architecture of Bengal, the Boro Annik temple of Puthia holds a prominent place.

This east-facing temple is rectangular from the exterior. It measures 48'-0" in the north-south and 15'-0" in the east-west. The temple is divided into three chambers. The main chamber is rectangular in size which measures 18'-2" X 9'-6" with the two adjoining square rooms measuring 8'-10" on each side. The upper part of the main sanctum is covered with a ***dochala*** Bengali-style low-pitched roof which is curved like a cornice bow. The front of the room is exposed by three semicircular arches. The archway is enclosed in three rectangular frame structures with two short pillars. The interior of the sanctum sanctorum has three wide niches along the west wall. The middle niche is relatively larger than the two on the side. The inner square of the two small square rooms on either side of the main sanctum sanctorum has a semi-circular dome built in the Pendentive style, but the outer portion is built with a ***chauchala*** roof with curved cornice. (Rahman K. M., 2017)

There are two open arches on the east and a north wall to enter the room on the sanctum's north side. These arches are also built in a rectangular structure. Besides, another open archway is connected to the main sanctum on the south wall of the room and three (in a row) on the west wall, and seven niches on each side of the entrance to the north and south walls. On the other side of the square room on the south side of the sanctum is an archway (in the east wall). Moreover, like the room on the north side, this room has been connected to the sanctum sanctorum by constructing an open archway in the middle of the north wall. The interior of the room has three niches, three on the west and south walls and two on each side of the entrance to the north wall. The entire temple has an uneven rectangular (10'-6" X 36'-4") wide verandah in front of it. The cornice of this temple is curved.

Facade Decoration of the temple:

Most of the ornaments of the temple are in ruins. The plaster lining of the interior has been peeled off. However, it can be easily inferred from the fact that the surface of the two square arches connected to the inside of the main sanctum sanctorum was once decorated with terracotta slabs. But now they are all ruined. The interior walls of the main sanctum were divided into several vertical and horizontal panels. However, the interior of the panels did not appear to have anything but plaster covering. The exquisite ornamentation of the temple has been created on the exterior of the house (east wall). Unfortunately, most of these terracotta plaques are now crumbling and many plaques have fallen off, making it difficult to determine the content of the paintings, but they do not say that they belonged to the Hindu deities.

In particular, the arch columns and the plaques up to the cornice on the top of the archway of the square room have all been destroyed. However, the terracotta plaques that are still present on the walls in the half-ruined state show that on each side of the arched path in front of the square (north wall) of the north square of the temple there are portraits of monks, cows towards the center, spiraling floral pattern, dancing Krishna, Balarama, and geometric designs. The north entrance of the north room was also decorated with terracotta plaques, but now everything is ruined. Only the rectangular panels on either side of the entrance and the surface have some lined floral plaques. The front wall of the south square room is decorated in the same way as the square room of the north square room.

The facade of the main sanctum sanctorum is divided into several vertical and horizontal panels. Each panel is decorated with terracotta panels with designs. Although there are various portraits lined up in the design. As the faces of most of the portraits are now ruined, it is difficult to identify them. There are scenes (portraits) of **Vaishnava** dances in the same style on the plaques. Almost all the portraits of the plaques on the rectangular panels on the top of the arch are almost extinct.

However, the ones that can be identified are: Forged designs, spiral dot donation rows, swan rows, horse riders, two fast-moving horses at the two corners, Rama Lakshmana holding arrows, war of Langka, etc. are visible. All other aspects are destroyed. Moreover, it can be assumed that the four corners of the temple and some parts around the lower part of the exterior were decorated with terracotta plaques. (Rahman K. M., 2017)



(a) East façade of the Temple



(b) East façade of the main Sanctum in the middle



Left side single chamber



Middle column

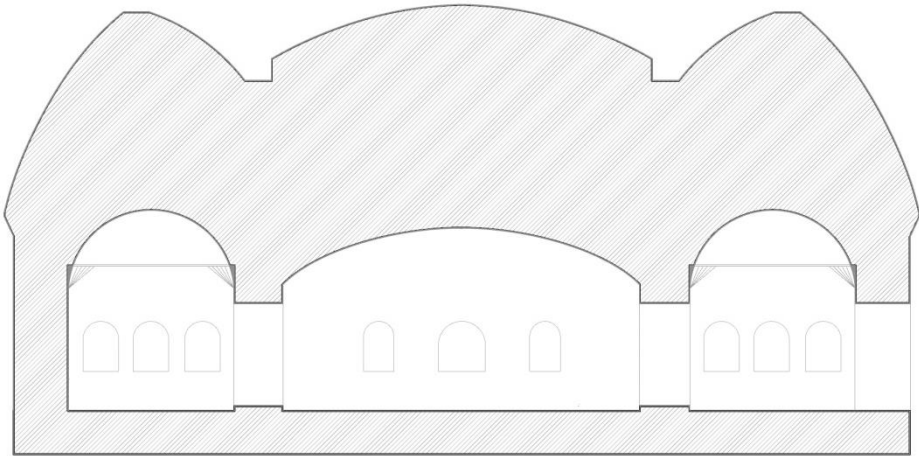


Right single chamber

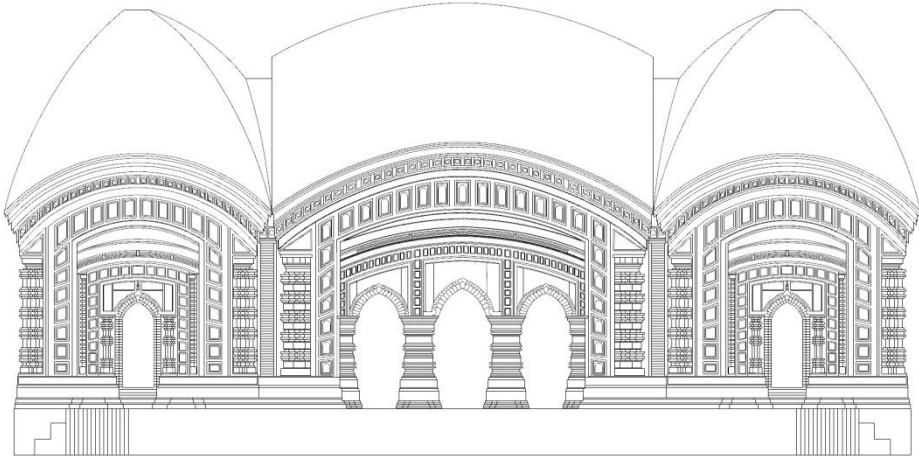
(c) Terracotta details of Boro Annik temple

Figure 38 :(a)(b)(c) Photos of Boro Annik temple
Source: Author's Collection; Site Survey

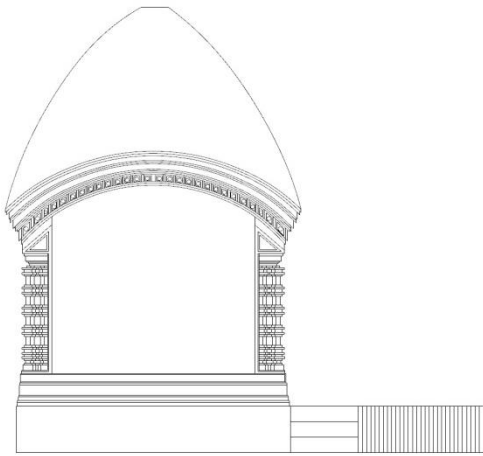
CASE NO_02 BORO AHNİK TEMPLE



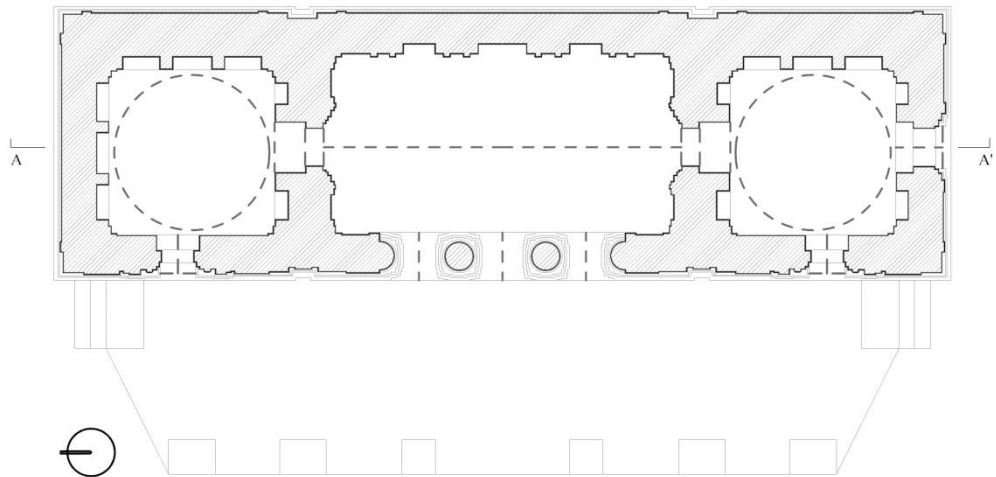
SECTION AA'



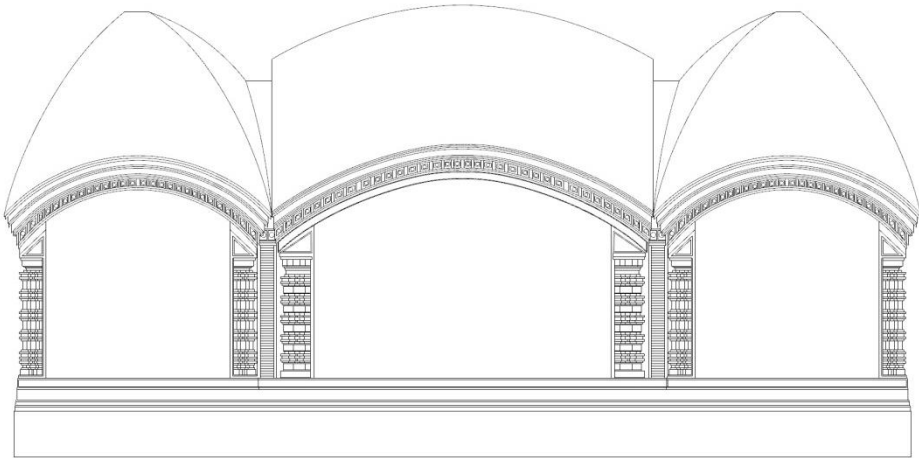
EAST ELEVATION



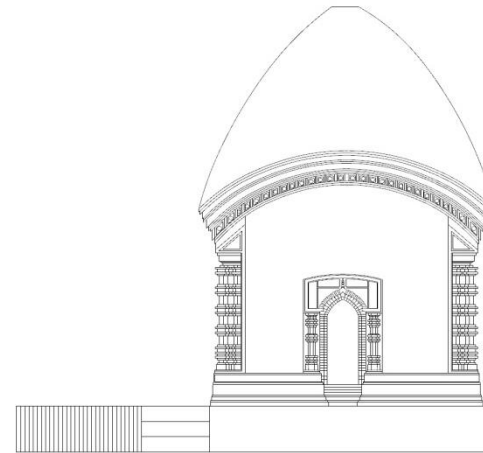
NORTH ELEVATION



PLAN



WEST ELEVATION



SOUTH ELEVATION

BORO AHNİK TEMPLE

Plate 3 : Boro Annik temple
Source: Prepared by the Author Reference: Haque, Saif Ul . (1997) Pundranagar to Sherebanglanagar: Architecture in Bangladesh. Dhaka, Chatana Sthapatya Unnoyon Society.

3.4.3 CASE 03: CHOTO GOVINDA MANDIR

This temple is also located in the northeast corner adjacent to the large Ahnik temple in front of the Char Ani palace. Only bricks and limestone were used in the construction of the temple. It is difficult to determine the exact date and time of the construction of the temple as there is no written record of the king of Puthia. If it is possible to decipher the inscription on a plaque placed above the south house, the construction information of the temple may be revealed. However, its location proves that the temple was built by the four Ani kings of Puthia. Because the temple is located in the Vita of Char Ani Raj on the west bank of Shyam Sarovar in Puthia. Although it is not possible to determine the exact date of construction due to lack of evidence, the construction period of this temple can be easily estimated by reviewing the construction period of Puthia Rajbari and a few other temples built in and around it and considering its decoration style. Like that of other temples, the style of construction of this temple suggests that it was built in the last half of the mid-eighteenth century. As such, the temple is believed to have been built during the zamindari period of the four Ani kings Rajendra Narayan (died 1897). At present, there is no worship in the temple.

It is the largest of the Chauchala temples in Puthia. The entire temple is situated on a 2'-6" high almost square platform. The stage measures 32'-2" in north-south, 33'-6" in east-west, and about 2'-6" in height. The main room of the temple is planned to be 4'-2" to the east-west and south from the edge of the stage and 2'-4" to the north. According to the topography, the temple is divided into three rooms, including the main sanctum sanctorum. The interior of the sanctum measures 12'-4" north-south and 13'-2" east-west. The room has a total of three entrances to the east, west, and south. But the south is the main entrance.

To the south and east of the sanctum sanctorum are two narrow rectangular chambers. The south rectangular cell measures 19'-10" x 4'-10" and the eastern cell measures 12'-4" x 3'-4". The south chamber is opened by three as well as the east chamber by a semicircular archway. Originally, these two narrow rectangular rooms of short range were used as the verandah of the temple. The three archways on the south facade of the temple are based on two short sturdy pillars and two corresponding pilasters. Of course, all the arches are placed in a rectangular structure. The inner surface of the sanctum sanctorum is covered with a chauchala-style roof and the upper part of the two-span rectangular chambers or verandas is covered with a barrel vault-shaped roof, but the outer surface of the entire temple is covered with a chauchala pyramid-shaped roof and the cornice is curved. The temple has two niches on the west wall (north side of the entrance), two niches on the north wall, and two niches on either side of the east wall entrance, and a square panel on the south wall (west side of the entrance). On the other hand, two (one by one) niches were observed on the east and west walls of the south rectangular verandah and two (one) niches on the north and south walls of

the east verandah. At the top of the roof at the top of the temple, there are five iron finials, one at the top and four at the four corners. (Rahman K. M., 2017)

Facade Decoration of the temple:

The entire interior of the main sanctum sanctorum of the temple, the north, south, and east walls of the rectangular chamber on the east side is covered with plaster. The east, west, and south walls of the inner rectangular chamber or porch interior have a plaster lining between the flower-carved cord-like swollen lines. However, the whole of the south wall outside the sanctum sanctorum, both sides and surfaces of the entrance to the east wall, the whole of the south facade of the exterior of the temple and some parts of the east and west facades and every corner of the temple are decorated with exquisite terracotta paintings.

Although the shape of these terracotta plaques is not the same for all of them, the popular narratives of various Hindu gods and goddesses, incarnations, the Lankayuddha, and Radha-Krishna are more prominent in the subject matter of the painting. In addition, some of the fruits have been presented with various animals, military battles, lattice designs, and rose designs. However, the swollen lines dividing the plaques show the use of flowers, twisted herbs, cod-like dentil designs, granular twisted herbs, lattice designs, and geometric designs. But sadly, most of the plaques of the temple have been destroyed.

The entire outer wall of the exterior of the sanctum sanctorum of the temple is divided into panels of different sizes and the panels are square and decorated with diamond or ice-shaped terracotta plaques. The plaques on the west side of the entrance have portraits of Hanuman with a *Gada* (weapon) and the plaques on the east side (in three rows) depict the demonic force of Ravana with a bow and arrow standing on the surface of Capricorn. The surface of the archway is adorned with spiral vines, dancing black and floral designs. The bulging lines dividing the blade are decorated with abstract flowers and lattice designs.

The plaques on both sides and surfaces of the entrance to the east wall of the exterior of the sanctum sanctorum feature horses, flowers, twisted herbs, and geometric designs. There are rectangular panels at the top of the entrance. The upper part of the three arches in the southern wall of the sanctum sanctorum or the interior of the verandah is also divided into rectangular panels. The exterior of the temple is decorated with three rows of terracotta arches in the lower part of the cornice. In the first row, there are Geometric designs on the blades. In the second row, there is a kind of animal turning backward (probably a horse), lotus (one after the other) and in the third row, there is a pattern of twisted herbs.

However, the magnificent decoration of the temple has been Triple-aisled archway on the outer facade of the south house. The entire wall is divided into small panels of different sizes and each panel is

decorated with red terracotta plaques with different portraits. Square, rectangular, and diamond or ice-shaped plaques in thirty (thirty-three in total, now three ruined) panels arranged in an arched structure after three rows of plaques on either side of the open and on the lower side of the cornice above. These plaques include A deity holding two elephants with two legs and two horses with two hands, Ganesha, Shiva seated on a bull, Kartik, Lakshmi, Kali, Goddess Durga, and Vishnu seated on a Garur, respectively. In a bow-shaped row (placed horizontally) from the west, we can see Sita's abduction by Ravana, Shiva, probably Kalkibatar on horseback, Parshuram with an ax in hand, Rama, Balarama, Vishnu seated on a Garur, Nitai-gaur, Bamnabatar, Narsinghabtar, Varabhavar Existing.

There is an inscription on the central panel of this row but it could not be deciphered. Next to this row from the top is another arched or moon-shaped panel with a plaque of cows and shepherds grazing in rows and a portrait of Lord Krishna in the middle. This is followed by a swollen arched line with flowers and twisted herbs and a rope-like line. The two sides of the three large rectangular fields at the top of the Tripple-aisled archways are lined with plaques bearing the portraits of Vaishnava dances in the same manner. The center of the triangular space on the side of the arch is also adorned with plaques with Krishna or Vaishnava dances dancing in a row upwards.

The entire area is covered with terracotta plates containing the picture of Krishna Lila with two medal-shaped circles (Rasmandal) on either side of the rectangular field above the central arch. On the east side of the western circle, some Gopinis dancing in Krishnalila have been decorated in the shape of elephants (Nabagopikunj) and wonderful ornaments have been created. From a distance, it looks like a portrait of an elephant. In the two rectangular fields above the other two arches, the battle scenes of Rama and Ravana in Lanka with soldiers and feudal lords are engraved. Above these rectangular fields were hung two iron chains in an arched bulging line. It is believed that the curtain was hung on the shackles during worship. The arched pillars of the Tripple-aisled archways and the corresponding post are also decorated with terracotta plaques. The arches of the arches protrude one after the other in front of the intrados and the last step is grooved. Most of the slabs and pillars are now destroyed. The present ones have portraits of flowers, twisted herbs, geometric designs, and Vaishnava dances.

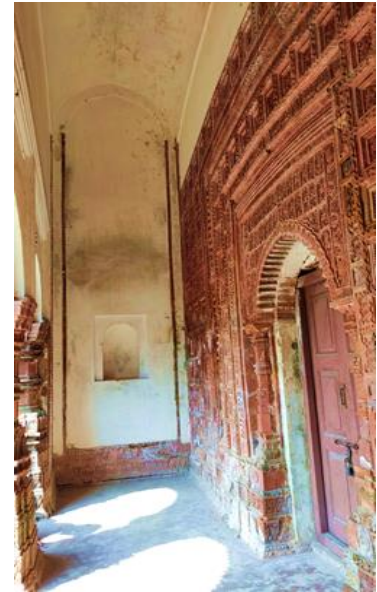
In addition, the lower part of the pillars and corresponding posters (adjacent to the floor) are decorated by elephants and horses in the form of a sword-clad Mughal-clad sepoy hunting procession, the people trampled under the feet of elephants, the landlord carrying a palanquin (obsured). The lower part of the western facade of the temple and the southern part of the two corners are decorated with flowers, lattice designs, and portraits of monkey king Bali and Sugrib wrestling, rows of monkeys standing in devotion to Rama, Radhakrishna, Narsinghabatar, and northern part of Kamadeva and Rama. The north and east corners of the north entrance of the temple are decorated with plaques bearing the portraits of Rama and Hanuman. On the other hand, in the north corner of the eastern

house, there are plaques related to Rama, Hanuman with a mace, and Radha-Krishna in the south corner. (Rahman K. M., 2017)

Moreover, both sides of the archway of this part (east entrance) are covered with flowers, lattice design, and the surface of the arch is covered with granular twisted herbs and floral designs. The poppy is decorated with two flowers and geometric patterned fruit. The lower part of the platform of the temple is surrounded by rectangular panels.



(a) Terracotta details of South facade



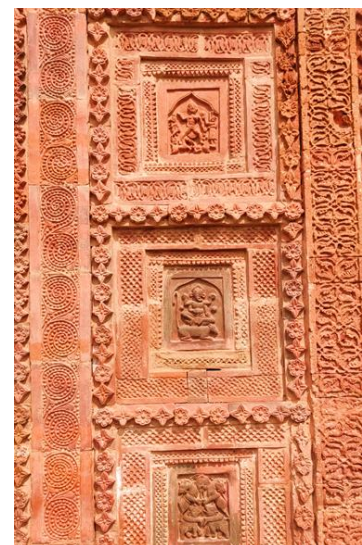
(b) South façade of Garbhagriha



(c) South east corner



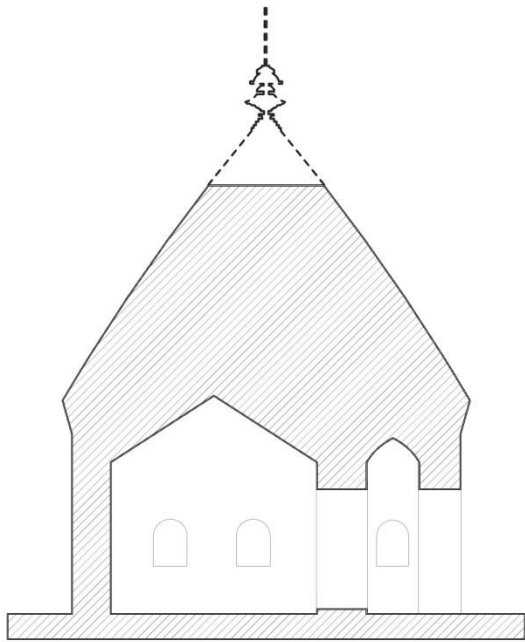
(d) North west corner



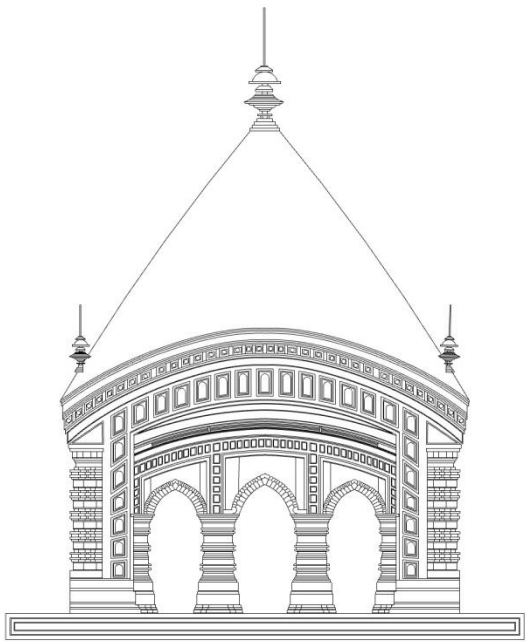
(e) Terracotta unit detail

Figure 39 : Photos of Choto Govinda Temple
Source: Author's Collection; Site Survey

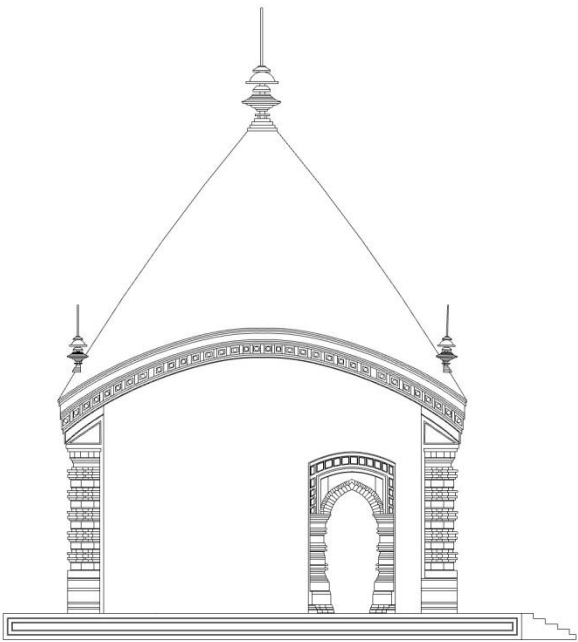
CASE NO_03 CHOTO GOVINDA MANDIR



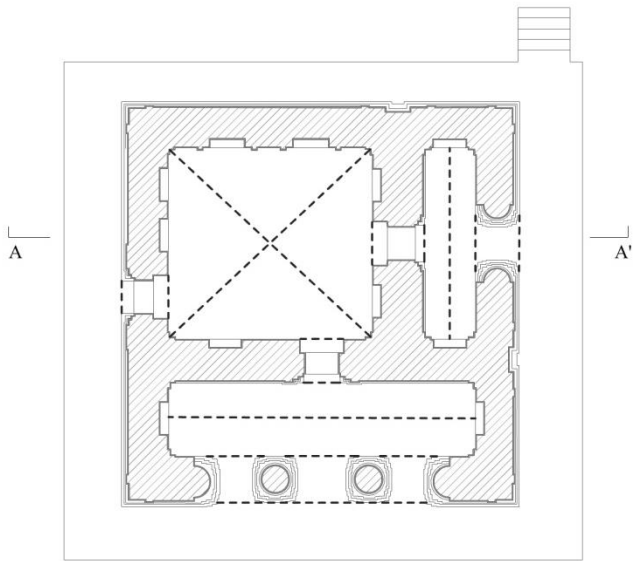
SECTION AA'



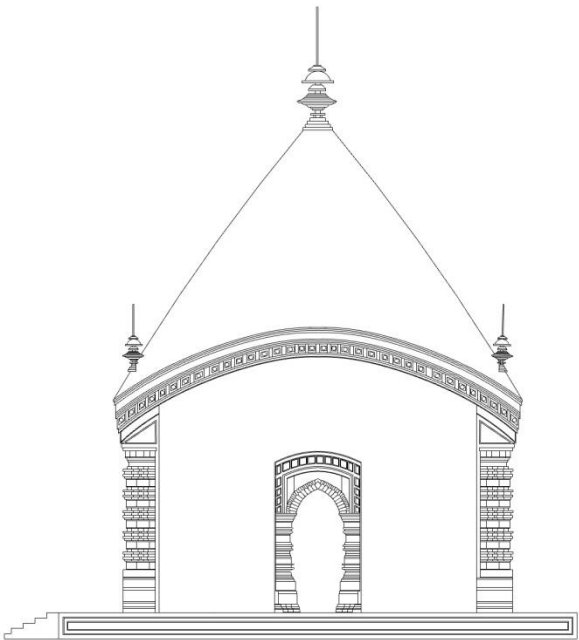
SOUTH ELEVATION



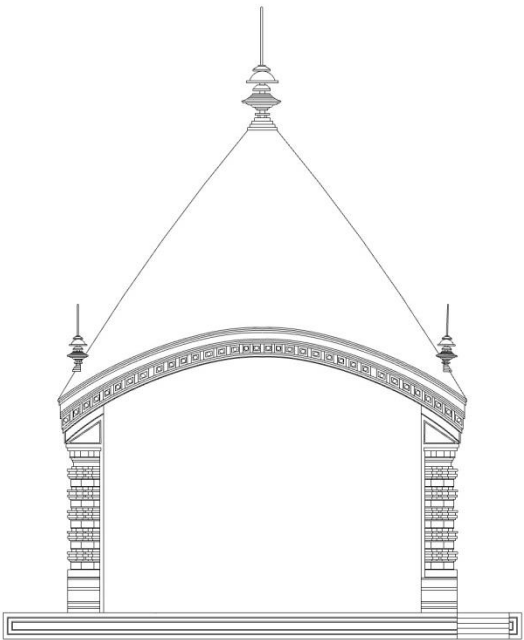
EAST ELEVATION



PLAN



WEST ELEVATION



NORTH ELEVATION



Plate 4 : Choto Govinda Temple
Source: Prepared by the Author

3.4.4 CASE 04: SMALL SHIVA TEMPLE

The temple is located near the *Sajar Mandap* on the east side of *Arani Road* in the southwest corner of Panch Ani Rajbari. Although bricks and limestone are mostly used, a small amount of stone is also used in its construction. The temple is said to have been built by three and a half Ani kings (known as Chauddapai) Anandanarayana in 1604 AD.

This square and one-chambered temple measures 8'-9" on each side of the interior. There is only one entrance (2'-1" × 5'-4") on the south side to enter the temple. The entrance with a designed three-step arch is housed in a rectangular structure. There are two niches on the east and west walls of the interior of the temple. The inner surface of the temple is covered by a semicircular dome built in the Pandantif style, while the outer part is covered by a pyramid-shaped *chauchala* roof. There are five iron rods at the four corners and the apex of the temple roof. The walls of this temple are 2'-4" thick and designed with curved cornices. Stone has been used as a step at the lower part of the entrance of the temple. The Shivling that was installed inside the temple does not exist at present.

Facade Decoration of the temple:

The interior walls of the temple have no decoration other than a plaster covering. However, the facade of the temple is decorated with attractive ornaments. The entire facade (both sides and surface of the entrance) is decorated with red terracotta plaques. These plaques contain images of gods and goddesses of Hindu mythology and Vaishnava dance. The entrance is surrounded by two adjacent or adjacent rectangular structures (the first rectangular structure is divided into eight vertical and ten horizontal panels at the top and the second structure is divided into seven vertical and nine at the top panels). The first rectangular side consists of a doorman, Ganesha seated with a mouse (rat), Saraswati with a standing harp in her hand, Goddess Durga holding the demon, Goddess Lakshmi seated on a lotus seat (two elephants on either side of the head), dancing Krishna or one of her companions. From the east, consists of a doorman, Kartik seated on a peacock (looks a bit like Ganesha as his face is obscure), Lakshmi or Saraswati on the latter, the latter obscure (portrait of a woman standing under a vine), then Goddess Durga with a sword in hand and There are three panels which contain a portrait of dancing Krishna. In the upper horizontal row of the structure, the fifth plaque from the east side is decorated with Krishna with a flute and the other nine plaques in the portrait of Vaishnava dance.

In the rectangular case at the top of the archway, there were portraits of two horses face-to-face, engraved in plaster on the plaster covering on either side of the archway, which is now ruined. Above this part and below the horizontal blade above the rectangular structure, there are serpentine leaf designs in a long curved rope bracket on the east-west and in a row above the rope bracket. The portraits of Hanuman, Krishna, and Yashoda from the bottom of the eastern vertical row, the devotees and monks of Shiva, Hanuman from the bottom of the vertical line of the west, Shishu Krishna and

Mata Yashoda and Shiva, Yashoda and Shiva In a row of horizontally placed bow-shaped plaques, a portrait of a deity (probably Arjuna) is presented.

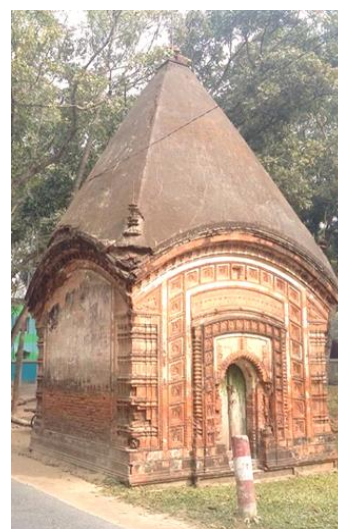
Moreover, in the decoration of the temple, especially in the bulging structures that divide the panels, there are abstract flowers and in some places cod-like tooth designs. The two sides of each corner of the temple were once decorated with terracotta plaques. But now that they have been destroyed, nothing is known about the features of the images, but it is easy to guess that they also had images of Hindu gods and goddesses. Below the cornice of the four corners of the temple, in the triangular section, there are portraits of eight peacocks (venomous snakes with hoods on their lips) carved on plaster. Of these, except for the four north and south, the rest of the east and west portraits have been destroyed. The lower part of the cornice is decorated with a bracket flap with a tooth design and a portrait of a rear-facing pheasant. The arch of the entrance of this temple is also decorated with grooved designs like the earlier small Govinda temple. (Rahman K. M., 2017)



(a) Road Side View of Small Shiva Temple



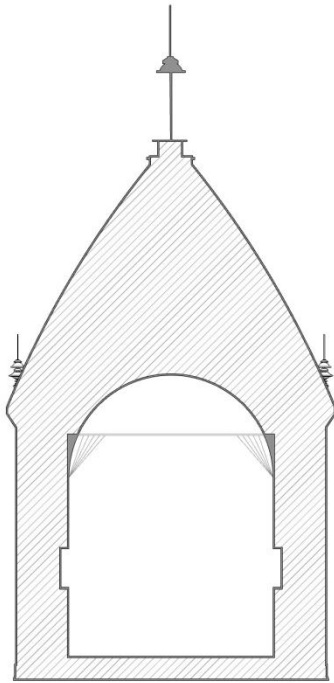
(b) South façade



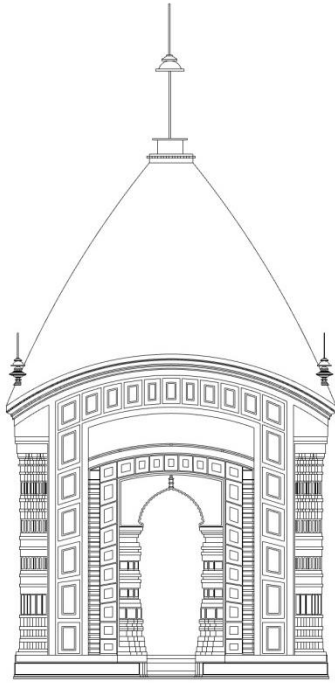
(c) Terracotta details

Figure 40 : (a) (b)(c) Photos of Small Shiva Temple
Source: Author's Collection; Site Survey

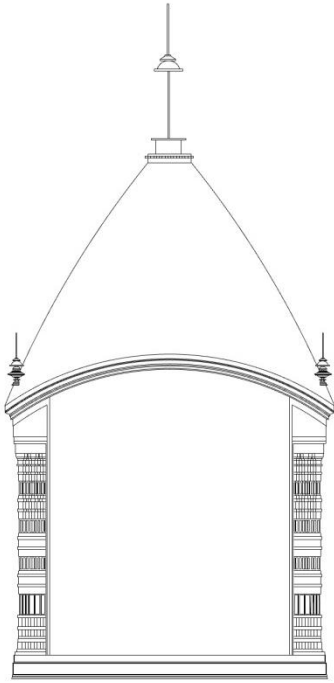
CASE NO_04 SMALL SHIVA TEMPLE



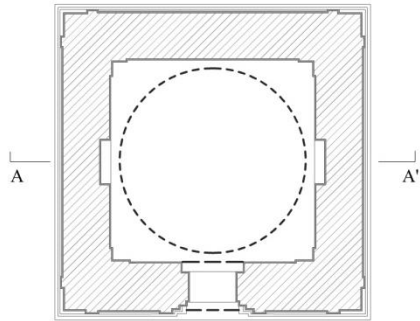
SECTION AA'



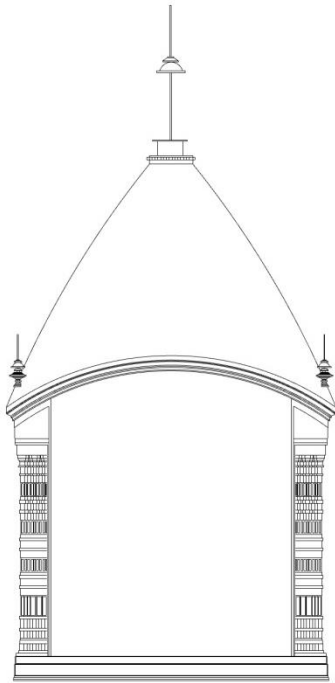
SOUTH ELEVATION



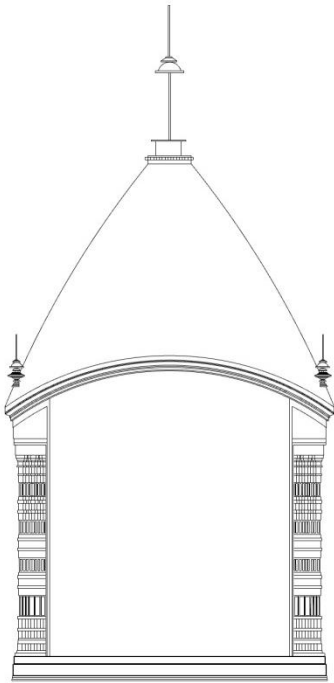
EAST ELEVATION



PLAN



WEST ELEVATION



NORTH ELEVATION



SMALL SHIVA TEMPLE

Plate 5 : Small Shiva Temple
Source: Prepared by the Author

3.4.5 CASE 05: SMALL SHIVA TEMPLE-A, KRISHNAPUR

The temple is located at Krishnapur Mouza, about one kilometer west of Puthia Rajbari. It was worshiped by four Ani kings. Bricks, limestone, and some stones have also been used in the construction. The temple is said to have been built by four Ani kings. According to the information found in an inscription on the top of the temple's main entrance, it was built in 1717 Shakabdo i.e. 1795 AD. Although the inscription is now obscure, the year of construction in the bottom row is still clear.

This temple is a square and one-room like the above small Shiva temple. The dimensions of each arm in the cell are 10'-3". Inside the room, there are two niches in the north and west walls. There are two semicircular arches with three steps in a row (groove design in the first step) in a rectangular structure on the south and east walls to enter the temple. The south is the main entrance to the temple. The two arches measure 2'-9" $\times$ 5'-6" (south) and 2'-5" $\times$ 5'-6" (east), respectively. Stones have been placed as the lower steps of the two entrances. In the center of the room was a circular 1'-7" high Shivling placed on a high base which is not present. The inner surface of the room is a semicircular dome and the entire temple is covered with a high pyramid-shaped chauchala roof. The cornice of the temple is curved and the walls are 2'-5" thick.

Facade Decoration of the temple:

The interior of the temple is completely covered with plaster. On the outside, however, the entrance of this temple, the four corners, and the east entrance are decorated with exquisite terracotta plaques. The subject matter of these images is related to the story of Hindu gods and goddesses like the above small Shiva temple. The rectangular upper part of the southern entrance has a portrait of two horses facing each other, carved in a plastered pattern on the plaster lining, with vertical and horizontal plates on both sides and vertical plates on the west and east edges of this temple.

From the west side of the upper curved row, small Govinda-like plaques are depicting Matsyabatar, Karmabatar, Varahabatar, Bamnavatar, Narsinghabatar, Balarama, Krishna, Parashuram, Rahu, and Kalkibatar. The dividing lines of the blade are decorated with cord braces and dental designs. Below the cornice that surrounds the temple are a row of plaques with a dental design and a portrait of an inverted pheasant. There is a floral design in the middle of the two pheasants. Moreover, in the triangular part of each corner of the lower part of the cornice of the temple, like the aforesaid small Shiva temple, a portrait of a peacock (a serpent on the lips) was engraved. Of these, only two, except for the south wall, are now in ruins. However, it is easy to guess that there was a portrait of a peacock. There is no decoration on the archway of the eastern wall of the temple at present. It is difficult to say what kind of portraits were in the plaques as they fell off. However, it can be assumed that these also included issues related to Hindu gods and goddesses. (Rahman K. M., 2017)



(a) South Elevation



(b) South East Elevation



(c) East elevation



(d) Terracotta corners detilas

Figure 41: Photos of small shiva temple-A, krishnapur
Source: Author's Collection; Site Survey

CASE NO_05 SMALL SHIVA TEMPLE-A, KRISHNAPUR

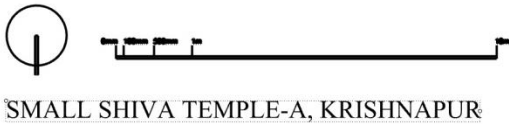
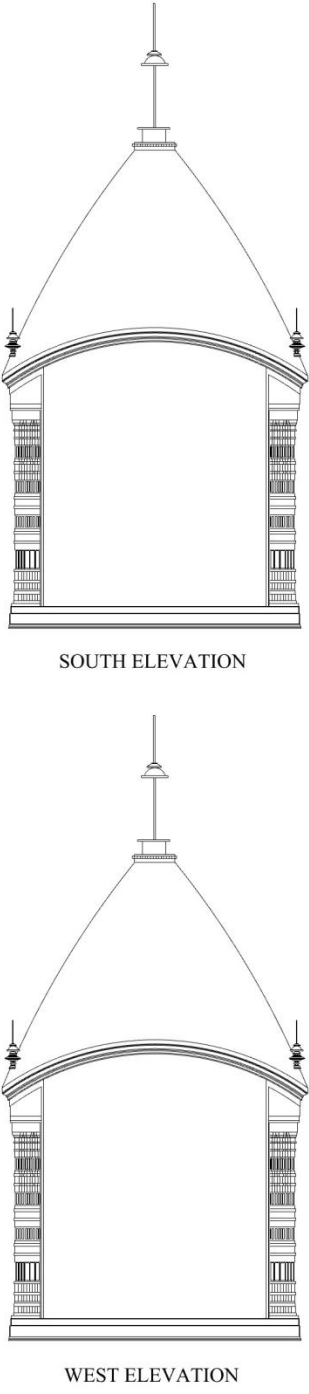
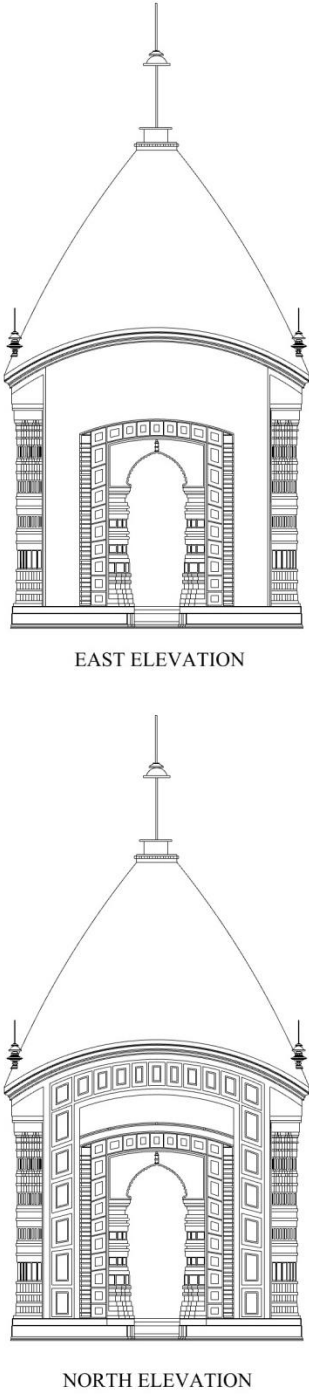
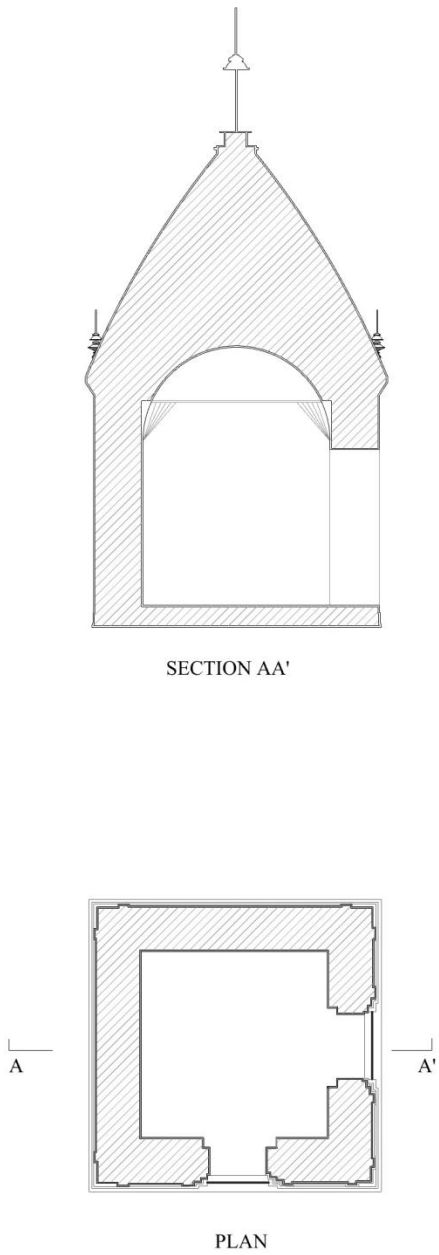


Plate 6 : SMALL SHIVA TEMPLE-A, KRISHNAPUR
Source: Prepared by the Author

3.4.6 CASE 06: GOPAL MANDIR, KRISHNAPUR

This temple also belongs to Krishnapur *mouza* (area) and is located half a kilometer south of the Rajshahi-Natore highway. At present, the condition of the temple is very dilapidated. Only limestone and bricks have been used in the temple as construction materials. According to local legend, this temple was also built by four Ani kings. But no precise information is available about the construction period. However, in terms of construction style, it is believed to have been built earlier than the small Shiva temple at Krishnapur. In that sense, the temple is believed to have been built in the middle or last half of the eighteenth century.

This temple is small in size like other Chauchala Shiva temples in Puthia and has one square room. Each arm measures 10'-4" inside the room. There are two semicircular arches in the east and south to enter the room. The arches are built in a similar rectangular structure to the other two Shiva temples. The two archways measure 3'-6 " x 4'-6 " in the east and 3'-2" x 4'-4 " in the south, respectively. There are a total of eight niches in six panels, three on each side of the north and west walls of the rectangular interior, one on each side of the entrance on the east and south walls. On the inner surface of the room, domes have been constructed in the Pandantif method and a pyramid-shaped chauchala roof has also been constructed on the outer surface. A total of five iron bars were observed at the four corners and the top of the roof. The walls of the temple are 2'-0" thick and the cornice is slightly curved.

Facade Decoration of the temple:

The interior of the temple is completely covered with plaster. There are two rectangular panels on either side of the main entrance. The exterior and south walls of the temple are decorated with red terracotta plaques. However, now that most of the plaques have been destroyed, it is difficult to say what kind of sculpture they were on. Both sides and surfaces of the eastern archway of the temple are decorated like the other two small Shiva temples. Most of the arch surface slabs were destroyed. The image of Rama holding an arrow can be seen on only one plate.

At the bottom of the seven plates placed vertically to the south of the archway is the doorman, then Ganesha, Saraswati, Durga, Shiva seated on the eagle, the other two destroyed, the doorman at the bottom of the vertical plaque on the north side, then the portraits of Kartik, Kali, and Kalki. Above the rectangular part of the top of the arch, eight horizontally placed plaques represent portraits of Krishna or Vaishnava dancing. From the bottom of the vertical plaque on the south side of the house, it is seen that Vishnu sitting on a *garuda*, Rama on the surface of Hanuman, Baul, and Matsyabatar, and Rahu from the bottom of the vertical plaque on the north side, the scene of stealing butter from baby Krishna, Brahma seated on a swan, Indra on the elephant surface and Bay. There are portraits of *Kurmavatar*, *Varahabatar*, *Narsinghabatar*, *Bamnavatar*, *Balram*, *Rama*, *Lakshan*, *Rahu*, and *Kalkibatar* from the south side in the row of arched plaques below the cornice. Portraits of monks

with braids are also seen on some of the plaques. The edges dividing the blade are decorated with floral designs.

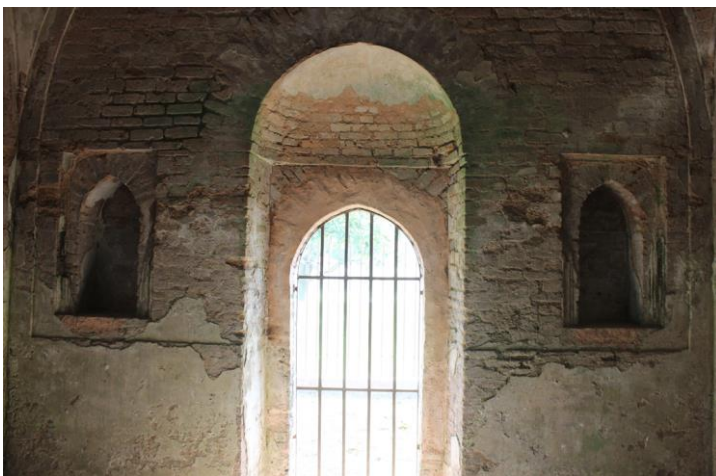
At the top of the south entrance of the temple, in a rectangular field, there are portraits of two leaping horses and carvings of flowers, carved in plaster. Moreover, on a triangular panel in each corner of the temple, there is a portrait of a peacock engraved in eight plasters, one with a serpent on its lips. The lower part of the curved cornice of the temple has a toothed design and a sculpture of an inverted pheasant below it. It is believed that there was a flower design in the middle of the two pheasants. Moreover, the square corners of the temple are decorated with grooves like flowers and squid teeth. Although most of the plaques of this temple contain portraits of Hindu gods and goddesses and incarnations, the presence of Baul portraits in some of the plaques shows the special influence of the Bauls in the social system of Bengal at that time. (Rahman K. M., 2017)



(a) Interior North Wall



(b) East Facade



(c) Interior South Wall



(d) Outside South

Figure 42 : Photos of Gopal Mandir, Krishnapur
Source: Author's Collection; Site Survey

CASE NO_06 GOPAL MANDIR, KRISHNAPUR

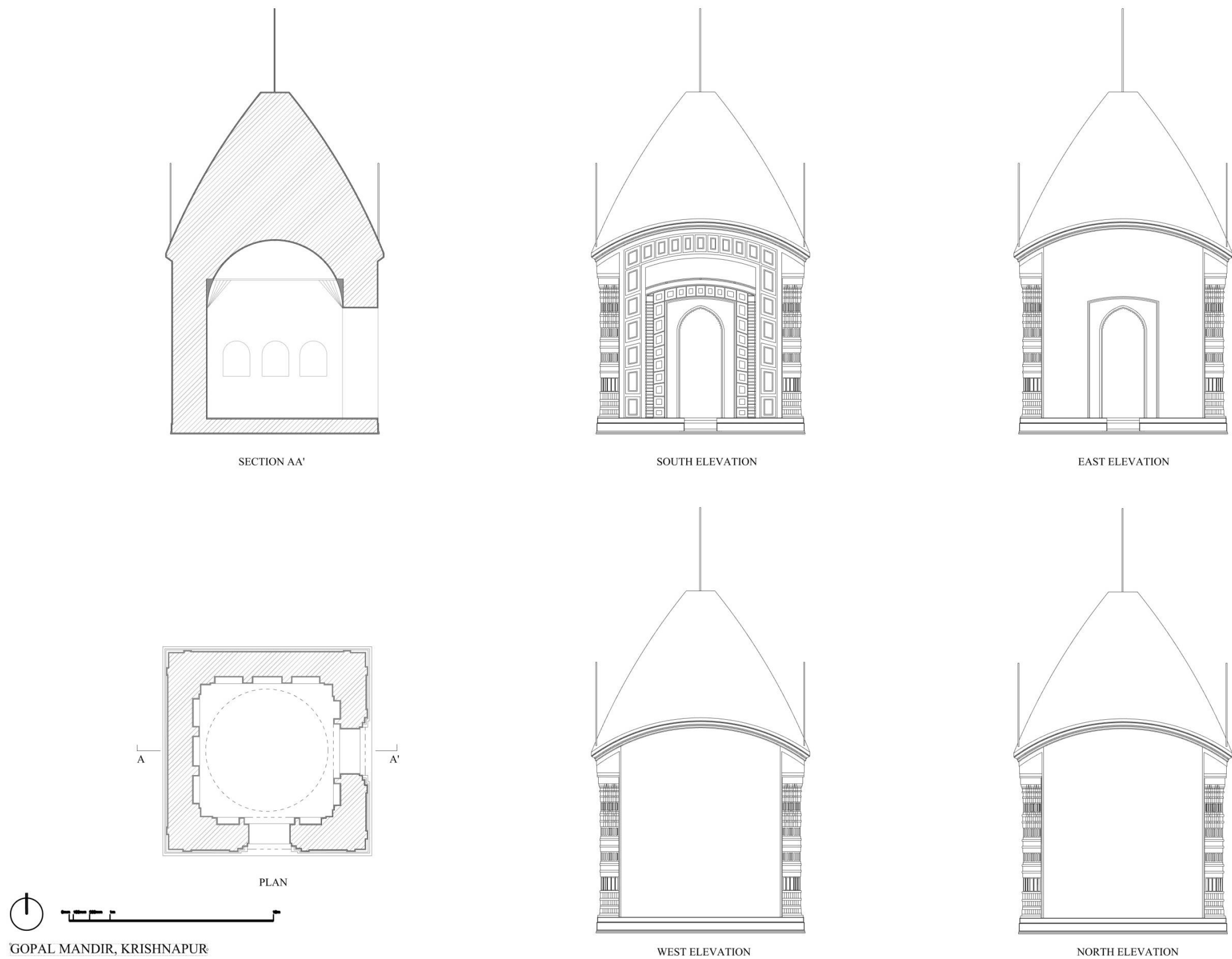


Plate 7 : GOPAL MANDIR, KRISHNAPUR
Source: Prepared by the Author

3.4.7 CASE 07: EK RATNA RATHMANDIR

This octagonal temple is located on the east side of the Pancharatna Shiva Temple, a little east of the entrance to the Puthia Rajbari. It is said that during the Rathparva celebrations, Sri Radha, Srigobinda, Sri Gopala, Sri Nitai, and Sri Gaur were brought here from the Pancharatna Baro Govinda temple in a chariot for eight days. The procession was held on the east side of the temple with great pomp. At the end of the chariot festival, these idols were again taken in chariots to the big Govinda temple. The temple is probably known as Rathmandir because of the celebration of Rathparva. Like other temples in Puthia, this temple is made of bricks, lime-surki, and small stones. Exactly when and who built the temple is not known. However, the location of this temple adjacent to the Pancharatna Shiva Temple, built in **1823-1830 AD**, suggests that it may have been built by the Pancha Ani kings at the same time as the Pancharatna Shiva Temple, i.e. in the first half of the nineteenth century.

The temple is completely octagonal. Its topography is divided into two parts, the sanctum, and the circular verandah. First, the temple is placed on a low octagonal foundation or platform. The length of each side of the octagon of the Plinth is 19'-6". The veranda is 4'-4" offset from the plinth edge. The width of this verandah is 7'-6" from the main sanctum in the middle and each arm of this octagonal row measures 16'-0". The pillars of this octagon have six surfaces and are exposed by grooves. The pillars are built-in Doris style. The inner surface of the perimeter veranda is covered with a barrel vault roof. The main sanctum is built on a 4'-0" thick octagonal wall. Each side of the octagon inside the sanctum measures 5'-10" and the distances of the east-west and north-south arms are 14'-6" respectively. The **Ratna** of the temple is placed on top.

The **Ratna** is also built to the size of the sanctum sanctorum and each arm of the **Ratna** is exposed by eight grooved paths or openings. The upper part of the **Ratna** is covered with octagonal domes. There are two niches on the southern walls and three niches on each wall on the west side of the northern entrance. At Both of the entrances, the slabs and the lower part of the plaque are made of stone. The floor of the sanctum sanctorum (Garbhagriha) and the verandah are covered with plaster. The cornice around the roof is built with an octagonal flat roof. (Rahman K. M., 2017)

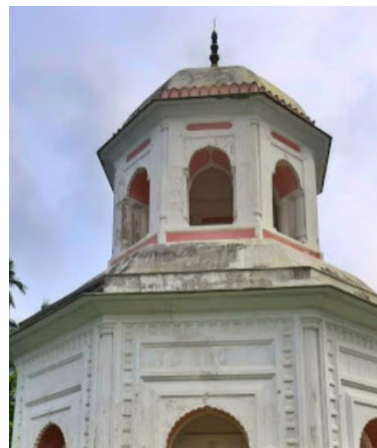
Decoration

The interior of the sanctum sanctorum of the temple is covered with plaster other than any kind of ornamentation. There is a rectangular vertical plane with a pseudo recessed arch at the base of each side of the octagonal wall on the outside of the sanctum sanctorum and a floral design at the apex of each arch. Beneath that **khajkhillan** or pseudo recessed arch, there is another simple surface of a pseudo recessed semicircular arch. Above this panel are two rectangular horizontal panels. At the two entrances to the sanctum sanctorum, a serpentine frame and a **khajkhillan** or pseudo recessed arch are carved between the squares. Each arm on the inside of the open octagonal row (inside the perimeter porch) is arranged in a rectangular horizontal panel and has an arch carved in the middle. However,

the exquisite ornaments of this temple have been created on the outer face of the house, i.e. each exterior of the octagonal arm is decorated with very attractive ornaments. Each arm is covered in rectangular vertical and horizontal panels from the beginning of the arch to the cornice above. At the top of each groove of the two columns, seven rows of semicircular grooves are dug in one rectangular horizontal panel, and fourteen rectangular panels at the side and six of them are carved on the top of the panel. The beauty of every facade of the temple has been greatly enhanced. Inside the tiny panels, the combination of different floral designs engraved in a subdued pattern is truly amazing. The arched pillars of the temple are decorated with veneer designs and the bottom with serpentine designs.



(a) West Elevation



(b) Ranta



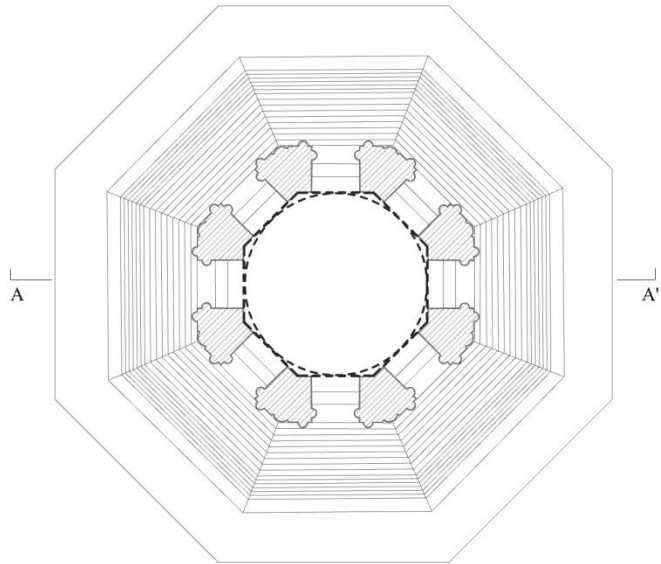
(c) Entrance Door to Garbhagriha or main sanctum
Source: Author's Collection; Site Survey



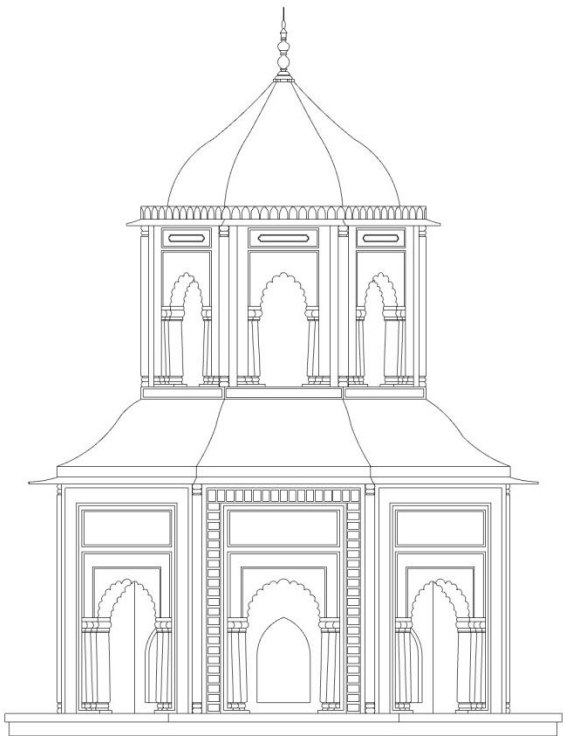
(d) View of Veranda outside main sanctum
Source: Author's Collection; Site Survey

Figure 43 : Photos Of Ek ratna Temple
Source: Author's Collection; Site Survey

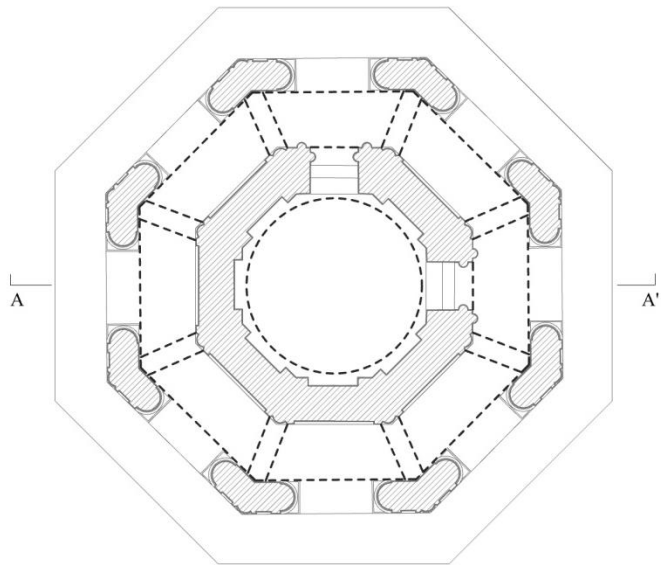
CASE NO_07 EK RATNA RATHMANDIR



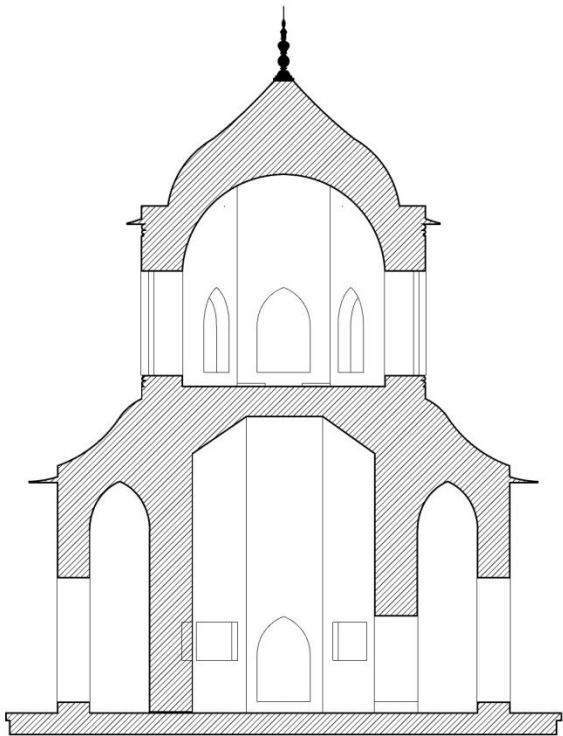
1ST FLOOR PLAN



ELEVATIONS



GROUND FLOOR PLAN



SECTION AA'



EKRATNA RATHMANDIR

Plate 8 : Ek ratna Temple
Source: Prepared by the Author ; Site Survey

3.4.8 CASE 08: PANCHA RATNA SHIVA TEMPLE

This huge Shiva temple is located on the east side of the main gate of Puthia Rajbari (Puthia Bazar) on the banks of Shiva Sarabar (Shivsagar in the local language). ***L.S.S. O'Malley*** and ***Bimalacharan Maitreya*** refer to it as the Bhubaneswar Shiva Temple. It is the tallest and largest of all the temples in Puthia. *Rani Bhavanmayi* built the temple for three lakh rupees at that time.

A sandstone inscription at the north staircase on the high platform of the temple mentions that its construction began in 1823 AD and was completed in 1830 AD. According to another inscription on the south wall of the temple, Queen ***Bhubanmoyee***, the consort of ***King Jagannarayan***, built the temple for seven years and placed Bhubaneswar Shiva there for the welfare of his dead husband. Three lakh coins were spent on its construction at that time. The Puthia dynasty gained special fame for her pious and philanthropic deeds. She managed the zamindari of Puthia from 1820 to 1847 AD.



Figure 44 : Pancha Ratna Shiva Temple

Source: <https://www.google.com.bd/maps/place/Siva+Temple/@24.3639736,88.8370626,3a,75y,90t/data=!3m1!1e2!3m1!1sAf1QipOomOXZDSPx-IQRymHkoPaxXQXOnk-hlIHwqj2e1o!1s3e2!6tshts?gl=2FzFl5.googleusercontent.com&hl=2f6FAF1QipOomOXZDSPx-IQRymHkPaxXQXOnk-hlIHwqj2e1o!1sHwqj3dW2o3!1s14-k-7n!1s20!1s801!1s0!1s0!1s0cJfe9c08eface22ab:0xc0d27767d1a5d898!8m2!3d24.3639736!8d88.8369838!7t=en&usq=3d=203>

The temple is made entirely of bricks and limestone. The use of stones is also observed in some places especially on the entrance door of the temple. The plan of the temple is square. The entire temple is

mainly divided into two parts. The first is the outdoor platform and the second is the main temple. The first part is a large square platform with a height of 11'-6 ". The dimensions of each side of the platform are 65'-0". At the top of this, there is another square platform measuring 46'-3 ". With a height of 2'-3" from the surface of the platform and the distance of the second platform from the edge of the first platform is 9'-6 ". The spaces are arranged according to the position of the main sanctum sanctorum which is located in the center.

The temple is generally divided into nine rooms, but except for the main sanctum sanctorum in the center, all have open verandas. The main sanctum is square in plan. Each of the inner arms of the sanctum sanctorum measures 14'-3 ". Outside the sanctum are four small square rooms measuring 8'-2" at the four corners of the stage and four rectangular rooms measuring 16'-10 " x 8'-4" in the middle at each side of the sanctum sanctorum. These rooms are open and each room is connected by a semicircular archway.

The square rooms of the corner are open by two arches and the rectangular rooms in the middle are by three arches. The outer open rooms were originally designed as a continuous verandah surrounding the sanctum sanctorum. The interior of the main sanctum sanctorum and the small square rooms at the four corners are covered with a low dome, which is covered with a pandantif method, but it is not visible from the outside. Because the outer shape is covered with five *ratnas* or peaks or kiosks which have been placed above the dome of the chambers. The *ratnas* or kiosks above the main sanctum are the largest ones and the other four are relatively the same small size. On the other hand, the inner surface of the four rectangular open rooms is covered with a chauchala roof, but they are also out of sight as the outer part is leveled. The cornice of the temple is enlarged (plastered with molded designs) on the front through periodic expansion.

The temple has twenty matte pillars and four posts. Twelve of the pillars are rectangular and strong and the other eight are square. The rectangular columns measure 5'-8 "x 3'-4" and the square middle columns measure 2'-9 ". The four posts are attached to the outer four corners of the sanctuary. The distances of the square pillars are 2'-6 " and 3'-0" respectively. On the four square rooms of the temple, four *ratnas* or peaks resembling small temples have been built separately on four squares of equal size. *Ratnas* has two open grooved entrances. The inner surface of these four *ratnas* is also covered with small domes and some of the pinnacles have been placed in a well-arranged manner at the tops. The four corner *ratnas* have a total of 68 pinnacles where each of the *Ratna* consisted of 17 pinnacles. There are 8 images of Manasa and the central *ratna* has 109 pinnacles. At the apex of each *ratna*, a trident was placed as a finial. There are eight crocodile-shaped drainage pipes around the cornice to drain water from the roof of the temple.

There are three entrances (3'-6" x 7'-0") on the east, west, and south walls to enter the main sanctum sanctorum. The south door is used as the main entrance to the temple. The lower part of the south and

west entrances, the two sides, and some parts of the upper part (square) are made of stone and the front part is surrounded by a protruding **khajkhillan** (grooved rectangular doorway with a semicircular pointed arch) decorated with stone pillars. The entrance to the east wall of the sanctuary is similar, but no stone was used. Wooden scales have been used at the entrance. A 1'-4 " wide stone slab has been installed on the inner walls of the perimeter verandah as a damp-proof course. The floor of the sanctum sanctorum is now covered with plaster, but it is known that it was formerly covered with stone. In the center of the floor of the sanctum sanctorum is a huge black Shivling made of Kasti stone. This Shivling, one of the largest in Bangladesh, is now being worshiped with devotion. After the idol was uprooted in 1971, it was restored to its proper place in 1976-77 under the leadership of Arani's saint Pagla Baba (real name Jitendranath Chowdhury).



Figure 45 : Drone view of Pancha Ratna Shiva Temple; Google view

Source: <https://www.google.com.bd/maps/place/Roth+mondir/@24.363871,88.8373113,3a,75y,90t/data=!3m8!1e2!3m6!1sAF1QipPNhrf89u6kboxDz-FlodcksYqXNqo9OuryHDCk!2e10!3e12!6shttps://www.googleusercontent.com/%2Fp%2FAF1QipPNhrf89u6kboxDz-FlodcksYqXNqo9OuryHDCk%3Dw203-h114-k-no!7!1920!8!1080!4m7!3m6!1s0x39fc09a69ac73427:0xb7c9b412c36e0c52!8m2!3d24.3638492!4d88.8373047!14m1!1BCglgAQ?hl=en&authuser=0>

There are two staircases on the north and south sides for climbing on the high platform of the temple. The wide 26-step stone staircase to the south did not exist before. It was built around 1928-30. The staircase is built on iron beams and is surrounded by two iron railings built-in. Although the 14'-0 "wide staircase was later added, it greatly enhanced the beauty of the temple in addition to facilitating the ascent and descent to the temple. It is said that there was a water clock, operated by an Acharya Brahmin, which is not present now. (Rahman K. M., 2017)

Facade Decoration of the temple:

Both the interior and exterior of the temple are covered with plaster. Inside the sanctum, there are six rectangular vertical panels in the shape of grooves on each side of the three entrances and a

rectangular horizontal panel at the top of the entrance. At the top of the inner face of the central dome is a hanging lotus flower carved in plaster. Moreover, there is a half-broken Ganesha idol made of plaster on top of a rectangular vertical panel in the middle of the west wall of the interior of the sanctum sanctorum.

On the outside of the sanctum sanctorum, two vertical rectangular panels (8'-3") on both sides of the entrance to the west and east walls have small grooves in which the statues are placed in a sculptural manner. At present, all the statues are in ruins. Of these, only the peacock-seated Kartik idol on the north side of the west wall and the Vishnu idol seated on an eagle on the south side of the east wall, and the Shiva idol on the northern side can be easily identified. Although it looks like an entry in the middle of the north outer wall of the sanctum sanctorum, it is just a rectangular vertical closed panel.

On either side of the panel are two half-broken statues, one on the east and one on the west. The western idol of them is a reflection of the medicinal mountain (Gandhamadan) in the hands of Hanuman. The identity of the statue in the eastern part is not known as it has been completely broken. Next to the main entrance of the south wall, there are two similar rectangular vertical closed panels with grooves, in which there is a scene of flowers and herbs decorated in tubs in a subdued manner on the plaster. In all the open spaces in the temple, the semicircular grooves have risen in three consecutive steps, greatly enhancing the beauty of the arch. At the apex of the arch are carved one flower at a time.

The decoration of the open square rooms in the outer four corners of the sanctum sanctorum is of a slightly different nature. These rooms have arched ornaments in the middle of the Pandantif built on the upper part of the interior. These decorative arches have vertical panels on the inside. However, the panels of the two square rooms on the south side of the sanctum sanctorum are decorated in blue and the panels on the two rooms on the north side are decorated in white. The lower part of the dome of each square room is decorated with dental designs, rows of active flowers, rope brackets, and serpentine on it. At the apex of the inner part of the dome, there is a flower design. On the other hand, in the middle part of the four open rectangular rooms around the sanctum sanctorum, a rectangular panel in the middle of the vault has three flower designs. The exterior of the temple is completely covered with plaster. The front of the wide pillars is covered with rectangular vertical panels. Deep in the center of the lower panel, a plaster sculpture has been placed inside the groove. The idols are undoubtedly the deities of the Hindu community. But due to lack of proper care, they could not be identified. The small arches on either side of the statue are gilded and decorated with veneer designs and serpentine spots. The lower part of the offset of the outer verandah of the temple and the lower part of the stone slab at the entrance of the main sanctum is decorated with dental designs.

The beauty of the temple has been enhanced by the five **ratnas** of the temple and the successively ascending pinnacles on top of the **ratnas**. The central **ratna** is larger than the other four gems. There

are a total of 177 pinnacles in five gems. From a distance, the pinnacles are visible like a honeycomb. The tops of each pinnacle were once covered with brass sheets, but are currently not observed in all but the top five pinnacles of the five **ratnas**. However, each pinnacle currently exists in a highly damaged condition. When the top of the main **ratna** of the temple collapsed in about 1883 AD, an old craftsman from Varanasi came and rebuilt it. (Rahman K. M., 2017)



The inner side of the roof , Corner open veranda



The inner side of the roof, Middle Open Veranda



Inside main Sanctum; 9' high Shivling



Front Door Of the main Sanctum



Water Drainage from main sanctum

Figure 46 : Arches and Inner roof of the Rectangle and Square rooms of the veranda

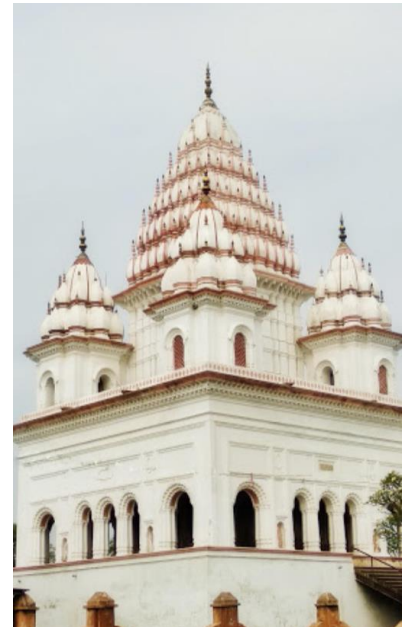
Source: Author's Collection; Site Survey



Exterior façade of the veranda Tri-arched

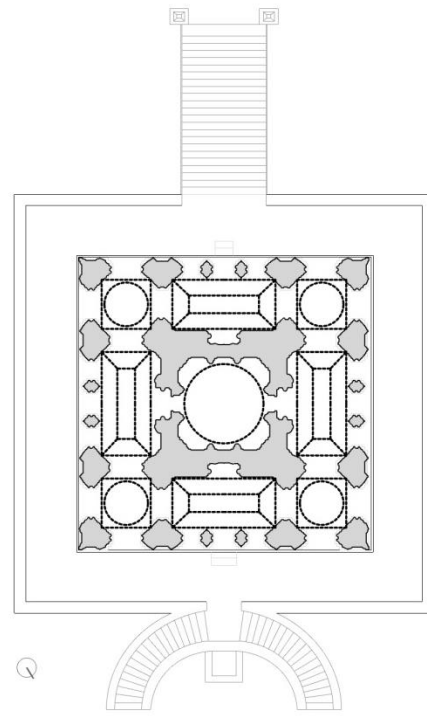


Arch details

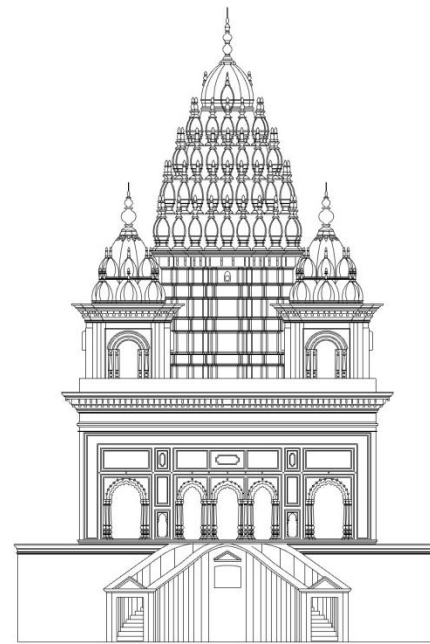


*Figure 47 : Details of Pancha ratna Shiva Temple
Source: Author's Collection; Site Survey*

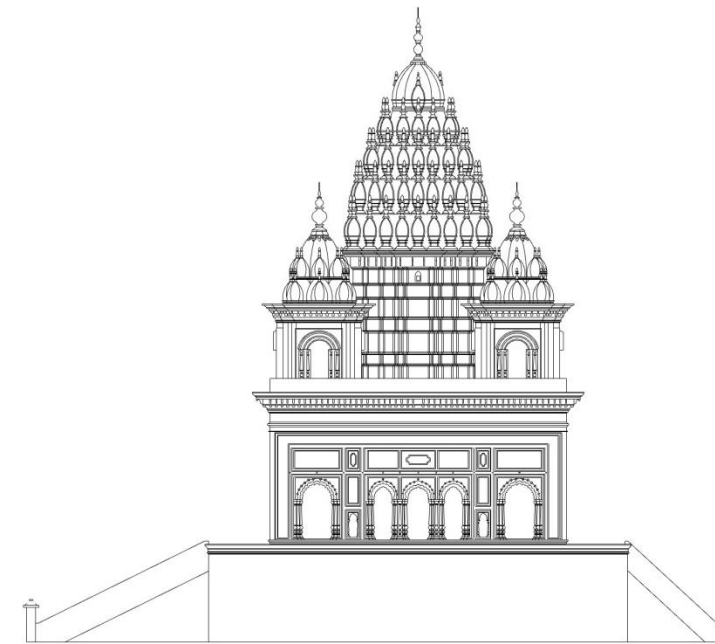
CASE 08_PANCH RATNA SHIVA TEMPLE



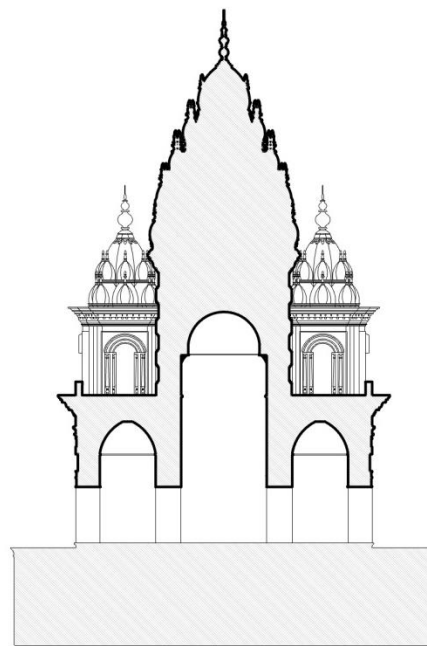
Plan



North Elevation



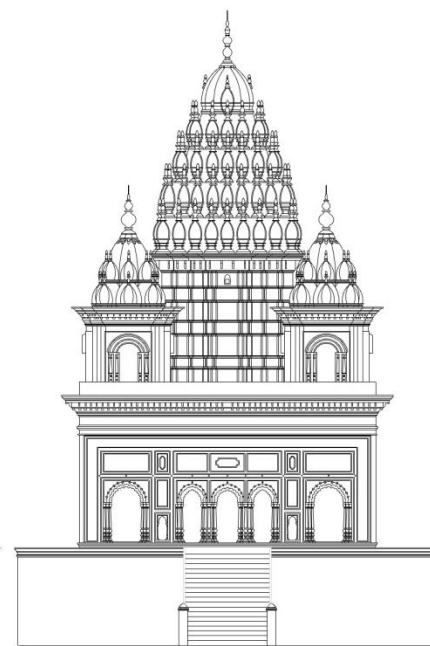
East Elevation



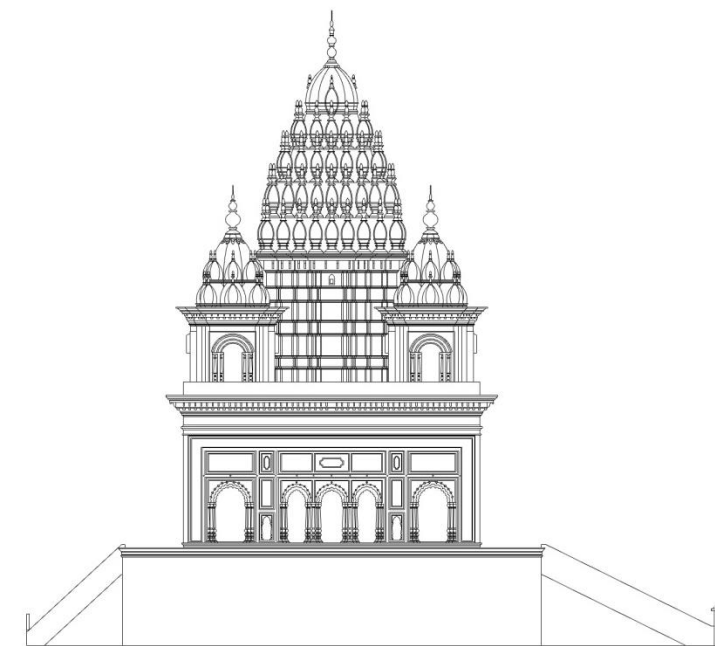
Section



PANCH RATNA SHIVA TEMPLE



South Elevation



West Elevation

Plate 9 : Pancha Ratna Shiva Temple

Source: Prepared by the Author Reference: Haque, Saif Ul . (1997) Pundranagar to Sherebanglanagar: Architecture in Bangladesh. Dhaka, Chatana Sthapatya Unnoyon Society.

3.4.9 CASE 09: PANCH RATNA BORO GOVINDA TEMPLE

The temple is located in the eastern courtyard of the Panch Ani palace in Puthia, i.e. in the courtyard of Gavindbari. The locals call it **Boro Govinda Mandir**. Probably the reason for this is that there is a Chauchala Govinda temple in the Vita of Char Ani Raj of Puthiya. Probably the reason for this is that the Chauchala Gaevinda temple (described earlier) in the Vita of Char Ani Raj of Puthiya is smaller in terms of shape and size than this Govinda temple.

But Bimalacharan Maitreya in his book mentions this temple as "Gopal Temple". According to him, when entering the Gavind house of the five Ani kings, the north vita seen on the left, there was an ancient Govinda temple with a single peak before the determination of the division of lands between the zamindars (*sharikana*), and there was another temple in the western vita in the form of a Bengali house. O'Malley mentions in his Rajshahi District Gazetteer the Govinda Temple. However, both the temples are now extinct. Except for the high mound, no other corner of the temple can be found. According to Bimalacharan Maitra, when **Govindaji** (idol of God) came to the palace of Panch Ani, **Gopal** (idol of deity) used to stay in the temple. This means that since the destruction of the two temples, the temple has become known to the local people as the Govinda temple, where the Govinda (idol of deity) is worshiped. The exact date of construction of the temple is not known due to a lack of written information. However, Bimalacharan Maitreya mentions in his text that there was a ruined inscription at the top of this temple. The inscription is now ruined. He recovered some of the nearly extinct inscriptions and mentioned them in his book.



Figure 48 : West Elevation Of Pancha Ratna Boro Govinda Temple
Source: Author's Collection; Site Survey



Figure 49 : View from the Inner Panch Ani Palace
Source: Author's Collection; Site Survey

The exact zamindari period of King Premnarayan is not known. However, as far as is known, his father Naranarayana was the zamindar of Puthia during the reign of Subaddar Murshid Quli Khan

(1717-1727) and during the reign of his son Raja Anupnarayan, the zamindari of Puthia was divided into four parts in 1744 AD. It appears from these two periods that Raja Premnarayan built the temple after the Kantjir temple at Dinajpur in the first eighteenth century (1704-1722). If this information and conjecture given by Bimalacharan Maitra are correct as this temple was built, the temple was built at some point in the third or fourth decade of the first half of the eighteenth century and he managed the zamindari of Puthia in the third half. It is considered to be a historical observation.

There are many instances of **Ratna** or Shikhar temples in both East and West Bengal built in the Middle Ages. However, the construction of such temples outside Bengal is not very noticeable. It has already been mentioned that these temples are known by different names according to the number of *ratnas* or peaks. The **Ektratna** temple does not seem to have gained much popularity in Bengal. Among the existing examples are Chanchra Shiva Temple, Abhaynagar's Boro Temple, Naldanga's Gunjanath Shiva Temple, and Baghutia's Temple. However, there are many examples of the construction of octagonal temples in Bengal in the late middle Ages. In this case, it should be noted that the predominance of such octagonal temples is more in East Bengal than in West Bengal. For example, the Ganesha temple in Jhenaidah (1680), the Laxminarayan temple in Mohammadpur (Jessore) built by Raja Sitaram Roy, the Kanainagar temple built at the same time, the Shiva temple in Ullapara in Pabna, the octagonal temple of Rani Bhabani in Baranagar are notable.

Later, among the Pancharatna temples built in the first half of the eighteenth century, the Pancharatna temple was built by Ramprasad Roy at Japsaya in Bikrampur, the famous Hare Krishna temple at Kanainagar near the capital of Raja Sitaram Roy of Jessore, the Mahadev Temple at Jhenaidah (1733) and the Pranagopal Temple (1745) built by Raja Ramnath Roy at Gopalganj in Dinajpur are notable. Following the Pancharatna temples built in the first half of the seventeenth and eighteenth centuries, the Pancharatna Boro Govinda temple in Puthia and the other two temples were built.

The temple is built with brick and lime. It is built on a 3'-3 " high square platform measuring 46'-6 " to the north-south and 47'-3 " to the east-west. The main temple is located 3'-9 " to the west from the edge of the stage and 3'-3 " to the east, north, and south. According to the arrangement, the temple is divided into five square and four small rectangular rooms. The main sanctum sanctorum (larger square) is placed at the center with four small squares at the four corners and four rectangular chambers at the four sides.

The four small rectangular rooms are mainly used as corridors of the temple. The internal dimensions of a square womb (**Garbhagriha**) are 10'-9" x 10'-9 " and the four small square cells are 5'-0" x 5'-0 ". On the other hand, the internal dimensions of the four rectangular corridors are 19'-0" x 5'-7". There are four archways (2'-9 'x 6'-6' ') to enter the sanctum sanctorum. The interior of the sanctum sanctorum is covered by eight niches on each side of each entrance and the upper surface is covered by a small semicircular dome. The inner surface of the upper part of small cells is covered with small

semicircular domes and the upper part of the rectangular corridors is covered with arched vaults (V-shaped). However, the tops of these domes are not visible as they are covered with a flat roof and five stones are made on the top of that flat roof.

Among the smaller square cells, the south-west corner room of the sanctum sanctorum is connected to the rectangular corridor by two open arches facing north and east and the southeast corner room has the same configuration with two open arches facing north and west. On the other hand, the northwest corner of the sanctum sanctorum is connected to the rectangular corridor by two open arches facing east and south and the north-east corner cell is connected to the rectangular corridor by two open arches facing west and south. In the four rectangular corridors on the outside of the sanctum sanctorum, there are three open semicircular grooved arches arranged on two pillars.

There are five **ratnas** (kiosks) on the second floor of the temple in keeping with the layout of the ground floor plan below. The inner surface of the five **ratnas** is covered with low semicircular domes like the lower chambers and consists of a pyramid-shaped chauchala roof. There are four open arches on each side of the four-cornered small **ratnas**, including the large one in the middle. However, on the outer wall of the central **ratna**, there are two closed arches (arch-shaped panels) on each side of each entrance inside of the gem. Each niche is built into a vertical rectangular structure.

Adjacent to the south entrance of the sanctum sanctorum is a narrow staircase (2'-3 " wide) to reach the second floor of the temple. But at present, this staircase is closed and it is not possible to go up. Among the **ratnas** on the second floor of the temple, there are a total of seventeen top bars, two on each side, four on the four corners, four on the top of small ratnas, and the last one on the top of the central ratna. This curved cornice temple is still worshiped with devotion. In the sanctum sanctorum of the temple, full-length idols of **Sri Govinda**, **Sri Radha**, **Sri Gopala Srinitali**, and **Srigaur** are placed on wooden square swings. (Rahman K. M., 2017)

Facade Decoration of the temple:

The inner walls of the main sanctum sanctorum and the small square chambers of the corner are completely covered with plaster. However, inside the main sanctum, there were eight elephant heads; a rectangular vertical panel is at the top of the four entrances. The surface of these panels is semicircularly arched. The entrances to the small rooms are grooved and the entrance is paved with stones.

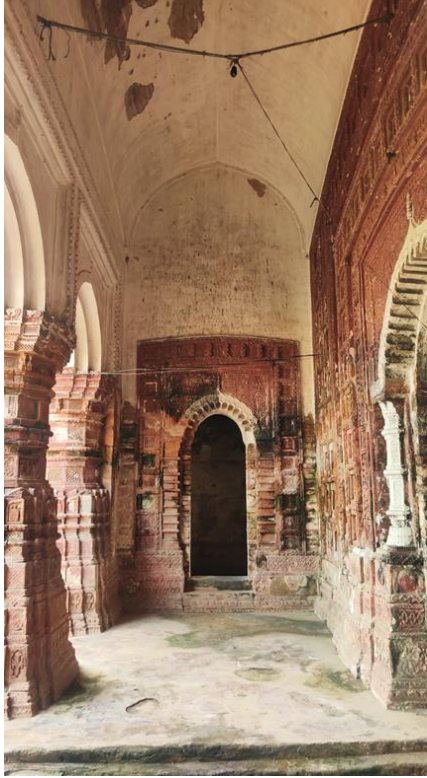
The exterior wall of each side of the main sanctuary is decorated with exquisite terracotta plaques in box-shaped grooves. The sculptures carved on the terracotta plaques on the outside of the west wall of the sanctum sanctorum depict Radhakrishna, the meditating monk, the blossoming lotus flower, and the herbaceous plant on both sides and above the entrance. In a rectangular space at the top of the

entrance, there are terracotta plaques with stories of Krishna, running horses, floral designs, and geometric designs on the pillars on both sides of the entrance. The exterior of the walls of the sanctum sanctorum is covered on both sides and above the entrance with terracotta plaques of Krishna images, running horses, floral designs, and the pillars of the entrance are covered with flowers and geometric designs. The outer walls of the eastern walls of the sanctum sanctorum are adorned with terracotta plaques emblazoned with flowers, Radhakrishna, elephant heads, horses, and herbs above the entrance. The decoration of the exterior of the north wall of the sanctum sanctorum bears a striking resemblance to the decoration of the east wall.

The north and south walls of the rectangular chambers on the west side of the temple have decorated terracotta plaques archways on both sides and on the tops which are adjoining with the small corner square rooms. Some parts of the east and south walls of the rectangular room on the south, i.e. on the archway of the square cell and on both sides are decorated with flowers, herbs, grooves, galloping horses, and terracotta plaques rich in geometric designs. Only a combination of floral and geometric designs, herbaceous and grooved designs exist on the arches above and the sidewalls of the north and south walls of the rectangular room on the east. The terracotta slab design on the west and east walls of the rectangular chamber in the north are similar to the design of the rectangular chamber in the east. The other parts of the walls of the four rectangular rooms are covered with plaster. Exceptional flower bracket designs exist just above the tri-archways.

However, the beautiful decoration of the temple has been created on the outside. Each facade of the exterior of the temple is divided into several panels and the panels are decorated with reddish terracotta plaques. Originally, this temple is the most attractive among the temples of Puthia in terms of decoration. The ornamentation of the Navaratna temple (1752) at Kantnagar, Dinajpur, bears a striking resemblance to the image carved on the terracotta plaque of this temple.

The special attraction of the innumerable terracotta plaques placed at the front of each house of the temple is the mythology of the Ramayana-Mahabharata and sculptures depicting various social events and animals. Along with passing various scenes of mythology in the decoration, various aspects of the social life of the then-rural Bengal have also been presented with the wonderful artistic craftsmanship. (Rahman K. M., 2017)



(a) The Inner Veranda Back Side _ East



(b) Columns Front



(c) Drainage System from main Sanctum

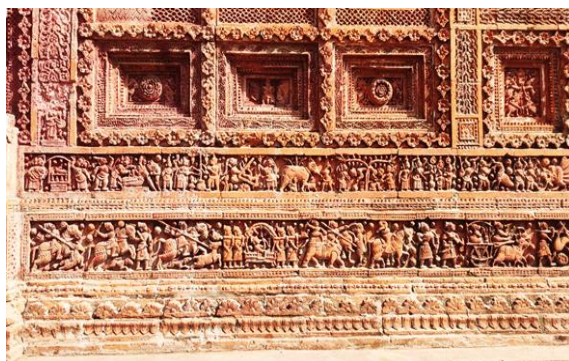


(d) Tulshi mancha at South

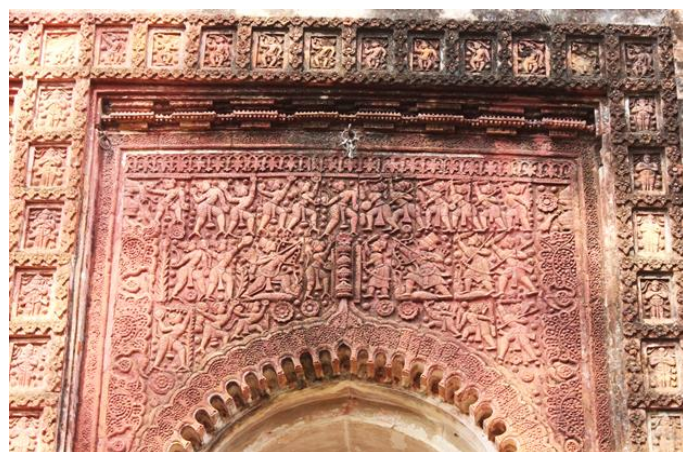
Figure 50 : (a)(b)(c)(d) Details of terracotta façade
Source: Author's Collection; Site Survey



(a) Front Facade Details Three Arch ways



(b) Mughal Soldiers in the terracotta Front

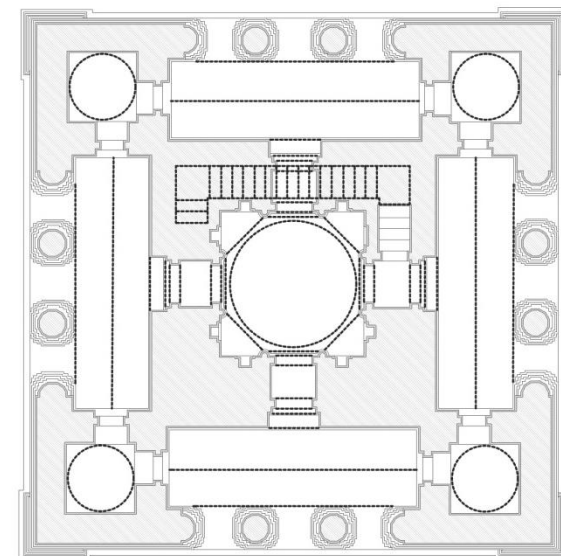


(c) Unit of terracotta

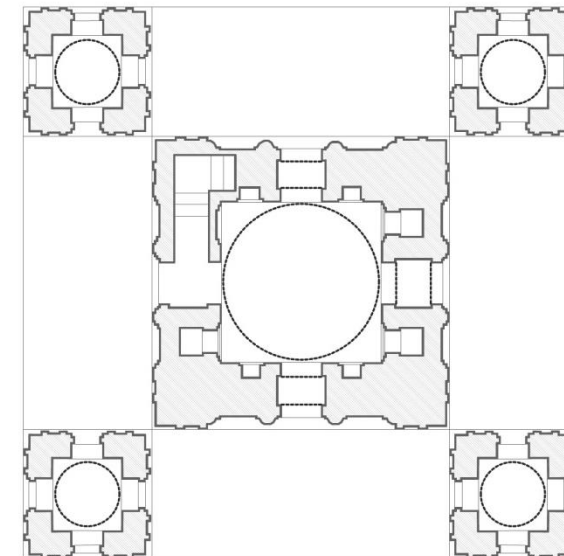
(d) Front Facade Top decoration on the Archways Ramayan

Figure 51 : (a)(b)(c) (d) Details of terracotta façade
Source: Author's Collection; Site Survey

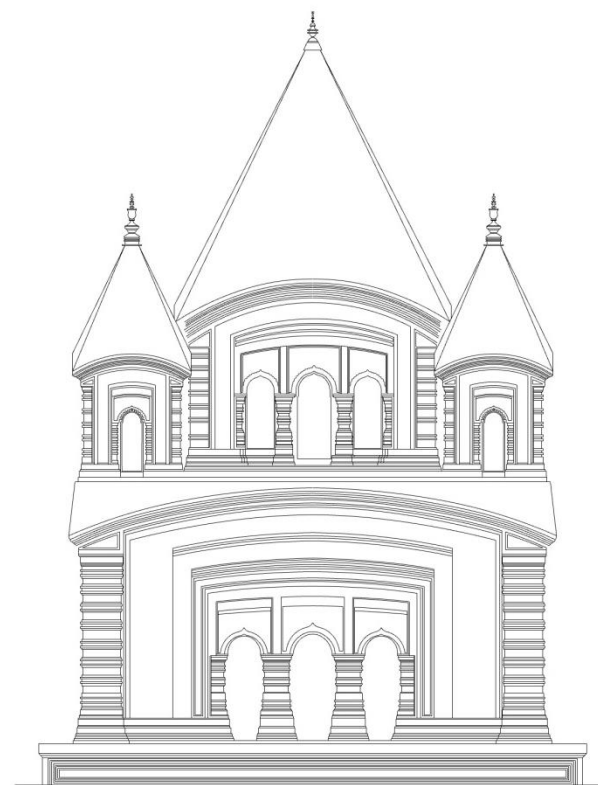
CASE 09_PANCH RATNA BORO GOVIND TEMPLE



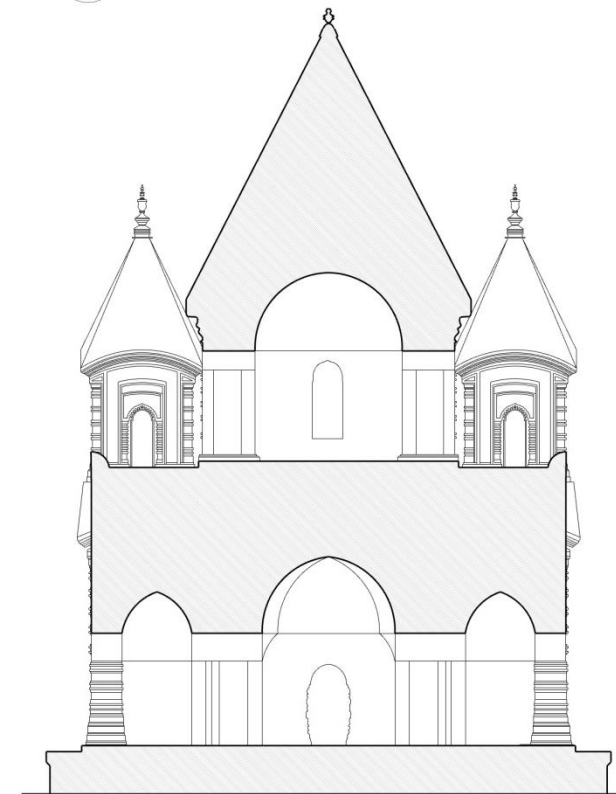
Ground Floor Plan



Second Floor Plan



Elevation



Section

PANCH RATNA BORO GOVIND TEMPLE

Plate 10 : Pancha Ratna Boro Govinda Temple

Source: Prepared by the Author Reference: Haque, Saif Ul. (1997) Pundranagar to Sherebanglanagar: Architecture in Bangladesh. Dhaka, Chatana Sthapatya Unnoyon Society.

3.4.10 CASE 10: FOUR-STORIED DOLMANDIR OR DOLMANCHA

Built on four levels, this high and huge *dolmandir or dolmancha* of Puthia is a remarkable example in the history of temple architecture in Bengal. It is slightly different than the other dolmanchas of Bengal built in the eighteenth and nineteenth centuries. This huge four-story building, which was gradually reduced in size, now exists in full size, except for a few ruins. The earthquake in 1886 AD did not damage its corners. The temple is located in the center of Puthia Bazar on the north side of the field in front of Panch Ani Rajbari. The entire building is made of bricks, limestone, and some stones.

According to an inscription on the temple floor, King Bhubanesndra Narayan is said to have built this hugely different temple in 1778 AD. At present the inscription is unreadable. The temples named Dolmancha, Rasmancha, and Tulsimancha are mainly associated with Krishnalila. The presence of such a building can be noticed in the area where Krishna is worshiped. The infrastructure of Rasmancha is usually octagonal and the other two are square. The building of a Rasmancha is bigger than the Dolmancha and the Dolmancha is bigger than the Tulsimancha. The dolmanchas are usually built in the form of *charchala* and *Pancha Ratna*. However, there are examples of pavilion-shaped *dolmancha* being built step by step. In this context, the *dolmancha* of Mohammadpur built by Sitaram Roy can be mentioned. Moreover, a three-storied *dolmancha* similar to the four-storied *dolmancha* of Puthia is observed in Pabna. The architecture of these two buildings is reminiscent of the history of the construction of a Buddhist temple at Paharpur in the present-day Naogaon district. The ancient Babylonian Zikkurat temples also had square steps with similar steps. However, Inside Kotla, India there is the three-storied Lat Pyramid by Firaz Shah Tughlaq (1351-137) which is to be observed as a square or multi-storied building in a decrepit pattern of the Puthiya Dolmancha and then the four-storied Mandvi building (1511) in Barada, Gujarat. This temple is very similar to the plan of construction of Panchmahal built later in Fatehpur Sikri. Like Panchmahal, an umbrella has been inserted over this temple in Puthia. The temple has four floors and is built in a square. The construction of the temple has been completed in four levels in a short range from the ground floor to the fourth floor. From the outside, the temple measures 69'-9 " x 69'-9 ". The four floors of the temple are discussed separately for the convenience of understanding.

Ground Floor

The arrangement of the 1st floor of the temple is divided into four parts. From the outside, the first and second part is the circular veranda, the third part is the small rectangular room located around the main sanctuary or central room and the fourth part is the main sanctuary or central room. In the first part, there are 28 open archways with seven on each side to enter this part. However, on the north-eastern side, closed three-arched closed panels are seen. The ambulatory veranda is again actually divided into eight open rooms. Among them, four 6'-6" squares are found at The four corners and the other four rectangles measuring 44'-0" x 8'-9 " are found at the four sides. The rooms are

interconnected by horizontally open arches. The inner surface of the upper part of the rectangular rooms is covered with a *chauchala* arched surface and the square corner is covered by octagonal domes. But the exterior of both the rooms is covered with a flat roof and the first floor of the temple is built upon the ground floor.

In the second part, the ambulatory verandah of this part is also open by five archways, five on each side, and like the first part, it is divided into eight open rooms. The four rooms of the quadrangle are square and the remaining four rooms between them are rectangular. Square cells measure 7' 6" x 7'-6" and rectangular cells measure 7'-2" x 24'-2". These rooms are connected by arches placed horizontally. Although the inner surface of both the square and rectangular rooms of this part is covered with a *chauchala* arch roof, the outer roof is flat. Each rectangular chamber has two ventilators. The third part, this part has four small rectangular rooms around the main sanctum. The chamber on the north side of the sanctuary measures 4'-4" x 16'-4", the chamber on the east measures 22'-9" x 4'-4", the chamber on the south measures 4'-4" x 12'-4" and the west The room measures 4'-4" x 12'-4". Staircases are leading up to the upper floor of the temple across some of the rooms on the south and west sides. The inner surface of the upper part of the chambers is covered with barrel vault-type arched roofs but the outer part is covered with a flat roof. There are vents on the east, west, and north walls of the north chamber wall, and on each side wall, there are small open windows. The walls of the east chamber have similar ventilators on the north and east sides, and on the south and east sides, there are two ventilators, and on the lower part, there are four small windows. Each room is open by an archway which is a total of four arches on four sides. There are stones at the bottom of the arches.

The fourth part, this part is the main sanctum sanctorum or central room of the hall. All the rooms are arranged by keeping this sanctum sanctorum in the center. The room is square. Each of its sides measures 8' -4". There are four open arches on each side to enter the room. The surface of the room is covered by a semicircular dome built in the *Pendantif method*, but the exterior is covered by a flat roof. The entire floor of the temple is covered with plaster. At present, most of the plaster of the temple has been demolished.

First Floor

The two-storied part of the temple is also divided into four parts. The first part is an open veranda or roof with a width of 8'-10" around the other three parts. The edges of the roof (above the cornice) are surrounded by a 2'-0" high roof. The second part, this part is an ambulatory verandah 2'-0" high and 6'-0" wide from the open verandah or roof of the first part. This verandah is also divided into eight rooms like the ground floor. Corner square cells measure 7'-2" and rectangular cells measure 24'-0" x 7'-2". The inner surface of the square rooms is covered with octagonal domes and the upper part of the rectangular rooms is covered with a *chauchala* arch roof but the outer part has a flat roof and a Second floor is placed on that. The four square rooms are surrounded by four and the rectangular

rooms by three semicircular grooved archways. The third part has a 4'-2 "corridor on three sides of the main sanctum, north, south, and east. The inner surface of the roof of the corridor is covered with barrel vault-shaped arches and these three sides are opened by archways. The south corridor has seven open windows, two on the south, two on the north, two on the east and one on the west, and a staircase on the west. The fourth part, this part is where the main sanctum or central chamber is located. This square room (8'-0 "x8'-0") has a total of four angular arches open with one on each side and the inner surface of the roof is covered by a semicircular dome.

Second Floor

The third floor of the temple is divided into three parts. The first part is a square open porch or roof with a width of 6'-6" like the first floor. The perimeter of the edge of the roof is surrounded by a 2'-0 " high cornice. The second part is an open veranda or a veranda 4'-2 "wide to the west, east, and south of the central room and 1'-0" above from the roof. The porch is open to the south with three grooved archways, one on the west, one on the east, and one on the north. To the north, there is the staircase to the fourth floor of the temple. The third part, this part is the central room on the third floor of the hall. This square room (6'-0"x7'-0 ") has four open angular archways around it. The inner surface of the room has an inverted gabled dome, but the outer part is covered by a flat roof.

Third Floor

This is the last level of the temple. This layer is divided into two parts. In the first part of the room is a square open veranda or open roof of 5'-5 "width. The edges around the roof are surrounded by a 1'-6 " high cornice. In the second part, the main sanctum sanctorum of the temple is located on a square foundation 1'-9 "above the open verandah or roof. There is an open archway with four grooves on each side of the room. Inside the room, there are four niches in each corner of the four walls. The surface of the room is covered with a large vein dome. At the top of the dome, there is a top iron bar on two brass pitchers, and the lower roof and cornice of the dome are curved like the huts of Bengal. There was an iron bar at each corner of the open veranda or open roof which is not present.

Facade Decoration of the temple:

The interior and exterior of the four floors of the temple are completely covered with plaster. However, plaster has fallen off in many places due to unused conditions and lack of care. Each archway of the temple is arranged in a rectangular structure and the arches are grooved and the top of the arch is decorated with a flower pattern. On the ground floor, only the wall of the rectangular cells are divided into eight rectangular horizontal panels and the transitional archways from the rectangular cells to the main sanctum sanctorum have designs on two rectangular vertical panels on both sides. Excavated arch patterns are also observed in the rectangular vertical panels on either side of the archway on each side of the exterior section.



View from front Road side



(a) Veranda



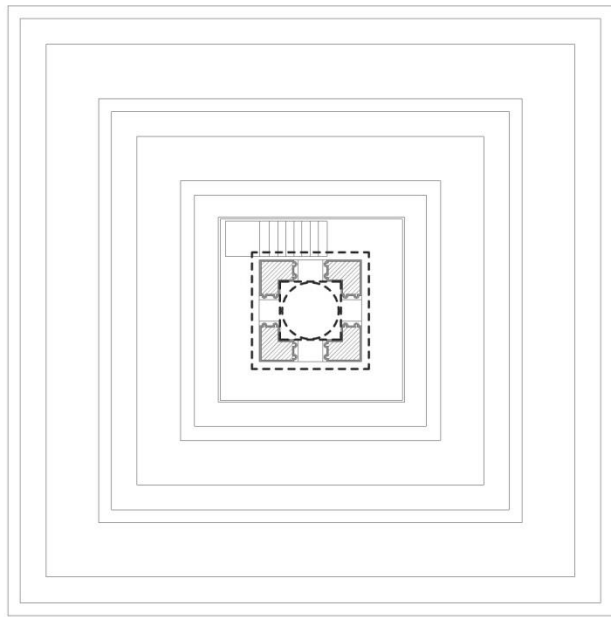
(b) Inner roof of corner



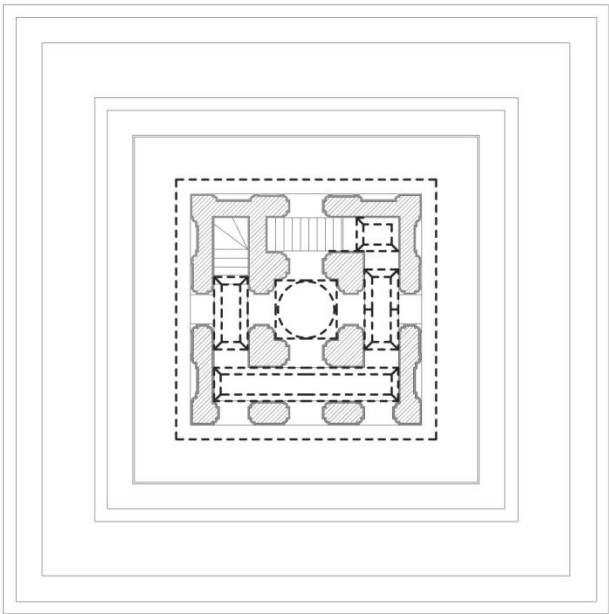
(c) Inner ventilator

*Figure 54 : (a)(b)(c) Interior photos of Dolmancha
Source: Author's Collection; Site Survey*

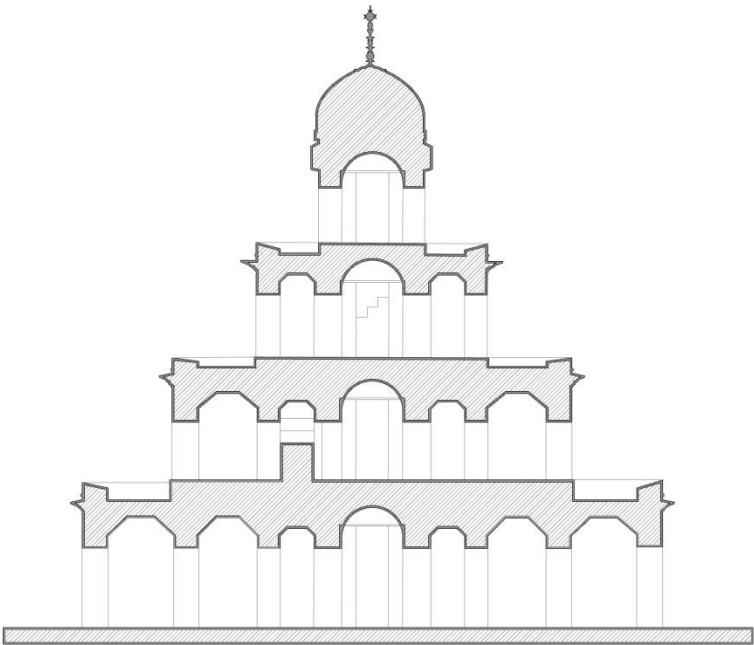
CASE NO_10 PUTHIA DOLMANCHA



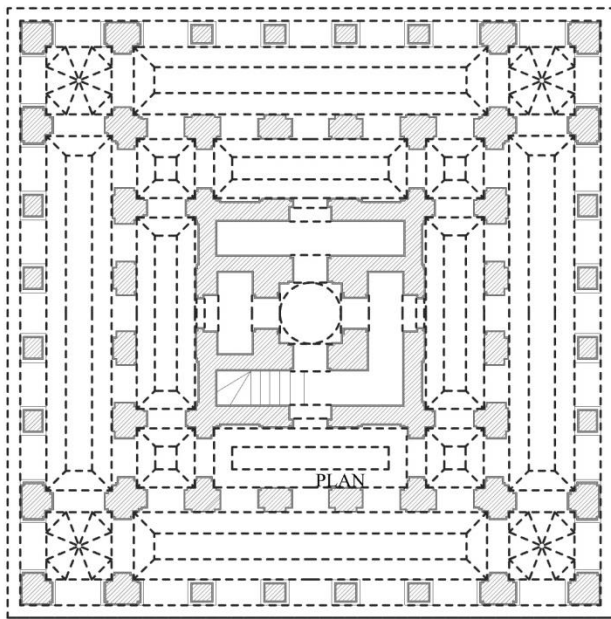
THIRD FLOOR PLAN



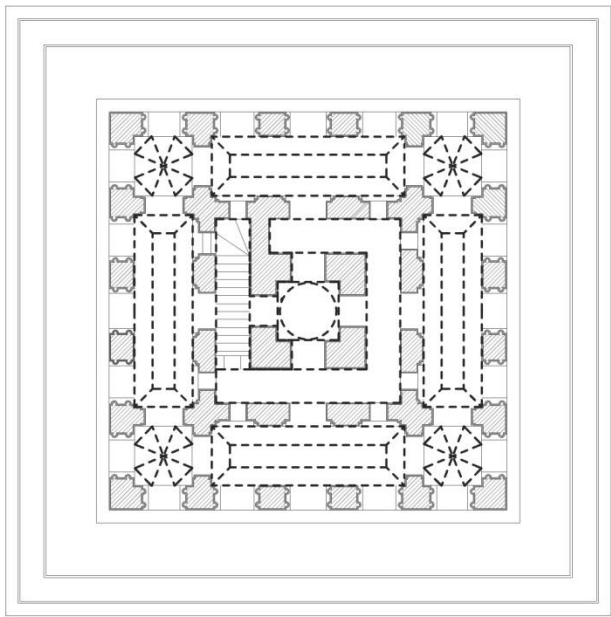
SECOND FLOOR PLAN



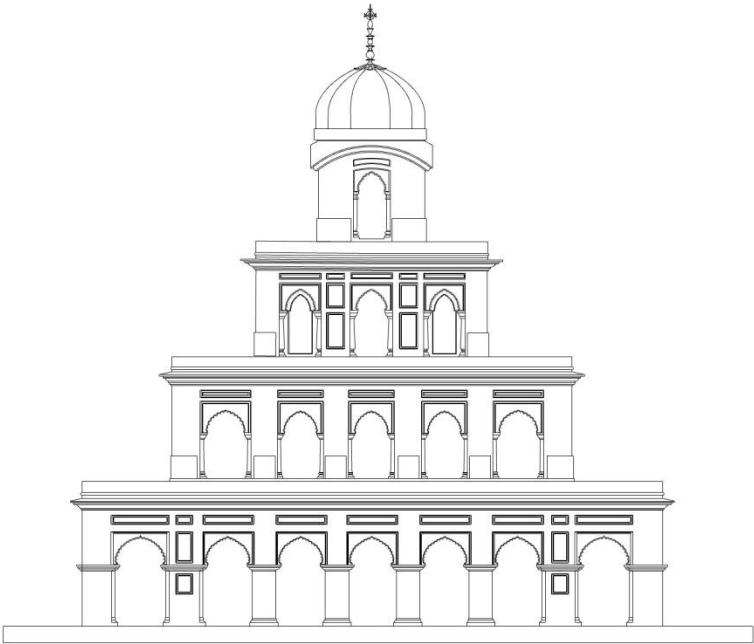
SECTION AA'



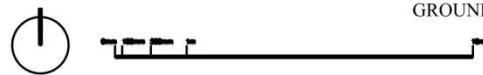
GROUND FLOOR PLAN



FIRST FLOOR PLAN



ELEVATIONS



PUTHIA DOLMANCHA

Plate 11 : Dolmancha
Source: Prepared by the Author Reference: Haque, Saif Ul. (1997) Pundranagar to Sherebanglanagar: Architecture in Bangladesh. Dhaka, Chatana Sthapatya Unnoyon Society.

3.4.11 CASE 11: RADHAKANTA TEMPLE TEMPLE

This two-storied temple is located on the northeast corner of Char Ani Choto Gavind Mandir on the west bank of Shyam Sarabar. It is also known as Radhakanta Temple. Brick, limestone, and wood have been used in the construction of the temple. The temple was built by *Char Ani* kings. But due to the lack of inscriptions in the corners of the temple and lack of written information, the exact date of its construction is not known. However, the structure of the temple suggests that it was built in the late nineteenth century. The very simplicity of the construction of the temple indicates the financial misery of the builders.

The temple is situated on a high rectangular platform. The stage measures 45'-9" east-west, 28'-0" north-south, and height 2'-9 ". The main temple is built 4'-1" away from the south and west ends of the stage. This extended part of the stage is mainly used as an open veranda. The temple's sanctum sanctorum is rectangular and measures 9'-4" in north-south and 17'-8" in east-west. The room has three entrances on the south wall and one each on the east and west walls. Of these, the western entrance was later closed. The entrances have semicircular arches. Of the three southern entrances, the middle one measures 2'-8 " x 5'-3 " and the two sides measure 3'-4" x 5'-3" and the two east and west entrances measure 2'-8" x 5'-3". Although the inner surface roof of the sanctum sanctorum is chauchala, the outer surface roof is flat and the second floor is built on it. There are three niches in the north wall of the sanctum sanctorum. The sanctum sanctorum is surrounded by a rectangular junction or corridor on the west, east, and south. The west and east corridors have two short ranges i.e. 9'-4" x 6'-4" and the southern one is relatively large i.e. 35'-10" x 6'-4".

The interiors of the corridors are connected by open arches. The front of the south corridor is flanked by three semicircular arches on two square pillars (2'-10" x 2'-10") and the east by an archway. On the other hand, there is a semicircular open archway at the front of the east and west corridors (east and west). The inner roofs of the corridors have a *slight quadrangle Chauchala*, but the outer ones are covered with flat roofs. To reach the second floor of the temple, a twenty-step staircase has been added from the outside to the west. Also, the cornices on both sides of the temple are simply built.

First floor, the two-storied part of the temple has a rectangular chamber measuring 10'-11" x 18'-11" above the lower main sanctum sanctorum. Three archways are measuring 4'-4" x 7'-0" to the south and 3'-0" x 7'-0" to the west and east. The 7' wide roof to the east, west, and south of the room is used as an open veranda. The floor height of the room from this veranda is 2'-10". The room has a two-step staircase to the west to ascend. There are also four closed arches on either side of the east and west archways of the room. The surface of the room is covered by a flat roof built on four strong wooden arches.

Facade Decoration of the temple:

The temple does not have much ornamentation. The walls (interior and exterior) of both the ground floor and the second floor are covered with a layer of plaster. The outer plaster is mostly peeling off. The interior of the downstairs sanctuary and corridors are divided into vertical and horizontal panels or sections. On the outside of the south wall of the sanctum sanctorum were three red terracotta plaques above the tri-archway. At present, the other two are destroyed except for the plaque in the middle archway.

The existing plaque has a beautiful portrait of the Krishna under a tree and Radha, the lover standing shyly with her head covered. The open arches of the temple are surrounded by rectangular sections. The east, west, and south facades of the temple are divided into vertical and horizontal panels from the bottom of the stage to the cornice. There are two closed arches on either side of the tri-arched doorway to the south house. Inside the two-story room, on the east and west walls of the room, two squares, two vertically on each side of the entrance, and the north wall, six horizontal panels (three above, three below) are observed horizontally. (Rahman K. M., 2017)

The three square and rectangular panels have a few floral designs at the four corners and inside. The bottom three rectangular panels have a total of fifteen niches where each panel contains five niches. The arched pillars are decorated with veins and the upper part of the arch is decorated with flower and herb designs. There are two flower designs at the two corners of the rectangular part of the surface of the arches of the house. At present, there is no worship in the temple.



*Figure 55 : South Elevation Of Radhakanta Temple Temple
Source: Author's Collection; Site Survey*



(a) Arch details



(b) Exterior Stair



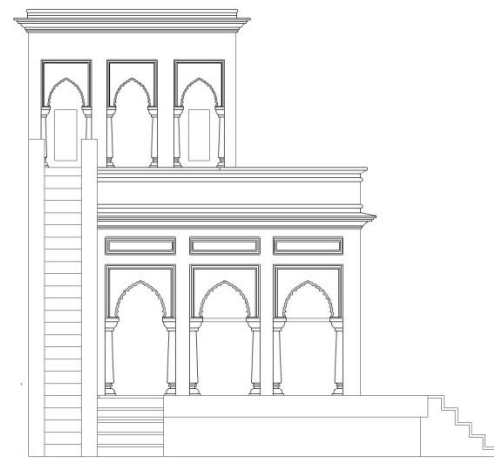
(c) View from East side



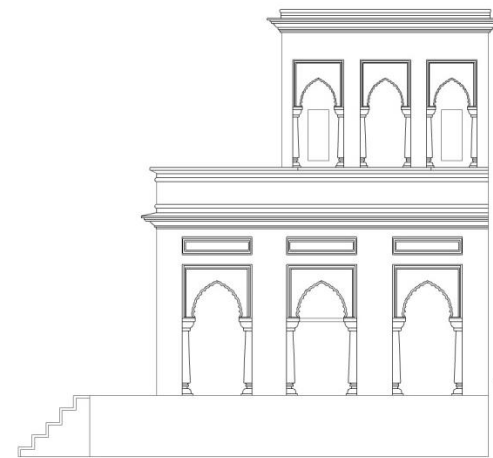
(d) First floor

*Figure 56 : (a)(b)(c) (d) Details of terracotta façade
Source: Author's Collection; Site Survey*

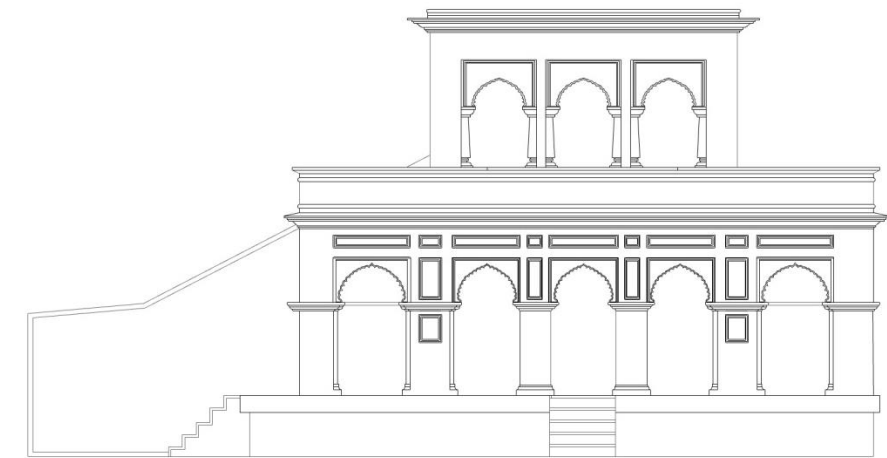
CASE NO_11 RADHAKANTA MANDIR



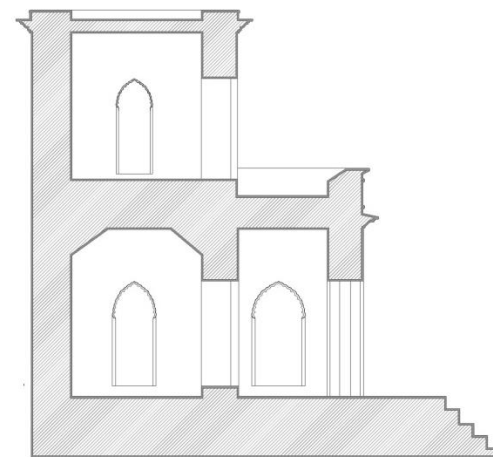
WEST ELEVATION



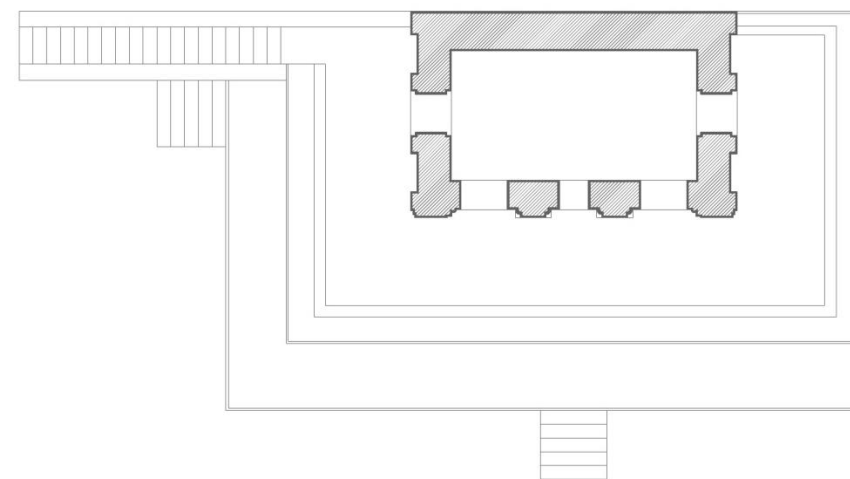
EAST ELEVATION



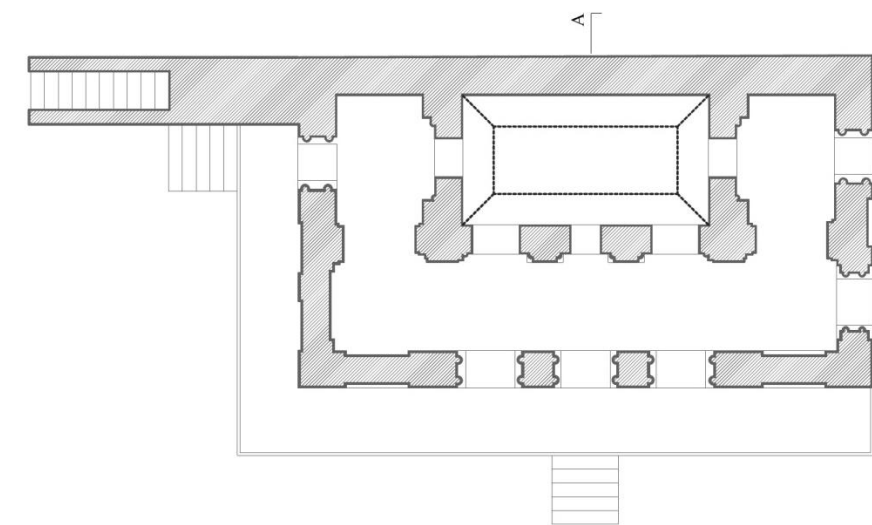
SOUTH ELEVATION



SECTION AA'



FIRST FLOOR PLAN



GROUND FLOOR PLAN



RADHAKANTA MANDIR

Plate 12 : Radhakanta Temple
Source: Prepared by the Author; Site Survey

3.4.12 CASE 12: TARAPUR TEMPLE

The temple is situated in a large pond at Tarapur, about three kilometers west of Puthia. Although it is known as '*Rath Bagicha Tarapur*', the two-storey building is now known to the locals as *Hawakhana*. According to local legend, in the summer, the four Ani kings of Puthia used to come to this building with their queens or concubines and return to the palace after enjoying the cool air for a while. But from the construction type of the building, it is easy to assume that it is normal to be a temple and not a ceremonial building. **Bimalacharan Maitreya** mentions in his treatise that in the ideal of Puri, Puthia also had a chariot road and a temple in the pool.

In support of his statement, the road from Puthia to Tarapur through the border of Kara and Krishnapur mouzas is now known to the locals as '*Rathgali*'. There are many examples of chariot festivals in Puthia from ancient times. There is even a history of many competitions between the panch ani and char ani zamindars of Puthia over the chariot festival and puja-parvan. This building built in the pool of Tarapur shows the easily conceivable history of competitions between the panch ani and char ani zamindars of Puthia. However, when the Rath festival was over, the building was known to the locals as *Hawakhana* because the Pramed Bilasi kings of Puthia (Char Ani) along with their queens or concubines enjoyed the cool breeze and enjoyed life in the building. The flat-roofed temple is made entirely of bricks and limestone.

It is not known exactly when the temple was built due to a lack of written information. However, **Bimalacharan Maitreya** mentions in his book that the festival of chariots was celebrated in Puthia even before the division of the Puthia dynasty, and the ruins of a temple called '*Rath Bagicha Tarapur*' still exist in the pool of Tarapur. The division of the Puthia dynasty took place in about 1744 AD. Therefore, if the information given by him is correct, then the building was built before 1744 AD, i.e. in the first half of the eighteenth century. But in terms of architecture, the building is believed to have been built in the last half of the eighteenth century.

The two-storied temple is built on a square platform right in the middle of a huge pool of about 8.33 acres. The stage measures 48'-6" x 46'-6" and its height from the water is 4'-0". The stage is built on 28 arches with 7 tunnel-shaped arches on each side. The main temple is located 5'-8" on each side from the edge of the stage. For the convenience of description, the temple is divided into two parts - the ground floor and the 1st floor.

Ground Floor, The entire building is almost square. It measures 37'-2" in the north-south and 35'-2" in the east-west. The only room or sanctum sanctorum of the temple and around the sanctum sanctorum is a narrow covered verandah in the middle. The size of the rectangular sanctuary is 16' x 9'-2". The room has three semicircular grooved open entrances (4'-0" x 7'-5"), one on each side to the north, south, and east. Although the inner roof surface of the room is covered with a chauchala roof, a

flat roof has been constructed on the outside and a two-storey part of the building has also been constructed over the flat roof.

The porch around the sanctum is 6'-9" wide on the east, 5'-0" on the north, 3'-8" on the west, and 5'-0" on the south. The inner surface of the verandah is covered with a trough (pointed barrel) vault roof. The verandas have ten open arches, three on the north, three on the south, three on the east, and one on the west. Adjacent to the west wall of the sanctum sanctorum is a narrow staircase of 2'-8" wide and 22 steps facing south to ascend to the second floor of the temple. The floor of the sanctuary and the veranda were once covered with plaster. At present all the plaster linings have been destroyed.

1st Floor, on the first floor of the temple, a single room is built on a high foundation or platform with a height of 3'-2" above the lower sanctum sanctorum. The chamber measures 16'-2" north-south and 10'-5" east-west. The room has a total of five *khajkhilans* (grooved rectangular doorway with a semicircular arch), three on the east wall and each one on the north and south walls. The inner surface of the room has a square chauchala roof but the outer part is covered with a flat roof.

The west wall of the room has a (2'-10" x 7'-7") khajkhilan (grooved rectangular doorway with a semicircular arch) or grooved entrance with a small rectangular secret room at the front. A wooden door was supposed to have been installed at the entrance. The secret chamber measures 1'-3" north-south and 2'-7" east-west. The inner surface of the room is covered with a trough (pointed barrel) vault roof, but the outer part has a flat roof. Probably the treasures of the temple were hidden in this secret room. The height of the second floor from the ground floor of the temple is 14'-18". This two-story room is surrounded by an open roof with a 2'-0" high parapet.

Facade Decoration of the temple:

The interior and exterior of the temple are completely covered with plaster. The inner walls of the downstairs sanctum sanctorum are divided into rectangular and vertical panels. Impressions of three circles in a row are observed in the middle of the Chauchala roof. It is speculated that a flower pattern may have been carved in the circles. But now that the plaster covers have been removed, the decoration on the corners of the temple is not noticeable. There are two rectangular horizontal panels at the top of the entrances to the inner walls of the porch and two at the outside. In addition, the exterior of the sanctum sanctorum has 12 arched panels, two on each side of the east entrance (inside the verandah), two on the north, two on the south, and two on the south each side of the west entrance. A flower design exists in the middle of the inner *chauchala* roof in the first-floor room.

The open arches of the room are arranged in six-step grooves. The two pillars between the three arches on the east side of the room are galvanized and veined. At the top of the arches, there are two chainrings at the two corners, which suggest that the privacy of the room is protected by hanging

curtains on the chains. There are a total of six arched panels, three arched panels on the west wall of the exterior of the room, one on the east side of the entrance to the north wall, and two on either side of the entrance to the south wall. Moreover, the lower part of the cornice on the outer side of the temple is divided into rectangular horizontal panels.

The archways on the temple's ground floor built-in are also believed to have had curtains in the past. Although the interior and exterior of this temple in Tarapur do not have many attractive decorations, the beauty of the building has been greatly enhanced by the fact that it is built in the middle of a pond. In the past, the building was used for boating, but now the aisle is being used as a means of transportation in the building as it is divided into an aisle in the east-west along the middle of the pool.

Many flat-roofed temples were built in Bangladesh during British rule. For example, Chandrabhairav and Yashareswari temples in Shyamnagar, Khulna, Krishna temple in Kaliganj, Gopal, and Vrindavan Bihari temples in Tarash, Pabna district, Bhangar Shyamnarayan temple in Faridpur district are especially noteworthy. However, unlike the *Gaopal or Radhakanta* temple of Puthia and the Tarapur temple with small infrastructures (rooms) or two-storied buildings on flat roofs is comparatively less in Bangladesh. David McCutchen gives examples of such temples in West Bengal, such as the Damodar Temple at Udayarajpur in Hughli and the Vishnu Temple at Kamarpukur (nineteenth century), the Radhakanta Temple at Bamanpara in Burdwan, and the Krishna-Ray (1793) Temple at Bhagalpur in Bankura.

However, the location of the temple in the center of the pool of Tarapur is quite fancy. It is not known that there is another such temple in Bangladesh. According to **Bimalacharan Maitra**, this temple was built in the style of the Puri temple. However, the tomb of Sultan Ghiyasuddin Tughlaq (1325) in the Indian city of Tughlaqabad was built in the center of an artificial reservoir. Later, the tomb of Sher Shah Suri (1540-1545) at Sasaram, the Golden Temple at Amritsar in Punjab (180), and the Jalmahal (1899) at the center of Mansagar or Mansarabar in the city of Jaipur in Rajasthan were observed. So the construction of buildings in artificial reservoirs is rare in present-day Bangladesh but it was prevalent in India in the past. (Rahman K. M., 2017)



Northwest view of Tarapur Temple or hawakhana



Arch Details



Stair on the West



Veranda



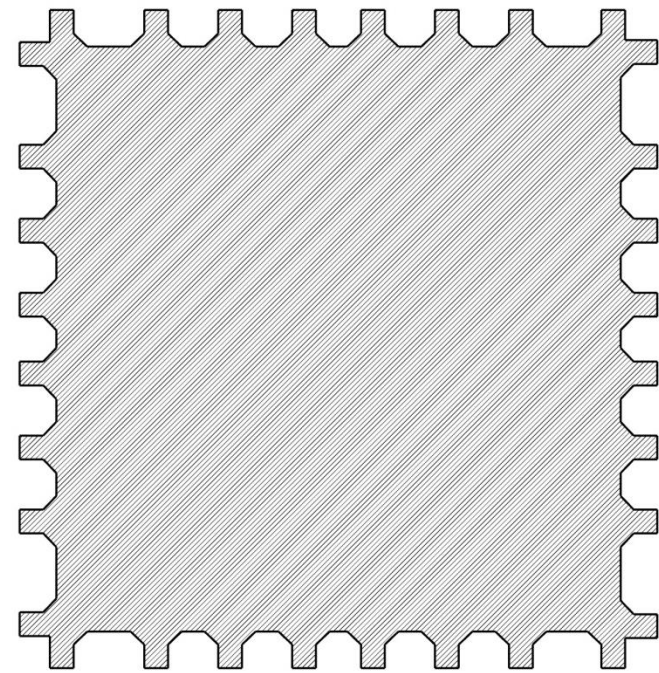
East Elevation



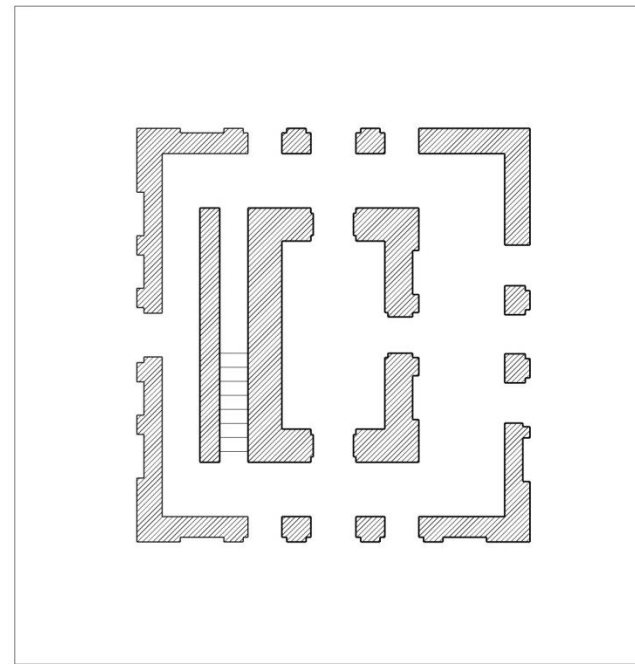
West Elevation

*Figure 57 : Details of Tarapur temple
Source: Author's Collection; Site Survey*

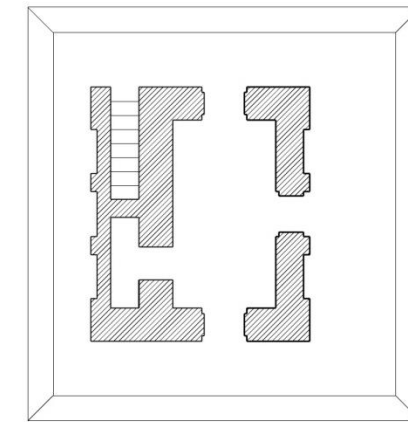
CASE 12_TARAPUR TEMPLE



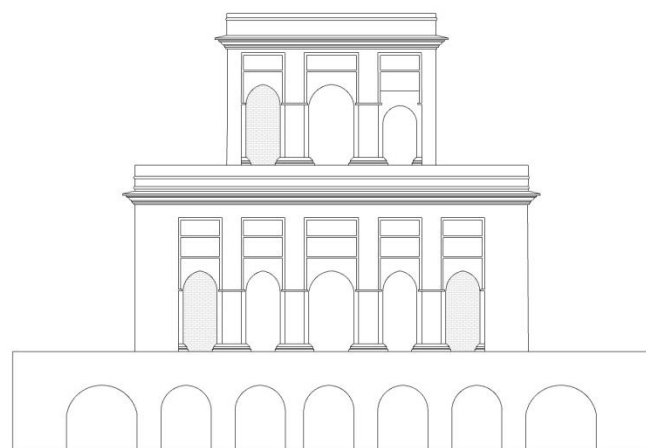
Plan at -100



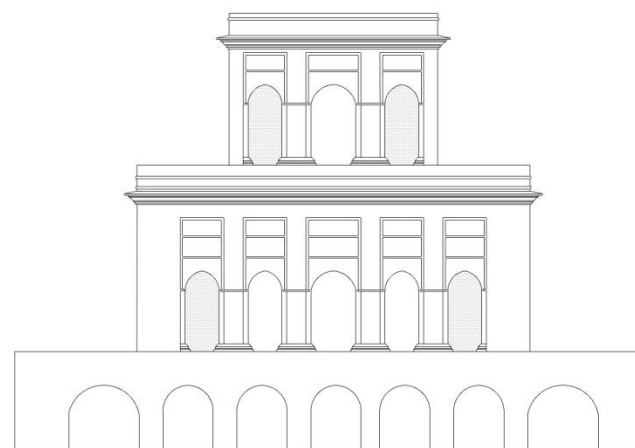
Ground Floor Plan



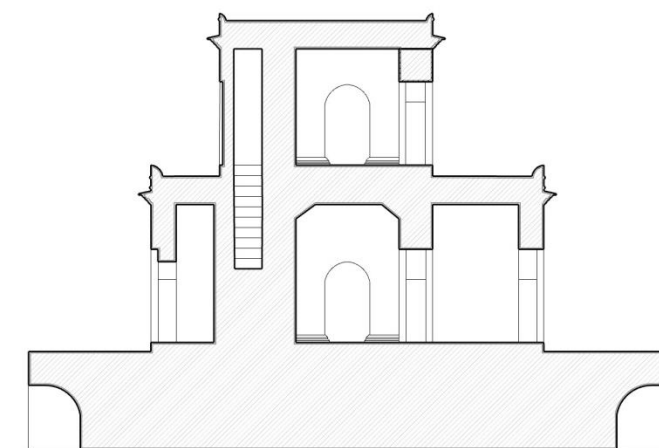
First Floor Plan



North Elevation



East Elevation



Section



TARAPUR TEMPLE

Plate 13 : Tarapur Temple
Source: Prepared by the Author ; Site Survey

3.4.13 CASE 13: KESHTO KHYAPAR MATH (A temple with small peaks at the head)

This temple is known as Krishnakshyapar Math or Keshto Khyapar Math and is formed with a square-shaped sanctum sanctorum with ratnas on the top like the Pancharatna Shiva temple in Puthia. There is no definite history for its name. According to legend, the site of the building was formerly a crematorium and a monk named Krishnakhyapa or Keshtakhyapa used to reside in this monastery, hence it came to be known as Krishnakhyapar Math or Kesht Khyapar Math. However, no trace of the crematorium can be found there at present. Like other buildings in Puthia, this one is made of brick and limestone.

Although there is no written or unwritten information about the construction period in the building or any other source, it is similar to the construction style of the Pancharatna Shiva Temple in Puthia and is easily built during the Pancharatna Shiva Temple (1823-30). Another Shiva temple built in the same way as this temple is observed at Tahirpur Rajbari, north of Puthia.

The monastery has one square room and is situated on a low square platform. Currently, the stage is almost wiped out. The dimensions of each side of the stage are 21'-10 ". The main building is built 5'-4 "away from the edge of the stage. The inner side of the monastery measures 6'-2". The room has a single grooved archway entrance (3'-4 "x5'-3 ") on the south wall to enter. The inner surface of the room is covered by a semicircular dome built in a pedantic manner, but the dome is not visible due to the small pinnacles like the pinnacles placed on the *rantnas* of the Pancharatna Shiva temple on the outside. There are three niches in the north, west, and east walls of the interior of the monastery. The walls of the building are 2'-6 " thick.

Facade Decoration of the temple:

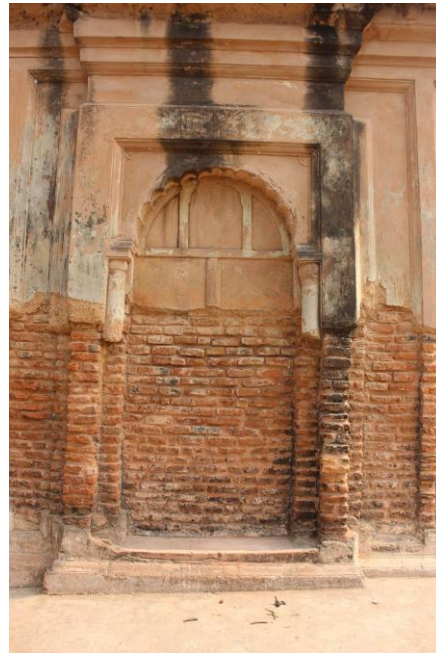
Both the interior and exterior walls of the monastery are covered with a layer of plaster. Apart from the entrance, there are three closed arches on the north, east and west walls of the outer part of the monastery. Moreover, the exterior walls of the building are divided into vertical panels. At the bottom of the cornice is a fringe design with floral and herbaceous designs. At the top of the temple, eight small rows of small pinnacles have been placed to create a wonderful ornament. There were eight elephant heads in the space in the middle of each row of peaks, one by one. Of these, all were destroyed except two in the south and two in the west. The floor of the building is now raw but is thought to have been previously covered with plaster. The interior of the room has a floral design at the top center of the dome. (Rahman K. M., 2017)



South east view of Kestokhepa temple



South west view



West elevation detail



Inner surface of the roof of temple



small peaks at the head

*Figure 58 : Photos of Kestokepa temple
Source: Author's Collection; Site Survey*

CASE NO_13 KESHTO KHYAPAR MATH

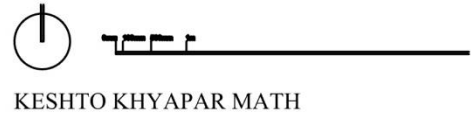
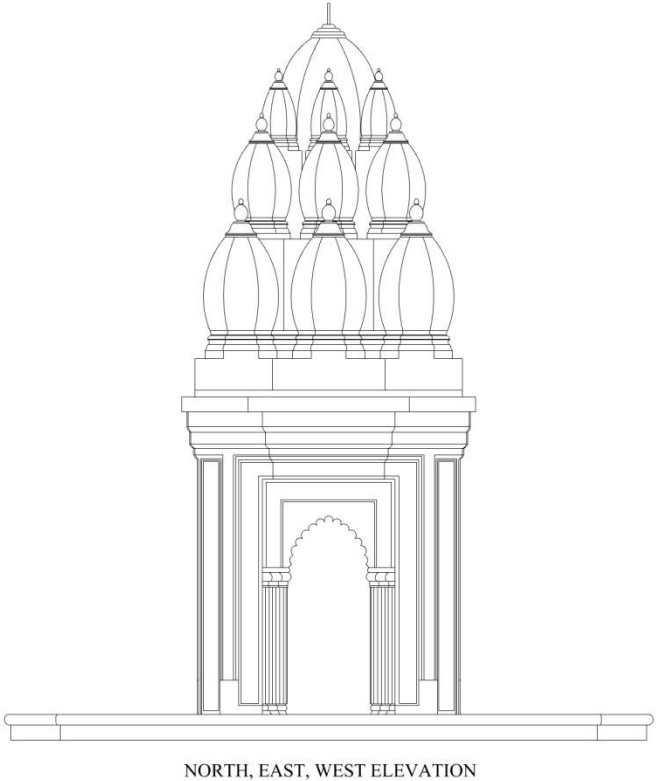
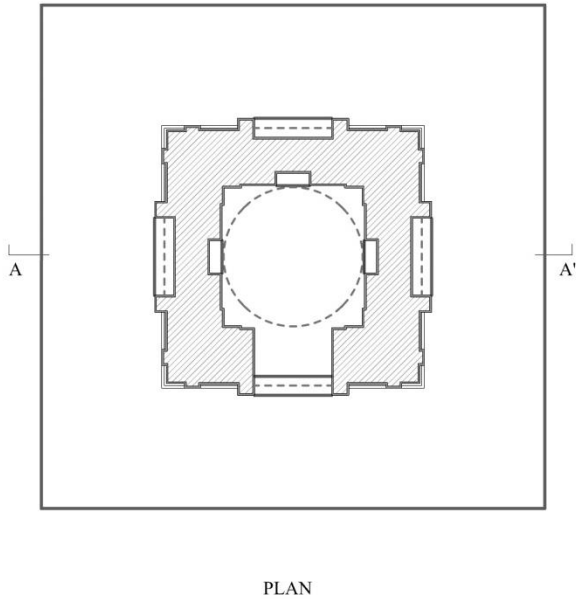
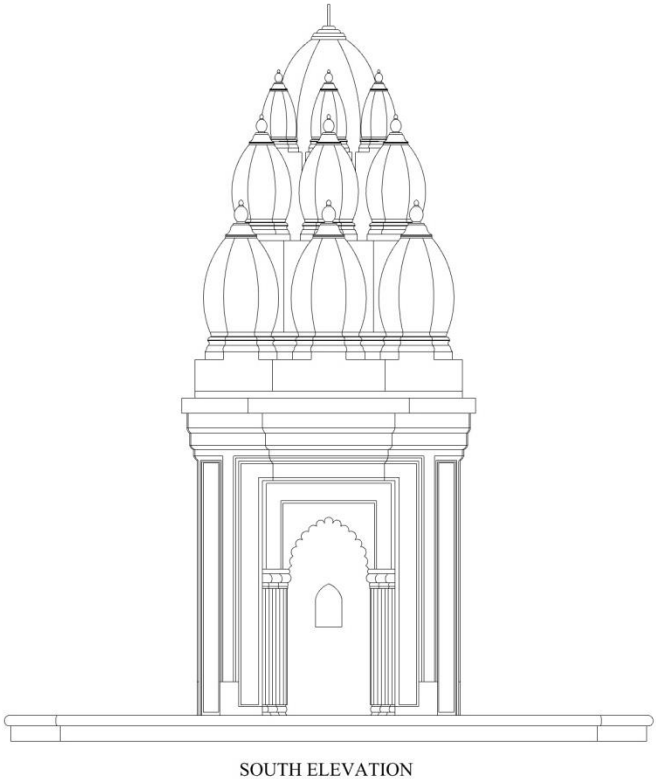
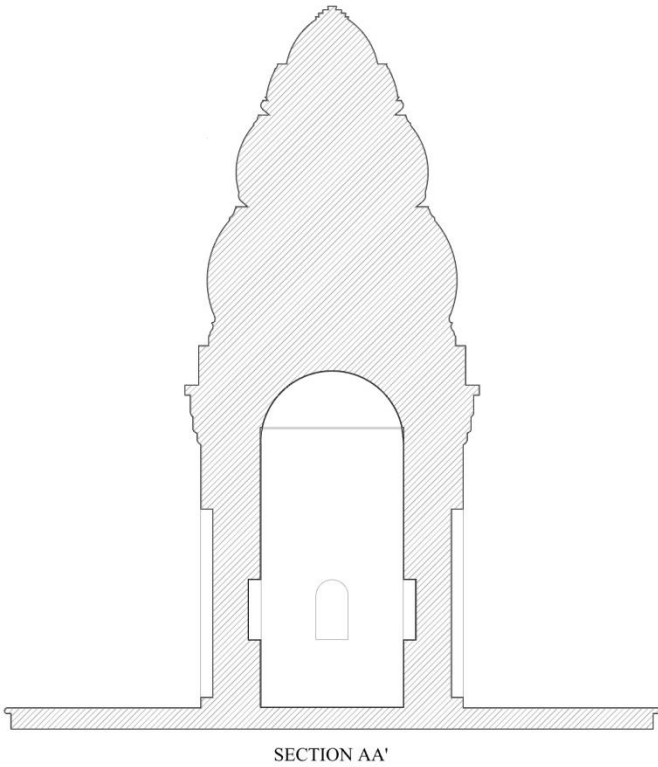


Plate 14 : Keshto Khyapar Math
Source: Prepared by the Author; Site Survey

CHAPTER 04

ARCHIVAL RESEARCH AND ANALYSIS

4.1 REGIONAL INFLUENCES

4.2 ARCHITECTURAL CHARACTERISTICS

4.1 REGIONAL INFLUENCES:

The regional influence contains the significance of the exact meaning of a 'region' demanding a close relevance to social, cultural, and revealing certain contextual influences. The regional influence asks researchers to not only define the region in terms of technical and regular terms but also treat the region as a result of historical evolution, and then think about the region's formation and deviations. The regional influence focuses on geographical space, integral social history as well as the relationship between one region and other regions, especially the adjoining areas.

Regional influence in architecture means an architecture that is derived directly from its local setting. The concept of regionalism leads to the building being intrinsically site-specific and responding to the local climate and culture of the place, where it is being built. Regionalism gave priority to the identity of the building, considering the ecological, social, and cultural elements of the region where the buildings were constructed. Regionalist architecture started to treasure and reflect the particularity of a region, its unique environment, locally available materials, the cultural value the place held, and the life led by the people of the place. The use of vernacular techniques describes a belief in a system of hereditary, conventional, or customary patterns of thoughts, forms, and styles.

It usually expresses in use of local materials and handed-down building technologies. A common definition of Regional influence in architecture can be predicted as 'architecture without architects', or 'unself-conscious design'. Regional architecture is built by architects integrating the locally available resources with modern ones, while critical regionalism is a regional architecture approach seeking universality. Regional influences include the following influences about the context and customs of making built forms in a particular region.

- Climatic Influence
- Geological Influence
- Social Influence
- Cultural Influence
- Economical Influence
- Religious Influence
- Context And Material

The peculiar climate and geography of Bengal, more than anything else, have shaped the personality, art, culture, architecture, dress, tradition, and way of life. The pattern of life in this land seems to have remained virtually unaffected over thousands of years. The context has unfolded a type of architectural style which has roots in both native and vernacular. In Bengal, like any other part of the world, traditional architecture showed its sustainability and resilience by its harmonic balance with the surrounding society and environment. With its specific character of forms and spatial

relationships, these built forms hold the heritage of the country's long history and traditions. Conflict and contradiction start with transplanted interventions. (Mowla, 2019)

Social influence comprises the conduct in which individuals change their behavior to encounter the demands of a social environment. It takes many forms and can be seen in conformity, socialization. Typically social influences result from a specific action, command, or request, but people also alter their attitudes and behaviors in response to what they perceive others might do or think.

GEO-CLIMATIC INFLUENCE:

Bangladesh geology subjugates major parts of the Bengal delta, one of the prevalent deltas in the world. The Ganges-Brahmaputra delta basin or the Bengal basin includes part of the Indian state of West Bengal in the west and Tripura in the east. The geological evolution of Bangladesh is connected to the uplift of the Himalayan Mountains and the outbuilding of deltaic landmass by major river systems originating in the uplifted Himalayas. This geology is mostly characterized by the rapid subsidence and filling of a basin in which a huge thickness of deltaic sediments was deposited as a mega-delta out built and progressed towards the south. Bangladesh is located in the tropical monsoon region and its climate is categorized by high temperature, heavy rainfall, often excessive humidity, and fairly marked seasonal variations. The most prominent feature of its climate is the reversal of the wind circulation between summer and winter, which is an integral part of the circulation system of the South Asian subcontinent.

The Geoclimate of Bengal did not allow permanency in the buildings and settlements, whatever evidence was there was eradicated by ever-changing courses of rivers and ravages of climate, therefore, should have been evaluated in Bengal's geo-climatic context. Every nation has some characteristic attributes that make it distinct from other nations, of which buildings and settlements are the most dominant ones providing it a visible tangible identity.

As Puthia belongs to the Rajshahi district, the existing climate of the entire northern region is also applicable to Puthia. The climate here is never extreme. Just as there is no shortage of depression in the Bay of Bengal, the effects of winter are not too great as it is far from the Himalayas. Humidity increases during the monsoon season and gradually decreases from August. The river Narod came out of the Padma (Mahanada) and is united with the Nandakubja on the south of the headquarters of Puthia and Natore. Once these rivers were navigable. As a result, these rivers played a vital role in the communication system. Besides this, there were no north-souths and as such, the capital of the Natore Raj Family flourished on the side of the rivers. Many other Zamindaries grew up along the rivers of which Puthia, Chapilla, and Santul are remarkable. In course of time, the rivers were silted up. At present, a scanty flow can only be traced.

SCIO- CULTURAL INFLUENCE

In Bengal, it is observed that every time a settlement begins to evolve organically, it follows some common principles, giving rise to a certain pattern. It is sometimes termed as building tradition, however, **the tradition is not only a fixed set of attributes, devices, and images; it may be seen as a series of superimposed layers of interventions.** But deep beneath, when the layers are unfolded, the traditional foundations become visible on which the buildings and settlements have gradually been built-up. This foundation reveals clues to a hidden order that gives a distinctive texture to the buildings and settlements of a place. (Mowla, 2019)

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After an initial century of anarchism and amalgamation, marked by revolutionary destruction and militant 'sufi' proselytizing, Hindu chiefs and Muslim overlords settle down to some sort of negotiation in a mutual front against Delhi. Under Shikarder Shah, Bengal became a self-governing entity for the first time. Throughout the following two centuries, a distinctive Bengali culture started to take shape-especially evident in literature and architecture. During the medieval period a large number of poets, Hindus, and Muslims of different places of East Bengal, composed lyric poems (gitikas) regarding the sorrows and joys of village people. Collectors gathered and preserved all these with care. Dinesh Chandra Sen collected these gitikas from them and edited and published books with the names of Purba Banga Gitika and Mymensingh Gitika. The exact date and year are not always available for all the Gitikas. Despite that, these are very important source materials for the study of the social history of medieval Bengal under the rule of the Mughals and the Nawabs. Temple art, reflected such cult affiliations, and much sculpture was specifically devoted to illustrating various relevant myths, especially those drawn from the Ramayana and Krishnalila stories, Sculpture also concentrated on decorative themes that communicated something of the ecstatic spirit of the new Vaishnavism, such as Radha and Krishna with dancing and singing groups. Illustrations of Shiva and the Goddess in their various aspects only became prevalent in later temples, however, as a direct consequence of the increasing popularity of these deities in temple worship. The sculptural decoration of temples was closely linked with parallel developments in Bengali religious literature, and many iconographic compositions were visualizations of Bengali versions of the epics and Puranas. The evolution of temple sculpture, generally in terra cotta, thus provided a visual accompaniment, as it

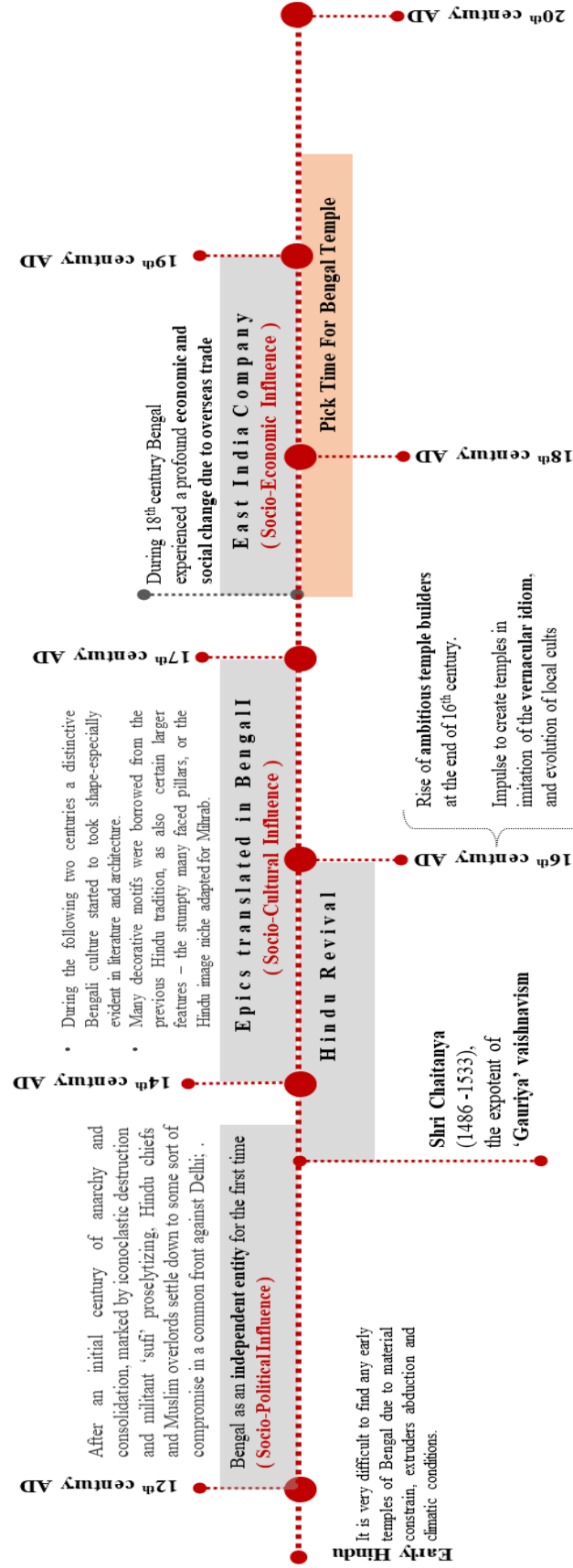


Figure 59: Time line showing the Regional influences on Temples Architecture of Bengal

were, to the development of a vivid literary tradition. The close relationship between monumental and vernacular architecture reflects a direct connection between the conventional deities of the Brahmanical pantheon and the popular deities with whom they were integrated

“What Dineschandra Sen has called the “Pauranic Renaissance” in Bengal had been steadily building up from the late fourteenth century through the popularization of the Sanskrit scriptures in Bengali translation, but the Hindu revival, which gave the most popular Bengali cults (of Krishna, Kali, and Durga) their modern forms, dates from the sixteenth century. Its chief initial impetus came from Chaitanya (1486-1533), the exponent of Gauriya Vaishnavism, whose active life in Nabadwip largely coincided with the reign of the last notable sultan, Husayn Shah (1493-1538), who generally has a reputation for tolerance despite the accusations of the Vaishnavas. Although the Radha-Krishna cult had been fermenting in Bengal from at least the time of Jayadeva at the court of Lakshmana Sen, the last Hindu king of Bengal (c. 1178-1206), it finally came to a head in the early sixteenth century and was undoubtedly the main inspiration behind the revival of Hindu art and architecture that coincides with that period. Nearly all the surviving richly decorated temples of the sixteenth and seventeenth centuries are Radha-Krishna temples, and their terra-cotta decoration is Vaishnava, not merely in subject matter but spirit—the rhythmic abandon and profusion.” (McCutchion, 1972)

In direct response to the new wave of Gauriya Vaishnavism that swept Bengal, most temples from the late sixteenth century and the seventeenth and eighteenth centuries were dedicated to Krishna and Radha. Only toward the end of the eighteenth century, when other cults reached prominence, were temples dedicated to Shiva and the Goddess, for example. Temple building was thus directly related to the movements of Hindu revivalism. Religious Architecture in cultural heritage constitutes a unique role because it is good widely available and one of the most important components of cultural heritage material. Places of worship remain visible for a long time and centuries witnessed the historic inter-territorial and events and stimulators for subsequent events.

On the subordination of Bengal to Mughal Authority at the beginning of the 17th century, Muslim architecture imported the imperial Delhi style, abandoning terracotta and the curved cornice. The indigenous tradition was carried on by the temples. Under the Mughal rule, especially in the seventeenth century and first half of the eighteenth century, hereditary lords of the land, often the descendants of princely houses, and powerful landlords (zamindars), enjoyed almost full independence within their territories as long as they sent revenues to the provincial court.

In a predominantly agricultural society, these individuals held economic power at the local level and were recognized as leaders of society. In the late eighteenth century, perhaps the most important result of their activities was the emergence of a class of Bengalis dependent on the services of the East India

Company. The expansion of local crafts and indigenous traders mediating between the producers and the Europeans led to the rise of a wealthy new class, the entrepreneur traders.

In the second half of the eighteenth century, with the decline of nawabi control and the British experiments in land revenue administration, these newly rich people increasingly turned to purchase land as a means of investment, thus earning for themselves the title of zamindar. In addition to gaining influence and prestige, temple building was another means of social recognition. So these newly rich Bengalis built a large number of temples to achieve social status. (Michell, Brick temples of Bengal : from the Archives of David McCutchoin, 1983)

SOCIO-ECONOMIC INFLUENCE

As mentioned earlier in this chapter, throughout the eighteenth century, mostly due to the remarkable increase in overseas trade, Bengal experienced an intense economic and social change. Through the existence of the Portuguese, Dutch, French, and British in Bengal goes back to the beginning of the sixteenth century, but it took some while for the effects of these foreign traders. Perhaps the appearance of a class of Bengalis depending on the services of the East India Company was the most significant consequence of their events. Purchase of land was one of the major steps toward consolidating their recently acquired position of social prominence.

“Temple building was also considered a means of providing the founder with influence and prestige, the decorated temple was a visible symbol of newly acquired wealth, and the dedicatory temple inscription clearly proclaimed the name and family of the founder. Temples also had a social significance in the numerous festivals that took place there, when groups of people gathered under the auspices of the founder and his family. The great number of temples erected in Bengal at this time, especially in those areas closely linked with foreign trade by way of various river routes, was thus directly related to the rise of this new middle class, who clearly wished to match their piety with their social ambitions. Most of the temples are, therefore, located in or adjacent to the great houses from which these landholders governed their estates, often as outsiders from the commercial centers where they spent most of their time.” (Michell, Brick temples of Bengal : from the Archives of David McCutchoin, 1983)

Another indication of change during this period, and especially of the increasingly significant status of particular groups in society, is the inclusion of the names of architects and builders in the dedicatory inscriptions with which so many of the temples were furnished.

Among the ancient Zamindars of Rajshahi, the Santul and the Tahirpur Raj families were famous. Of the zamindars of Rajshahi, the family (Raj Family) of Puthia was one of the oldest. For the division of

the property among the brothers, holders were created in the Puthia Raj Family. During the Zamindari of Anupnarayan, the Zamindari of Puthia was stretched over 15 parganas. During the time of Murshid Kuli Khan, it was settled at the tax of Rs. 1,25,516.00. **L.S.S. O'Malley** and **Bimalacharan Maitraya** refer to it as the Bhubaneswar Shiva Temple. It is the tallest and largest of all the temples in Puthia. *Rani Bhavanmayi* built the temple for three lakh rupees at that time. This shows a clear picture of Puthia's financial condition and their eagerness to build temples for influencing social status.

CONTEXT AND MATERIAL

Brick construction techniques were one of the key features of Bengal temple architecture. With an enormous demand for material for large construction and scarcity of stone in Bengal, intrigued by the choice of using clay as an alternative building material. The plaques of terracotta give us a glimpse of the early culture of the people of Bengal which is not available in Bengal literature. This proves that this plastic art supports the literary art of Bengal. In Bengal, only two caste forms can be traced – the Acharyas and Sutradharas. The role of the Acharyas and Sutradharas indicates an age-old relationship of working together that existed in India. These terracotta reliefs are noteworthy contributions of these artists. These artists derived their inspiration not only from the standard rules and regulations of the Shilpa Sastras but also from the keen observations of the daily lives of the people around them. In course of time, Sutradharas became capable of using materials like stone, ivory, metal, etc., and became skillful artists. They accordingly developed into four different directions namely – Kashtra (wood), Mrttika (clay), Chitra (painting), Pasan (stone), and divided themselves into several regional groups. The Sutradharas worked as a group and each consisting of several families and having their hereditary knowledge used to live and work under Acharyas who were responsible for planning and supervision. These teams used to travel from one place to another. The heads of these groups had ready-made master plans of temples of varied sizes and shapes and they used to carry these plans with them. Then according to the donor's choice and even details regarding arrangements of terracotta bricks, according to the theme and pattern used to be completed and necessary instructions were issued by the leader before the commencement of the construction. (Guha & Bandyopadhyay, 2017)

Temples were inspired by these and several constructions took place in undivided Bengal. Wood and bamboo were used for building in the early times. Stone is not much available in Bengal since it is the site of alluvial soil. Stone, wood, black salt, grand nite were used to make the bricks used for the construction of the architectural parts. Lime and mortar came later which was used for plastering. . Thatched temples may still be seen in Bengal today, but the temporary nature of their materials has meant that the older village temples have not been preserved. Any comparison with vernacular architecture, therefore, is largely restricted to contemporary examples. The progression from mud and thatch to brick was later continued in stucco and concrete constructions.

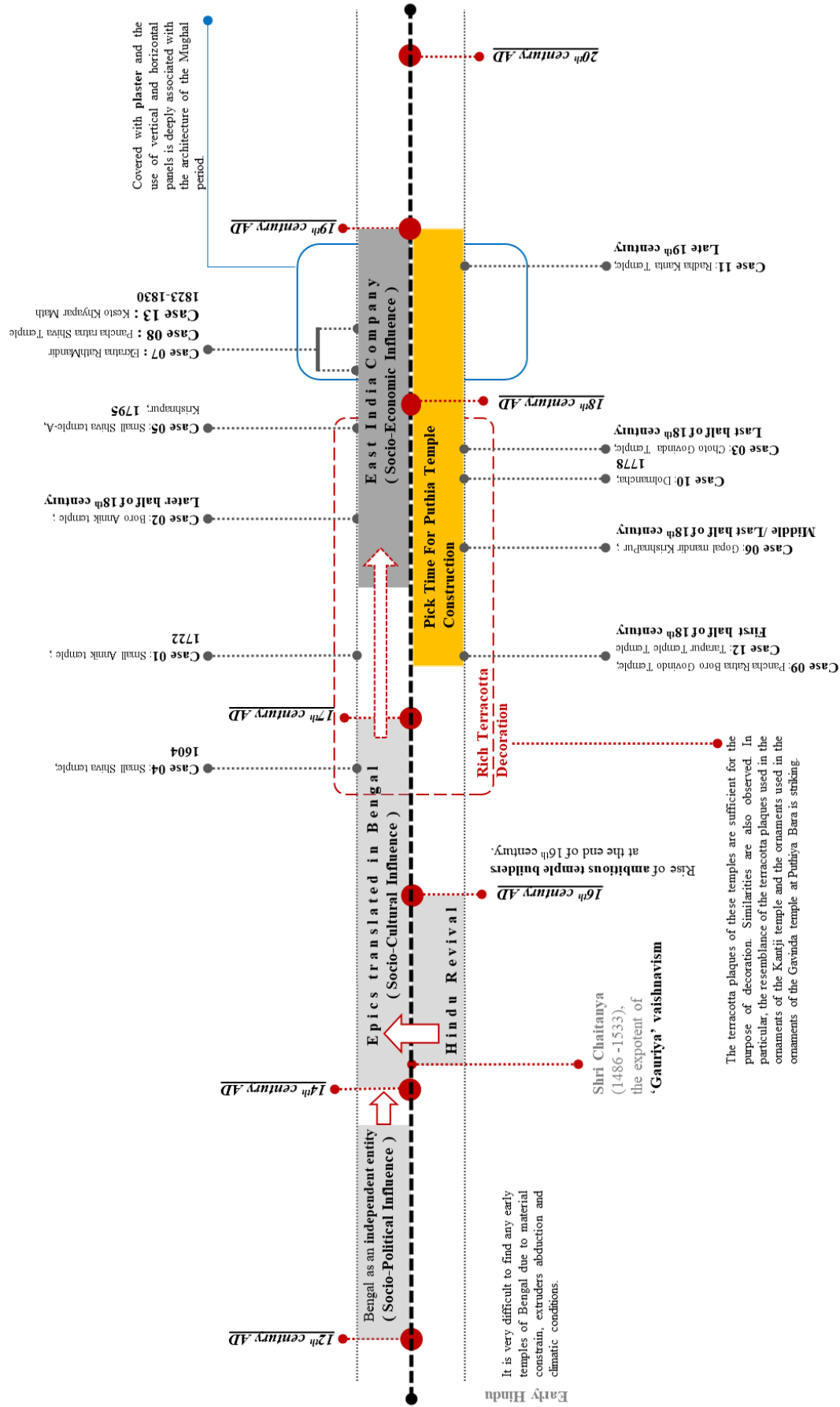


Figure 60: Time line showing the Regional influences on Temples of Puthia; Rajshahi

Various influences of local, Muslim and European architecture as indigenous elements in architecture is easily observed. However, the influence of Muslim architecture is most noticeable in religious architecture. Among the temples of Puthia, the cornices of all the temples except the Pancharatna Shiva temple, the octagonal chariot temple, the Krishnakhyapa or Keshtakhyapar monastery and the two-storied temple are built in a slightly curved shape. Such cornices have been constructed in the manner of construction of indigenous houses (huts). This style of construction continues in the temple architecture of Bengal, built in the eighteenth and nineteenth centuries, and is reflected in the temples of Puthia. The arched range of the temples of Puthia is a remarkable feature in the continuity of Bengali architecture

Especially from the fifteenth century, under the patronage of the Muslim rulers of this country, the indigenous hut-building style of chauchala and dochala was transformed into a brick building. And this style of construction also deeply influenced the temple architecture of Bengal. Even later, the use of dochala and chauchala style as the roof of the building became widespread in the temple architecture of this country. Puthiya Pancharatna Shiva Mandir, Dalan Mandir. The rites of the Pancharatna Shiva Temple and the Pancharatna Bara Gavinda Temple in Puthia can be said to be a successful application of that continuity of Indo-Muslim architecture with the small pinnacle and the high platform or the construction of the building on the foundation. . However, in the two Pancharatna temples (Shiva temple and Barae Gavinda temple) flat roofs have been built on these domes and gems have also been installed. The semicircular domes above the interior of the Puthiya temples are built following Muslim architecture. The idea of constructing gems on the roof of the temple is very likely taken from the idea of building an umbrella of Indo-Muslim architecture which carried the regionalistic feature.

The Tarapur Temple or Hawakhana at the center of the pool is rare in the architectural history of Bangladesh; there are examples of such buildings being built in the Indian subcontinent. The interior of all the temples and palaces of Puthia and the Pancharatna Shiva temple, Rathmandir, Dolmandir and Tarapur temples or the exterior of the Hawakhana are covered with plaster and the use of vertical and horizontal panels is deeply associated with the architecture of the Mughal period. Layered or stepped dolmandir or dolmancha construction infrastructure was already prevalent in India. The architectural features of Puthia Dolmandir are very similar to this, following the Sultani and Mughal architecture of India.

As we can see in the previous Fig 60, from the mid of 17th century to end of 18th century the temples of Puthia were emerged to be richly decorated with terracotta plaques. The terracotta plaques of these temples are sufficient for the purpose of decoration. Similarities are also observed. In particular, the resemblance of the terracotta plaques used in the ornaments of the Kantji temple and the ornaments used in the ornaments of the Gavinda temple at Puthiya Bara is striking. In both the temples, there is a

hunter on the shoulder of a dead deer, a soldier or a warrior dressed in Mughal Pasha, a landlord drinking hookah in a palanquin and bullock cart, a scene of boy Krishna stealing butter, Radhakrishna's love affair, Geometric designs, flowers and patches of shrubs, European Darayans with guns, boats, palanquin rides, cowherds, milking cows, milk sellers, old beggars, hunting scenes, kirtan, musicians, bell-players, Vaishnava dances, etc. , Sorrow, hope and longing for the most subtle feelings of desire are beautifully reflected. However, sculptures with portraits of dead deer on the shoulders of hunters, various animals and gods and goddesses, etc., are also seen in the ornaments of the Buddhist temple at Paharpur, built in the 8th century. Thus, the Buddhist temple at Paharpur, discovered through archeological excavations, is a shining example of a sculptural plaque bearing such material that has been in use in Bengal since time immemorial.

The sculptural plaque of Krishna's 'Rasmandal' and 'Navagapi Kunj' in the large rectangular space above the central archway of the tri-archway at the south house of the sixth Govinda temple in Puthia and the west house of the Boro Govinda temple is typical of Bengal temple architecture.

As a whole, we can see with the establishment of Bengal as an independent entity, Hindu Revival, and Vaishnavism the Epics of Hindus translated into Bengali which claims to be a massive Socio-Cultural Influence in the history of Temple architecture. With the establishment of the East India Company in Bengal and the rise of a wealthy group, the pick time for Temples in Bengal can be marked from mid 18th century to mid 19th century. These phenomena can also be seen in the case of the Puthia temples where the various amount of richly decorated terracotta temples can be found as evidence of Puthia's growing economy as zamindars. These temples also reflected its association with the vernacular idiom and evolution of local cults, construction techniques, and hut styles which reflected the characteristics of the subcontinent.

4.2 ARCHITECTURAL CHARACTERISTICS

The typology of religious architecture is complex, because no basic requirements such as those that characterize domestic architecture are common to all religions and because the functions of any one religion involve many different kinds of activity, all of which change with the evolution of cultural patterns. The history of architecture is concerned more with religious buildings than with any other type because in most past cultures the universal and exalted appeal of religion made the church or temple the most expressive, the most permanent, and the most influential building in any community. Because of the importance of temples in a society, temple architecture often represents the best of a culture's design and craftsmanship, and, because of ritual requirements, temple architecture varies widely between one religion and another.

The characteristics that distinguish a work of architecture from other built structures are-

- (1) The suitability of the work to use by human beings in general and the adaptability of it to particular human activities,
- (2) The stability and permanence of the work's construction, and
- (3) The communication of experience and ideas through their form.

Over time, indigenous architecture in rural Bangladesh has evolved according to regional topography, climate, and availability of local resources. The indigenous settlements are built largely without formally trained professionals and are built by local workers together with household and community members. Indigenous people of this region have hereditarily been doing this for years.

Despite not being designed by professional architects, the buildings continued to accommodate and serve the needs of the majority of the population, which are well adapted to the local environment and resources. Here the analysis framework is designed in four broader sections which are layout, Plan analysis, elements and decoration or ornamentation. These broader sections are subdivided into more categories for better analysis process. All cases are taken into account for each section and forming a summery as a whole. Following characteristics are kept in mind to analyze each temple.

4.2.1 LAYOUT

4.2.2 PLAN

4.2.2.1 Shape

4.2.2.2 Orientation

4.2.2.3 Entry

4.2.2.4 Garbhagriha or the main sanctum sanctorum

4.2.2.5 Circulation

- Veranda or horizontal circulation
- Satir or vertical circulation

4.2.2.6 Symmetry in plan

4.2.3 ELEMENTS

4.2.3.1 Plinth

4.2.3.2 Structural elements

- Column
- Wall

4.2.3.3 Openings

- Doors
- Arches
- Post intel

4.3.4.1 Roof configuration

- Inner surface
- Outer surface

4.2.4 DECORATION

4.2.4.1 Material

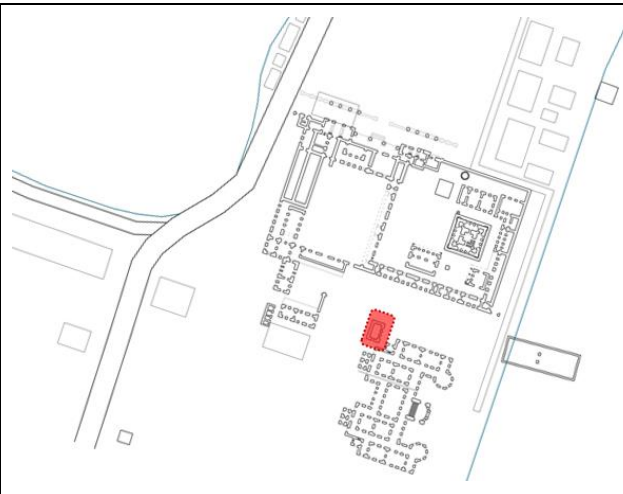
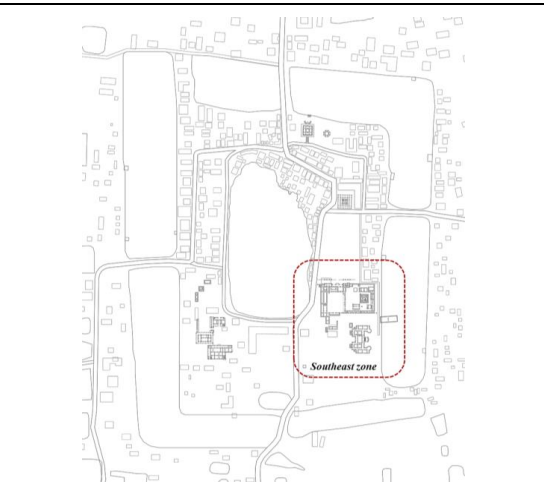
4.2.4.2 Repeated module

4.2.4.3 Art & Sculptur

4.2.1 LAYOUT:

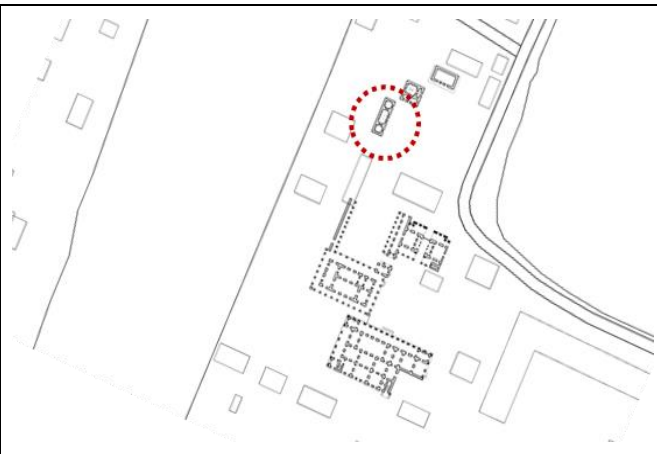
The layout plan is a plan of a layout that includes the site plan, parks, gardens, community drainage, etc. the layout plan includes many numbers of the site plan. So basically, a layout plan means a plan of the entire site showing the location of plots/building blocks, roads, open spaces, entry/exits, parking, landscaping, etc. The layout plan also shows a detailed map of the whole site and the relationship of the built form with the boundary of the property, nearby roads, and neighboring buildings.

CASE 01- Small Ahnik Temple:



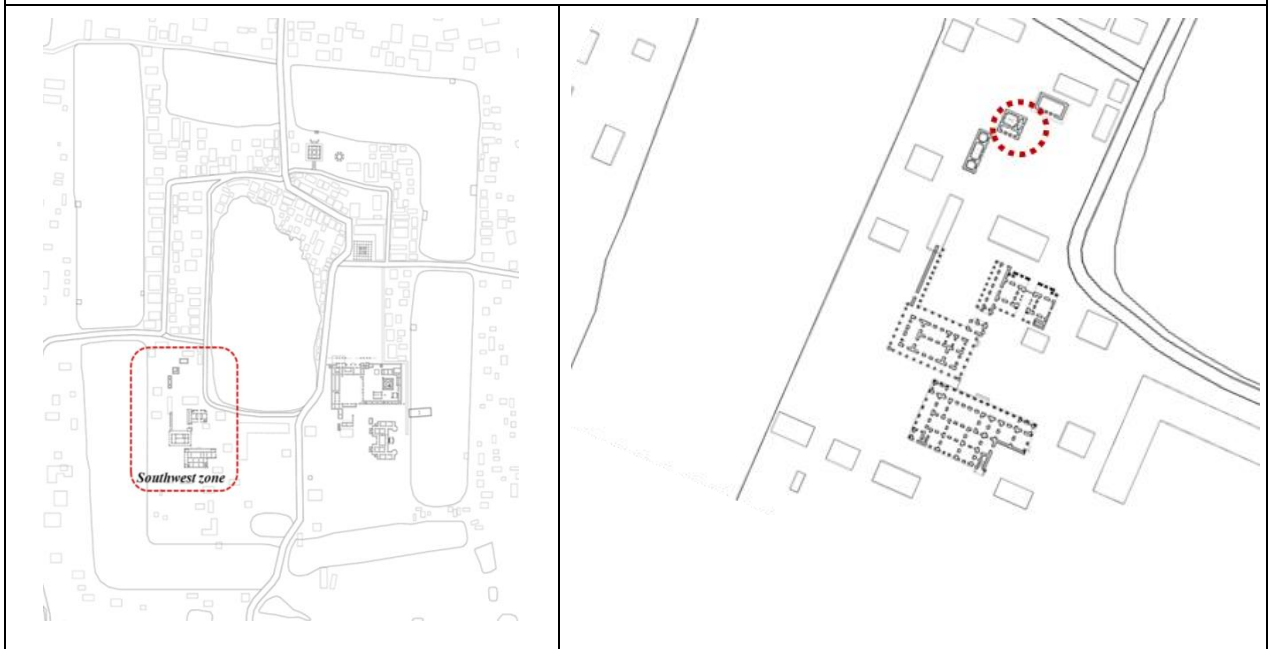
- Located in the northwest corner of the *Hemantakumari* residence in the south-eastern vita (area) of Pachani Rajbari, this temple still stands in its old form as a unique example of the architecture of the **Dochala-Ek** Bangla temple in Bengal.
- There is Rani Hemanta Kumari Ghat near the temple.

CASE 02: Boro Ahnik Temple:



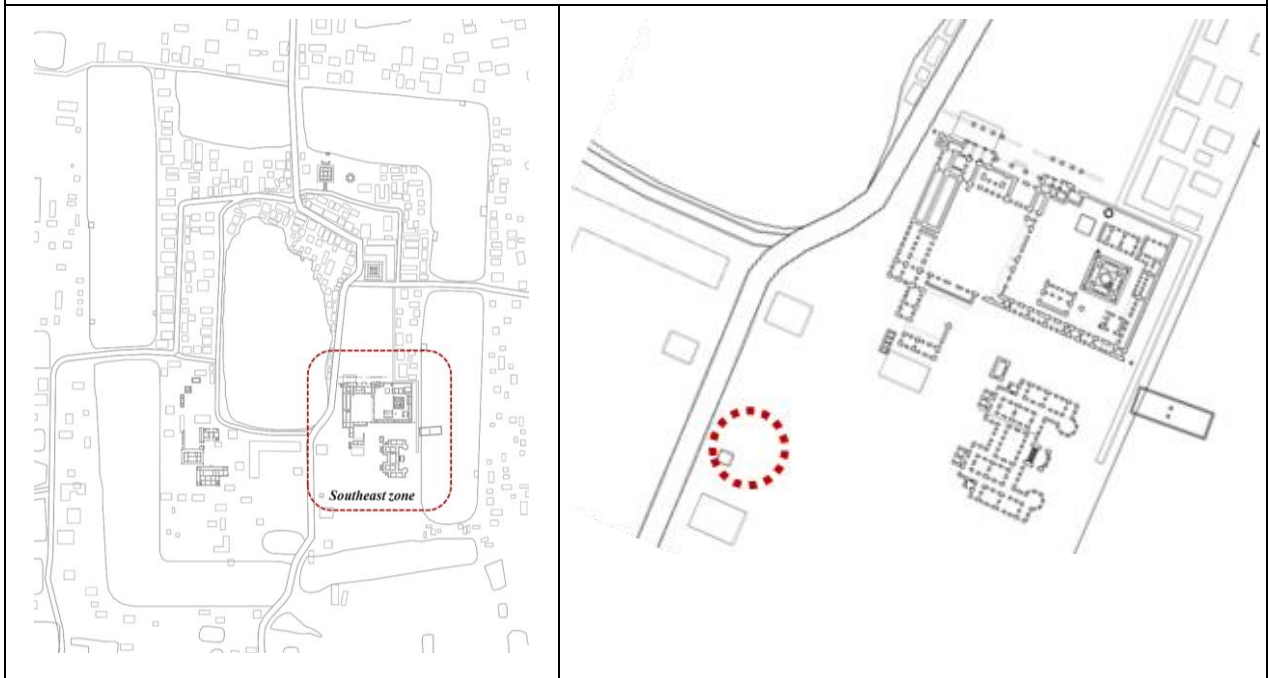
- The temple is located on the west bank of Shyam Sarovar Lake in front of the Char Ani Raja's palace. The temple was built by four Ani kings.
- It is located in the southwest corner of Choto Govinda Temple.
- Temples are established around a courtyard.

CASE 03: Choto Govinda Mandir



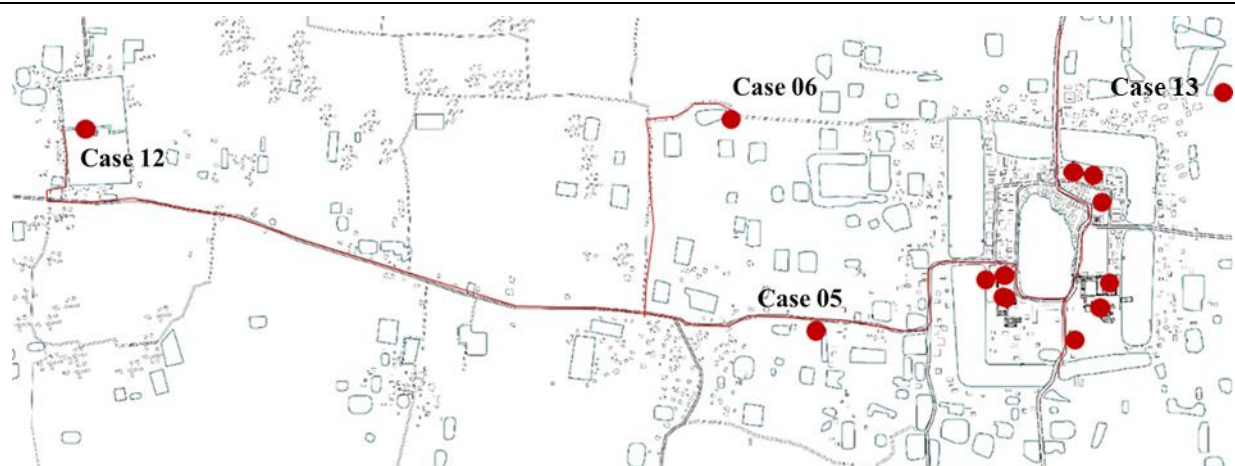
- This temple is also located in the northeast corner adjacent to the large Ahnik temple in front of the Char Ani palace on the west bank of Shyam Sarabar.
- Temples are established around a courtyard.

CASE 04: Small Shiva Temple



- The temple is located near the *Sajar Mandap* on the east side of *Arani Road* in the southwest corner of Panch Ani Rajbari. The temple is said to have been built by three and a half Ani kings (known as Chaudhapai) Anandanarayana in 1604 AD.

CASE 05: Small Shiva Temple-A, Krishnapur

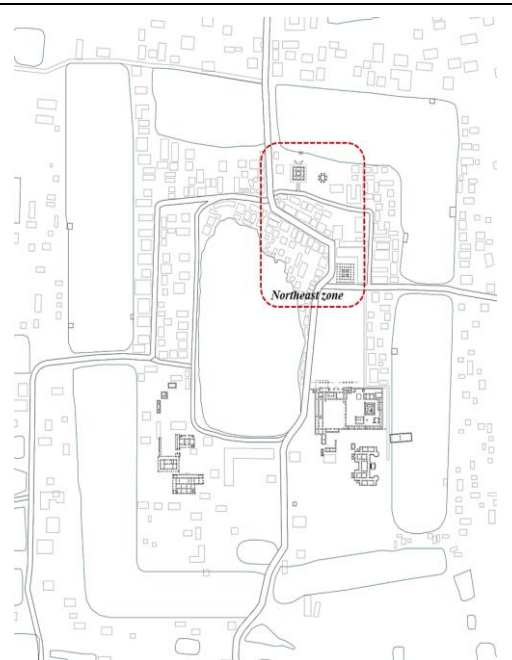


- The temple is located at Krishnapur Mouza, about one kilometer west of Puthia Rajbari. It was worshiped by four Ani kings.
- There is no waterbody adjacent to this temple.

CASE 06: Gopal Mandir, Krishnapur

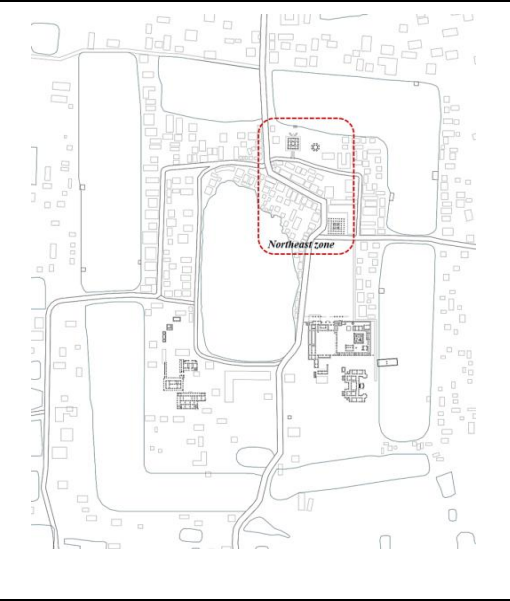
- This temple also belongs to Krishnapur *mouza* (area) and is located half a kilometer south of the Rajshahi-Natore highway. At present, the condition of the temple is very dilapidated.
- There is no waterbody adjacent to this temple.

CASE 07: Ektratna Rathmandir



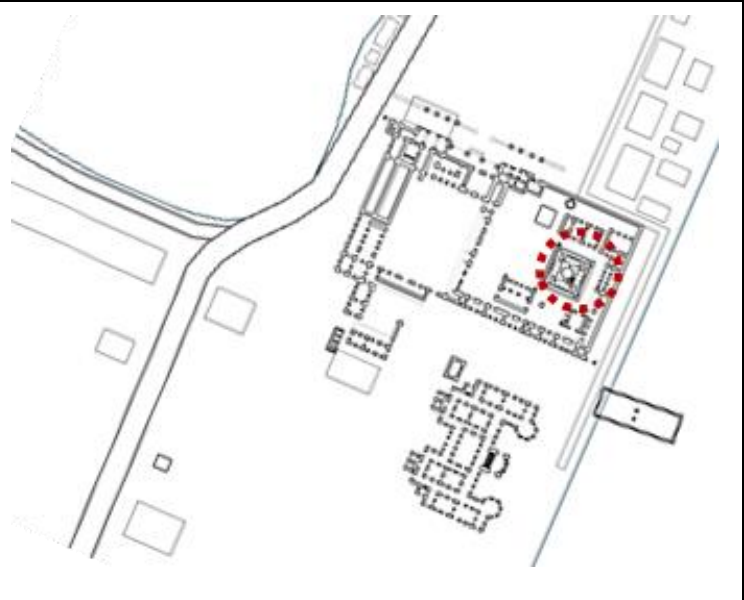
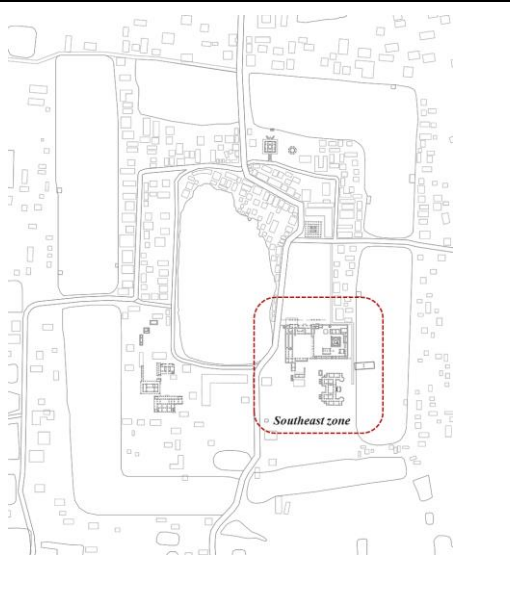
- This octagonal temple is located on the east side of the Pancharatna Shiva Temple, a little east of the entrance to the Puthia Rajbari.
- Gopal Chowki (water body) is on the north side of the ektratna temple

CASE 08: Pancha Ratna Shiva Temple



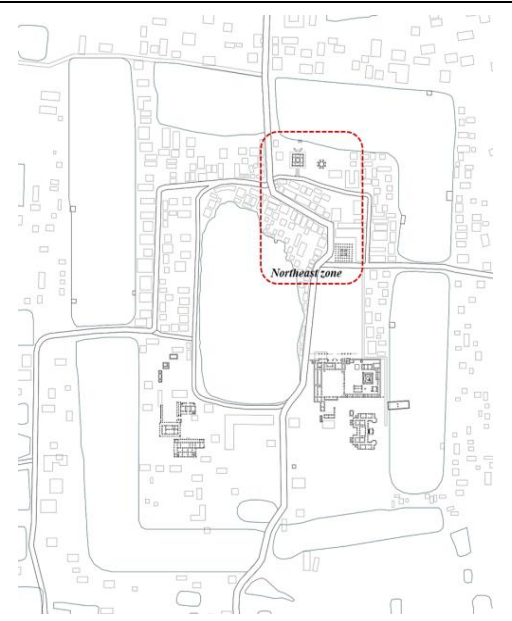
- This huge Shiva temple is located on the east side of the main gate of Puthia Rajbari (Puthia Bazar) on the banks of Shiva Sarabar (Shivsagar in the local language).
- **L.S.S. O'Malley** and (Moitraya, 1953) refer to it as the Bhubaneshwar Shiva Temple. It is the tallest and largest of all the temples in Puthia. *Rani Bhavanmayi* built the temple for three lakh rupees at that time.

CASE 09: Pancha Ratna Boro Govinda Temple



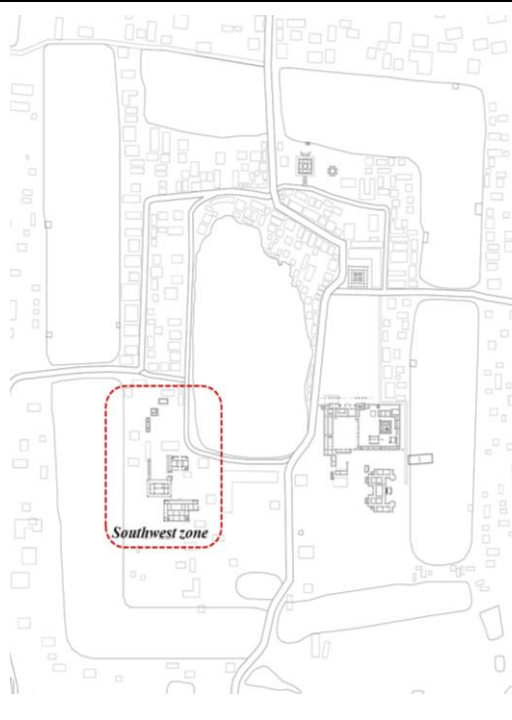
- The temple is located in the eastern courtyard of the Panch Ani palace in Puthia, i.e. in the courtyard of Gavindbari.
- The locals call it **Boro Govinda Mandir**. Probably the reason for this is that there is a Chauchala Govinda temple in the Vita of Char Ani Raj of Puthiya. Probably the reason for this is that the Chauchala Gaevinda temple (described earlier) in the Vita of Char Ani Raj of Puthiya is smaller in terms of shape and size than this Govinda temple.
- Rani Hemanta Kumari Ghat near this temple and the eastside waterbody is named 'Gobindo Sorobor' after the name of Govinda temple

CASE 10: Four-Storied Dolmandir Or Dolmancha



- The temple is located in the center of Puthia Bazar on the north side of the field in front of Panch Ani Rajbari.
- It is located to the northeast of Shyam Sarobar.

CASE 11: Radhakanta Temple Temple



- This two-storied temple is located on the northeast corner of Char Ani Choto Gavind Mandir on the west bank of Shyam Sarabar. This two-storied temple is located on the northeast corner of Char Ani Choto Gavind Mandir on the west bank of Shyam Sarabar.
- Temples are established around a courtyard.

CASE 12: Tarapur Temple

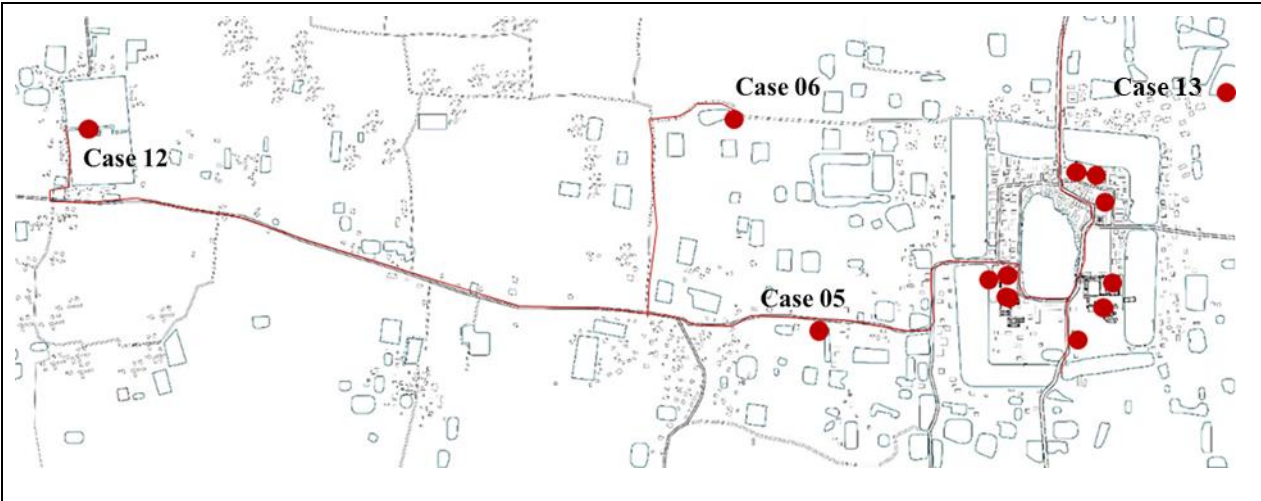
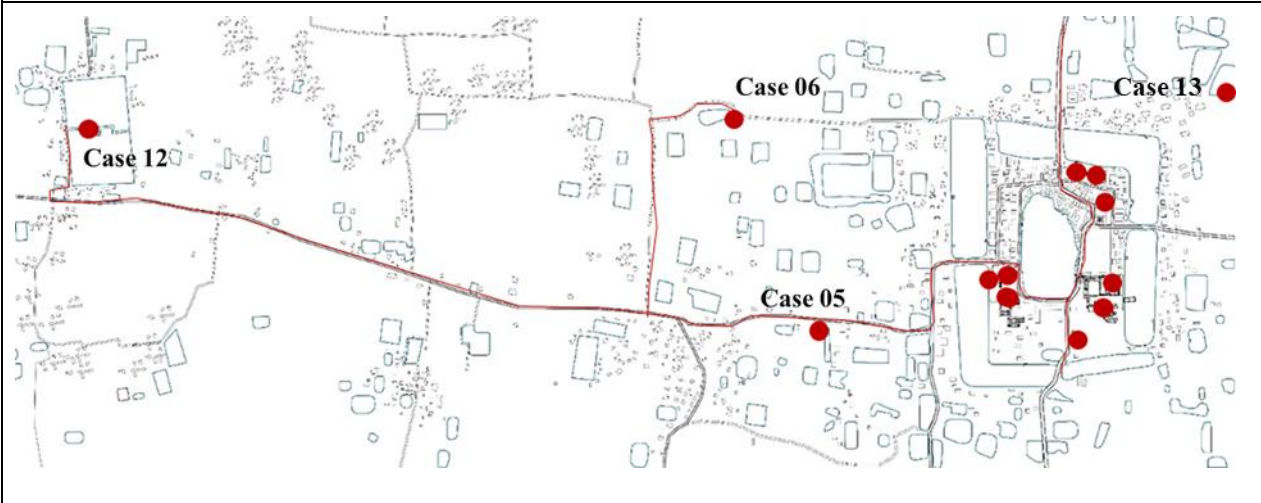

• The temple is situated in a large pond at Tarapur, about three kilometers west of Puthia. • Although it is known as 'Rath Bagicha Tarapur', the two-storey building is now known to the locals as <i>Hawakhana</i>. • The two-storied temple is built on a square platform right in the middle of a huge pool of about 8.33 acres. • Bimalacharan Maitreya mentions in his treatise that in the ideal of Puri, Puthia also had a chariot road and a temple in the pool.
CASE 13: Keshto Khyapar Math (A temple with small peaks at the head)

• The temple is situated at the east of this Tarapur, complex. • There is no waterbody adjacent to this temple.
SUMMARY: Here we can see, among the thirteen existing temples found in Puthia, eight temples (case no-3,4,5,6,8,9,10,12,13) have an almost square-shaped plan and three (Case no-1,2,11) of them have rectangular plans. Case no 7 has an octagonal plan which contains a special function as Rasmancha.

Table 5 : Layout analysis of Temple cases

4.2.2 PLAN:

Plan drawings are specific drawings architects use to exemplify a building or portion of a building. Plans are a common design drawing for graphic representation of architecture for any kind of built form. Except for plan perspectives, plan drawings are orthographic projections. This means they are not drawn in perspective and there is no foreshortening. Plan can be well explained by shape, orientation, entry, circulations, served and services, etc. This category helps to define a plan to identify the characteristics of the built form.

In Indian temples, we see some major elements that are common for all Hindu religious temples. Here some major attributes have been identified to find the characteristics of the Bengal temple form. These attributes are given below -

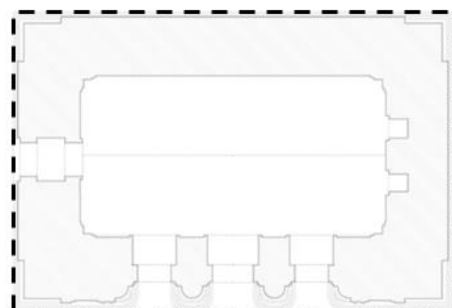
- Shape
- Orientation
- Entry
- Garbhagriha or the main sanctum sanctorum
- Circulation
 - Veranda or horizontal circulation
 - Satir or vertical circulation
- Symmetry in plan

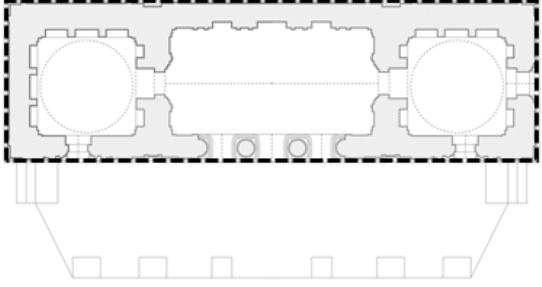
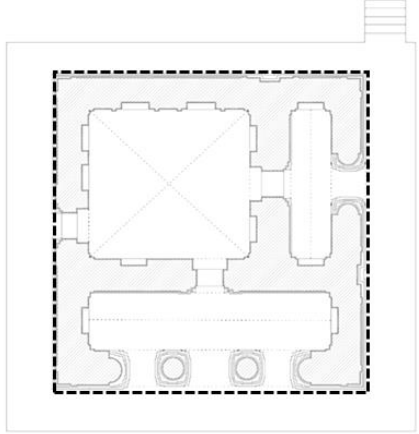
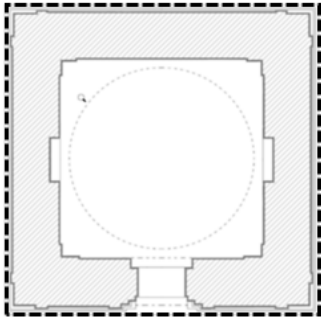
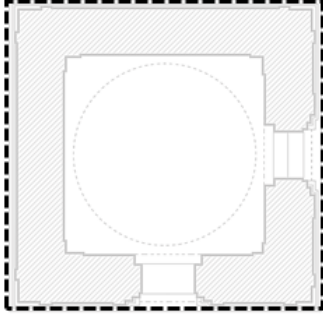
4.2.2.1 SHAPE

The shape of the building plan (often referred to as "footprint") is the outline projection of the exterior edge of the building at grade onto the horizontal plane. A Hindu temple is a pure geometry-driven structure, with many variations, on a square grid of padas, depicting perfect geometric shapes such as circles, rectangles, and squares. This underlying geometric principle in a Hindu temple is built around the belief that all things are one, everything is connected.

CASE 01: SMALL AHNIK TEMPLE

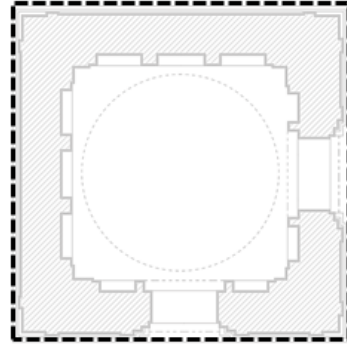
- The plan of this temple is a rectangular shape. Here we can see the length is 1.5 times larger than the width. It measures 24'-2" in the north-south axis and 16'-6" in the east-west axis from the outside.



CASE 02: BORO AHNIK TEMPLE • This east-facing temple is rectangular from the exterior which measures 48'-0" in the north-south and 15'- 0" in the east-west. The entire temple has an uneven rectangular (10'-6 " X 36'-4") wide verandah in front of it.	
CASE 03: CHOTO GOVINDA MANDIR • The entire temple is situated on a 2'-6" high almost square platform. The stage measures 32'-2 " in north-south, 33'-6" in east-west. The plan of the plan is almost square.	
CASE 04: SMALL SHIVA TEMPLE • This temple has a square-shaped plan measuring 8'-9 "on each side of the interior.	
CASE 05: SMALL SHIVA TEMPLE-A, KRISHNAPUR • This temple also shows a square-shaped plan measuring 10'-3" on each side of the exterior.	

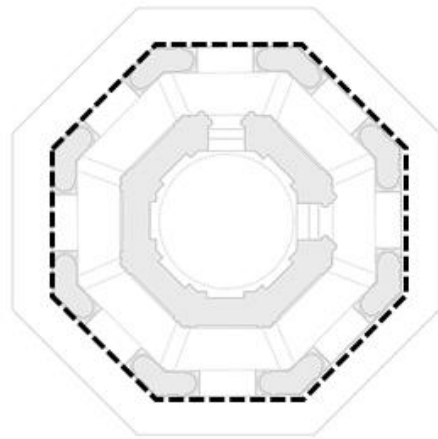
**CASE 06: GOPAL MANDIR,
KRISHNAPUR**

- This one square chambered temple is small in size like other Chauchala Shiva temples in Puthia measuring 10'-4" inside the room.



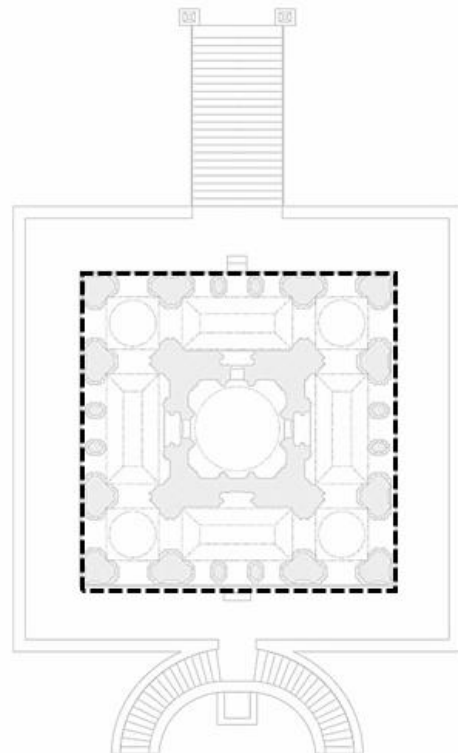
CASE 07: EK RATNA RATHMANDIR

- The temple is completely octagonal. The length of each side of the octagon of the Plinth is 19'-6".



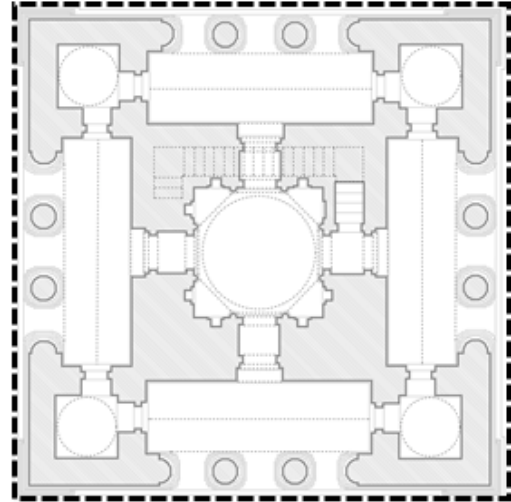
**CASE 08: PANCHA RATNA SHIVA
TEMPLE**

- The plan of the temple is square. The first part is a large square platform with a height of 11'-6 ". The dimensions of each side of the platform are 65'-0".



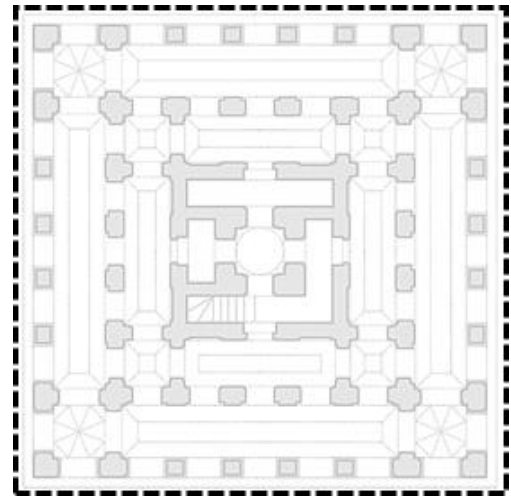
**CASE 09: PANCHA RATNA BORO
GOVINDA TEMPLE**

- The plan of the temple is square with symmetric planning of spaces.



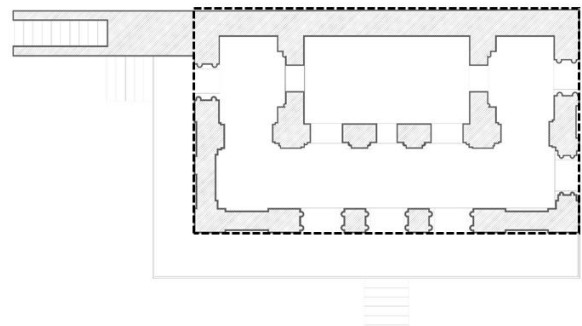
**CASE 10: FOUR-STORIED DOLMANDIR
OR DOLMANCHA**

- From the outside, the square-shaped temple measures 69'-9 " x 69'-9 ". The four floors of the temple are discussed separately for the convenience of understanding.



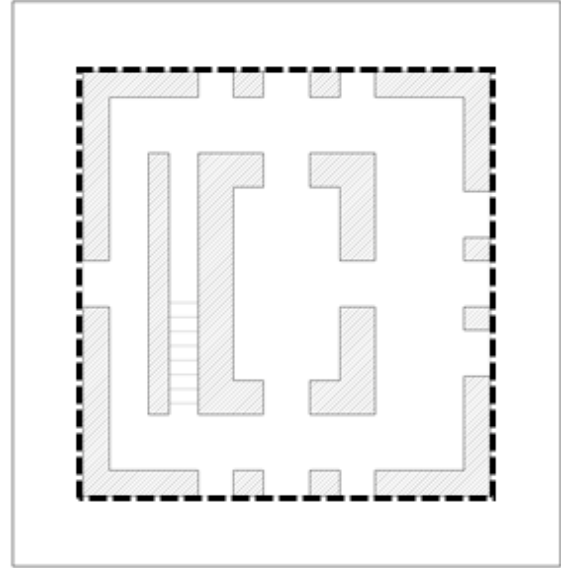
CASE 11: RADHAKANTA TEMPLE

- The temple is situated on a high rectangular platform. The stage measures 45'-9" east-west, 28'-0" north-south, and height 2'-9 ".



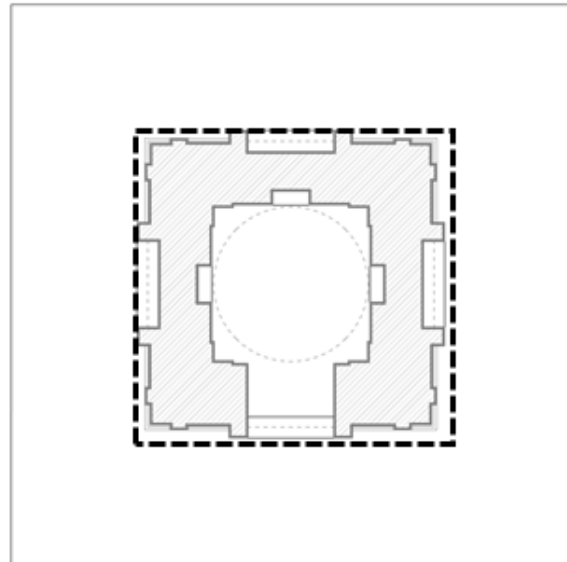
CASE 12: TARAPUR TEMPLE

- The entire building is almost square. It measures 37'-2" in the north-south and 35'-2" in the east-west.



CASE 13: KESHTO KHYAPAR MATH (A temple with small peaks at the head)

- The monastery has one square room and is situated on a low square platform. Currently, the stage is almost wiped out. The dimensions of each side of the stage are 21'-10 ".



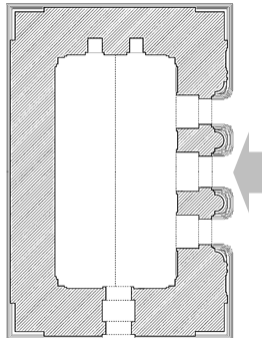
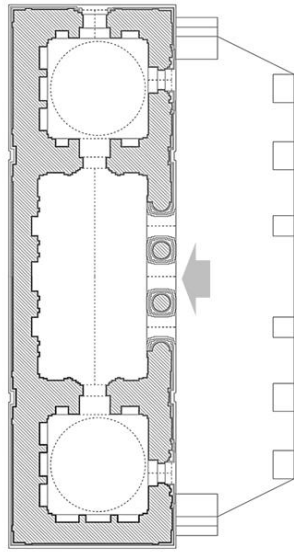
SUMMARY: Here we can see, among the thirteen existing temples found in Puthia, eight temples (case no-3,4,5,6,8,9,10,12,13) have an almost square-shaped plan and three (Case no-1,2,11) of them have rectangular plans. Case no 7 has an octagonal plan which contains a special function as Rasmancha.

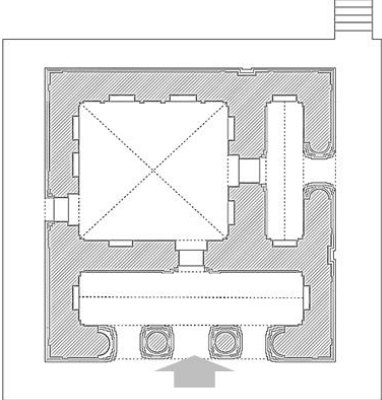
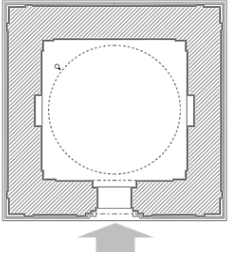
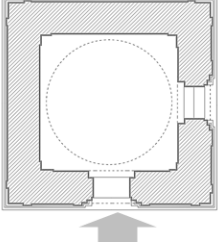
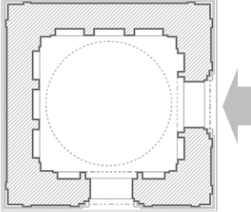
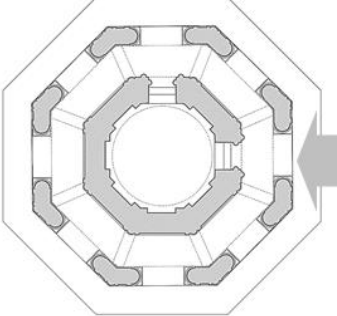
Table 6 : Analysis of Shape in Temple Cases

4.2.2.2 ORIENTATION

Orientation of building is defined as a method of fixing in direction of the plan of such a way that it drained maximum benefit from the elements of nature such as sun, wind, and rain therefore the construction of the built form should be a proper orientation to planning and design of the building. But in religious buildings, the issues can differ from any commonly built form.

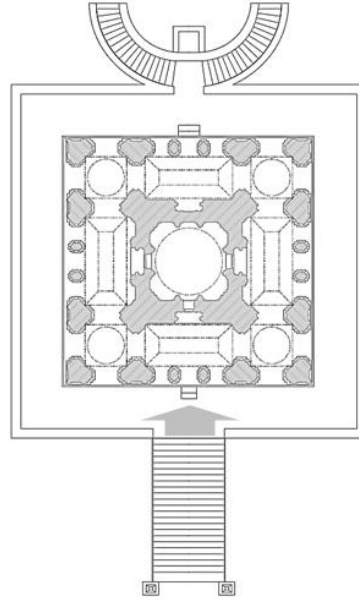
A Hindu temple is meant to encourage reflection, facilitate purification of one's mind, and activate the process of inner consciousness within the devotee. The primary deity of different Hindu temples varies to reflect this spiritual spectrum. The design, especially the floor plan, of the part of a Hindu temple around the sanctum or shrine follows a geometrical design called *Vastu-Purusha-mandala*. Though we can see a clear translation of Vastu in Indo-Arian and Dravidian temple plans, the Bengal temple is seen to have that influence of the geometry rather than repeating every element of Vastu.

Case No. & Temple name: Orientation	Temple plans
CASE 01- Small Ahnik Temple: The elongated length of the small annik temple is north-south oriented.	
CASE 02: Boro Ahnik Temple: This east-facing temple is also elongated to the north-south.	

CASE 03: Choto Govinda Mandir • This square plan is south facing. The way to reach the plinth is from the backside which is from the North.	
CASE 04: Small Shiva Temple • This square-shaped temple is also south-facing.	
CASE 05: Small Shiva Temple-A, Krishnapur • This square-shaped temple is also south-facing similar to case no. 4	
CASE 06: Gopal Mandir, Krishnapur • This temple is also square in shape and east facing.	
CASE 07: Ektratna Rathmandir • This Octagonal temple is east-facing through it has a subsidiary door from the north.	

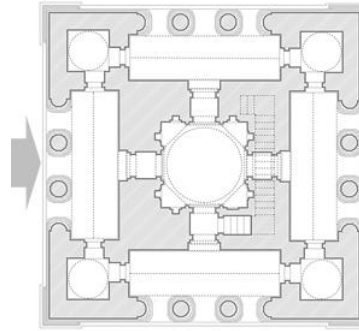
CASE 08: Pancha Ratna Shiva Temple

- The Pancha Ratna shiva temple is south facing near the lake known as Gopal Chowki.



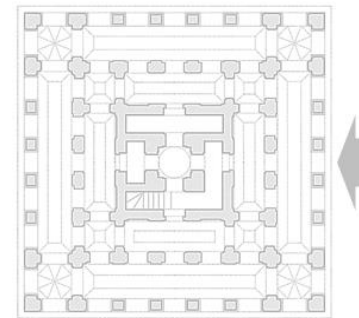
CASE 09: Pancha Ratna Boro Govinda Temple

- Though the temple is accessible from all sides, the front stair acceding to the plinth is from the west so this temple is basically west-facing.



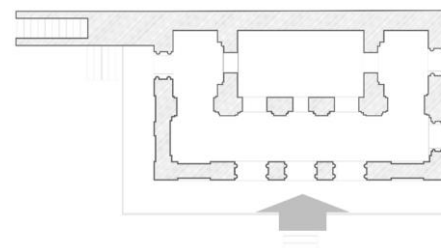
CASE 10: Four-Storied Dolmandir Or Dolmancha

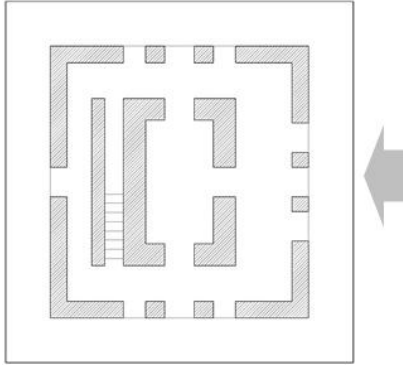
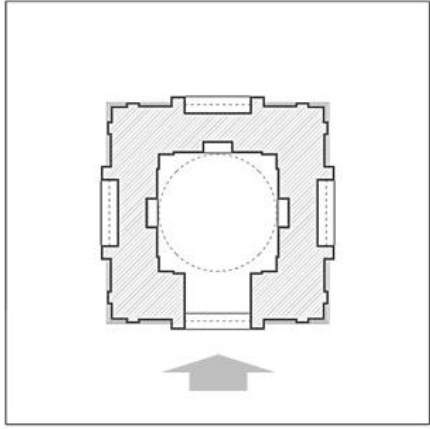
- This temple is accessible from all sides, but from the position of a stair, we can see the east side is remained open.



CASE 11: Radhakanta Temple Temple

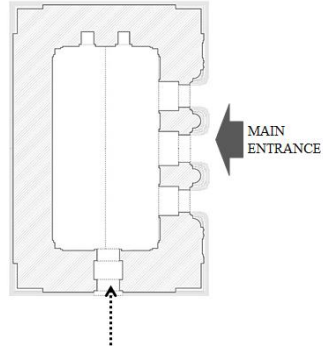
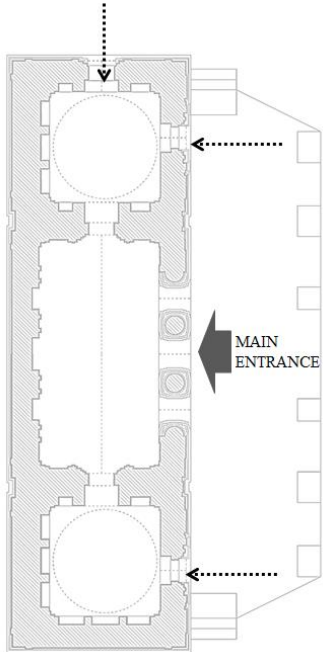
- This South-facing temple is rectangular in shape.



CASE 12: Tarapur Temple • This temple is east facing with the stair in the back.	
CASE 13: Keshto Khyapar Math (A temple with small peaks at the head) • This temple south facing temple has only one chamber like the case 4,5,6	
SUMMARY: Among the above-mentioned temples, only Case 09 Pancha Ratna Boro Govinda Temple is a west-facing orientation. Six temples (case 1,2,6,7,10,12) are oriented to East and others like six cases (Case no-3,4,5,8,11,13) are oriented to the Southside. According to Hindu Vastu East and South, sides are more preferable for temple planning. Even in Bengal, the preference for the selected orientation is clearly visible.	
<i>Table 7 : Analysis of Orientation in Temple Cases</i>	

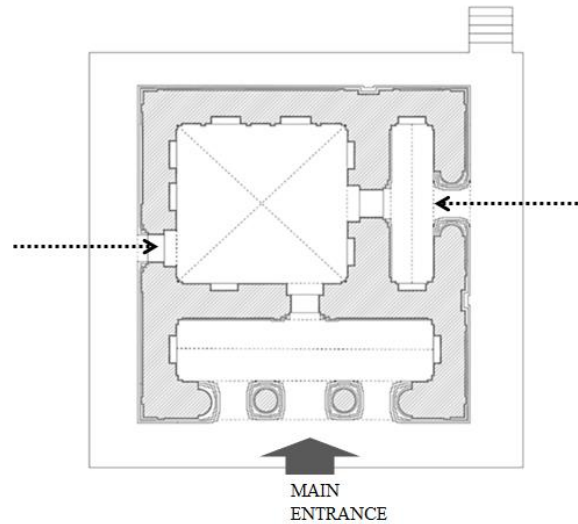
4.2.2.3 ENTRY

Entrances establish an appropriate transition that integrates into the overall built form facade design functionally and aesthetically. While there may be more than one entrance, the main entrance into the built form should be clearly distinguishable through its architectural design and treatment. The entry provides orientation signage that is visible and in character with the built form. In religious building, the Entry of a built form is very important as this depends on the spiritual and traditional customs. In Hindu temples design entry plays a very significant role according to the customs. In the following chart, we will discuss the main entrances and secondary entrances in the existing temples of puthia. All the plans shown in the table have north up oriented

Case No. & Temple name:	Entrance
CASE 01- Small Ahnik Temple: There is one entrance to the sanctum sanctorum on the south and three on the east wall with a total of four arched entrances. The tri-arched entrance on the east is the main entrance to the main sanctum sanctorum.	 The diagram shows a rectangular temple plan. A dashed line with an arrow points to the south entrance. A solid arrow points to the tri-arched entrance on the east wall, labeled 'MAIN ENTRANCE'.
CASE 02: Boro Ahnik Temple: The front of the main chamber is exposed by three semicircular arches. The archway is enclosed in three rectangular frame structures with two short pillars. There are two open arches on the east and a north wall to enter the room on the sanctum's north side.	 The diagram shows a rectangular temple plan with a central chamber and two circular sanctums at the ends. A dashed line with an arrow points to the north entrance. A solid arrow points to the entrance on the east wall, labeled 'MAIN ENTRANCE'. Another dashed line with an arrow points to the entrance on the south wall.

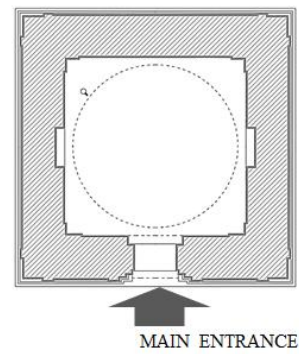
CASE 03: Choto Govinda Mandir

- The main sanctum has a total of three entrances to the east, west, and south. But the south is the main entrance.



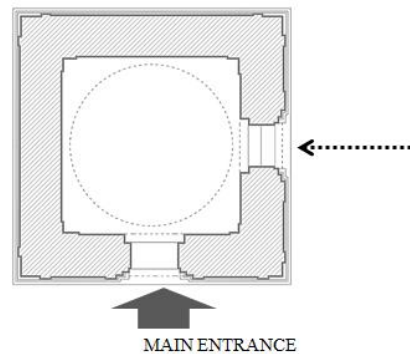
CASE 04: Small Shiva Temple

- The entrance with a designed three-step arch is housed in a rectangular structure.



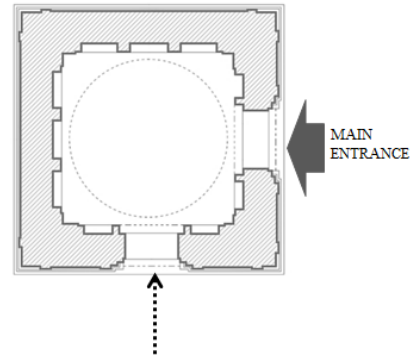
CASE 05: Small Shiva Temple-A, Krishnapur

- There, are two semicircular arches with three steps in a row (groove design in the first step) in a rectangular structure on the south and east walls to enter the temple. The south is the main entrance to the temple.



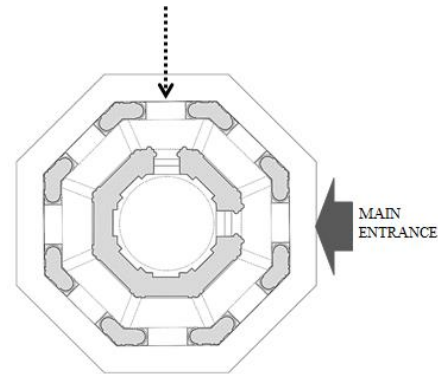
CASE 06: Gopal Mandir, Krishnapur

- There are two semicircular arches in the east and south to enter the room. The arches are built in a similar rectangular structure to the other two Shiva temples. From the exterior, it is easy to identify that the east side entrance is the main.



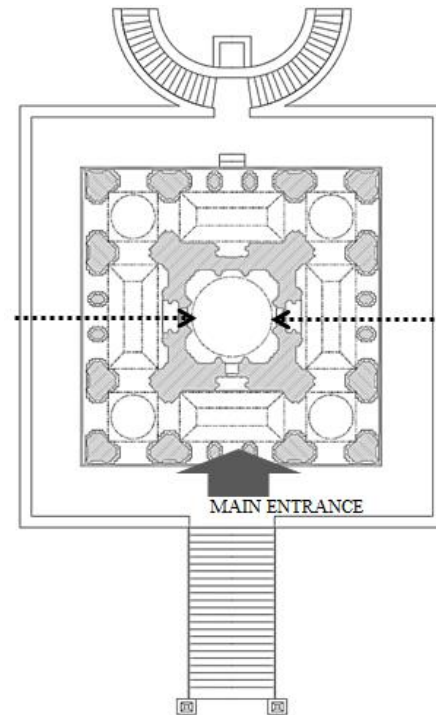
CASE 07: Ektratna Rathmandir

- There are two entrances. At Both of the entrances, the slabs and the lower part of the plaque are made of stone. From the decoration of the facade, it is noticeable that the east side entrance is the major one.



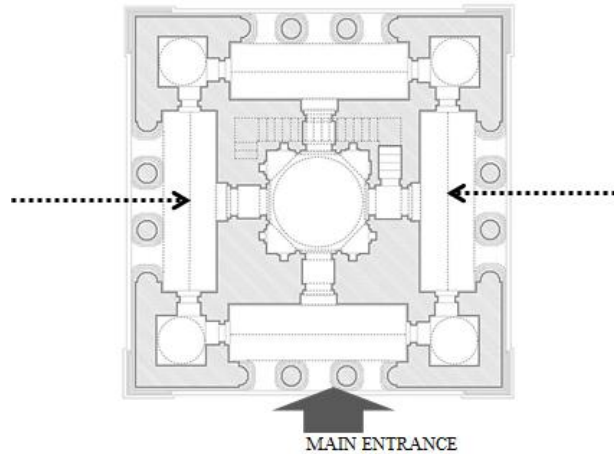
CASE 08: Pancha Ratna Shiva Temple

- The use of stones is also observed in some places especially on the entrance door of the temple. The main entrance is from the south side. Two other secondary entrances are seen from the east and west side.



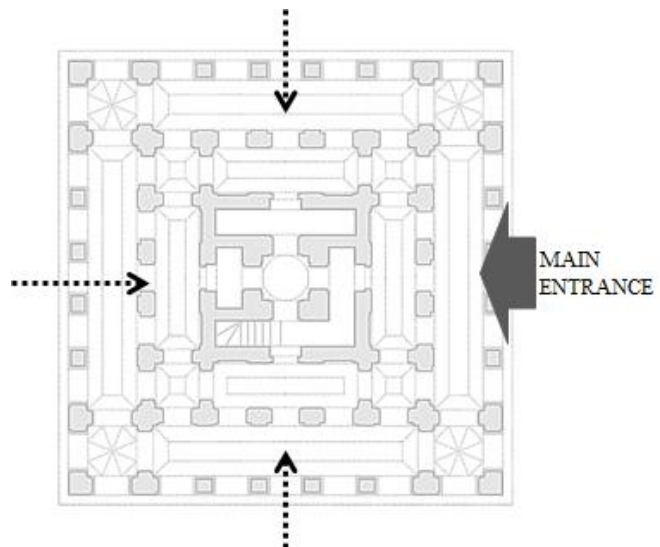
CASE 09: Pancha Ratna Boro Govinda Temple

- The main temple is located 3'-9 " to the west from the edge of the stage and 3'-3 " to the east, north, and south. And the main entrance is from the West and the rest of the three entrances are secondary though all of them measure the same.



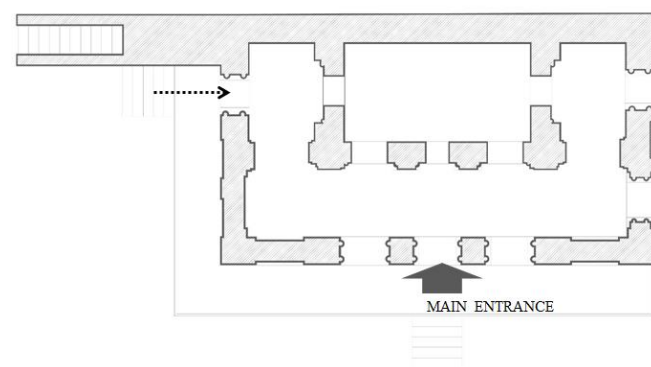
CASE 10: Four-Storied Dolmandir Or Dolmancha

- From the outside, the first and second part is the circular veranda, the third part is the small rectangular room located around the main sanctuary or central room and the fourth part is the main sanctuary or central room. In the first part, there are 28 open archways with seven on each side to enter this part. The main entrance to the Sanctorum is from the East.



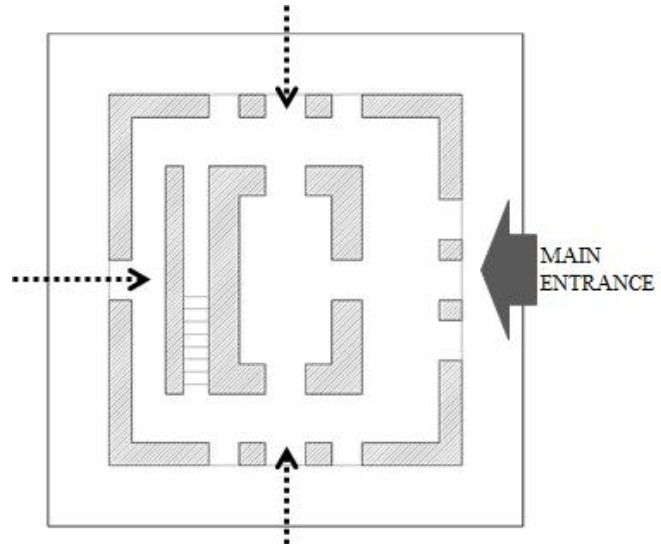
CASE 11: Radhakanta Temple Temple

- The room has three entrances on the south wall and one each on the east and west walls. Of these, the western entrance was later closed.



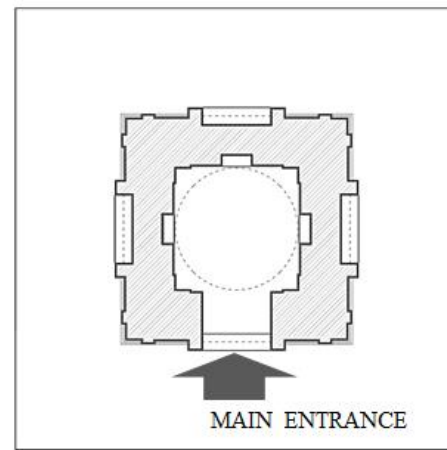
CASE 12: Tarapur Temple

- The room has three semicircular grooved open entrances (4'-0" x 7'-5"), one on each side to the north, south, and east.



CASE 13: Keshto Khyapar Math (A temple with small peaks at the head)

- The temple has a single grooved archway entrance (3'-4" x 5'-3") on the south wall to enter.



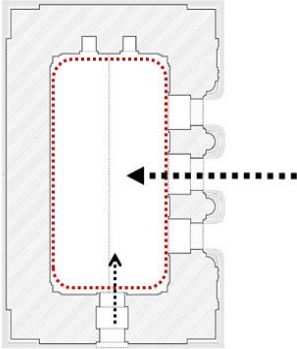
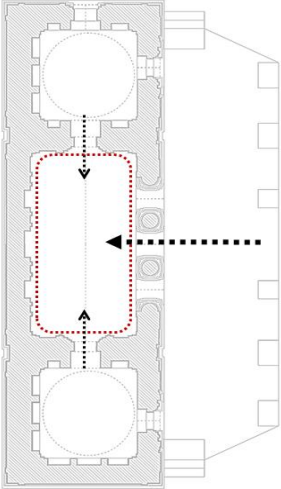
SUMMARY: Among the above-mentioned cases we can see the single-chambered temples have either one main entrance or have two entrances where the other is secondary. In case no 1,4,13 have only one entrance to a single Chamber, but case no 5,6 have another entrance along with the main one.

In the case of the larger temples, we can see they are accessible from all sides but from the orientation and circulation, the main entrance can be easily identified. Case no 1,2,6,7,12 have the main entrance from the east whereas the main entrance for case no 3,4,5,8, 10,11,13 is on the South. An exception is seen in case no 09 with the main entrance from West.

Table 8 : Analysis of entry in Temple Cases

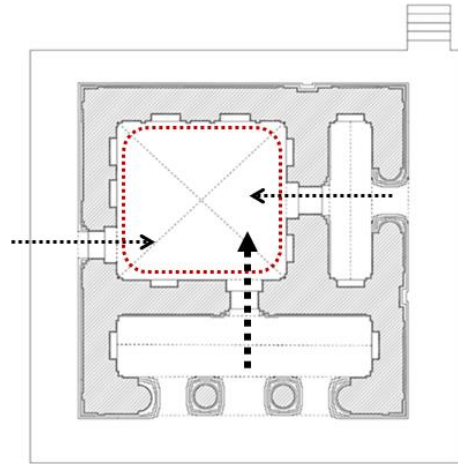
4.2.2.4 GARBHAGRIHA OR THE MAIN SANCTUM SANCTORUM

A garbhagriha or sannidhanam is the sanctum sanctorum, the innermost sanctuary of Hindu and Jain temples where resides the murti (idol or icon) of the primary deity of the temple. In Jainism, the main deity is known as the Mulnayaka. The word means "womb chamber", from the Sanskrit words garbha for womb and griha for the house. (Hardy, 1995) The room has a single entrance, without any windows. It is usually constructed in a spacious manner, to be seen by the worshippers outside. Entrance to the Hindu Garbhagraha is restricted only to priests and other devotees are allowed to sit only outside the sanctum of the temple. Whenever if any devotee visits the temples, he/she must compulsorily worship the main deity situated in the Garbhagraha of the temple, to get the full grace of the almighty. In some temples, women priests are also allowed to enter inside the sanctum of the temple and to perform puja to the deities. In the following chart, the main entrances and secondary entrances to the Grabhagriha are shown and the configuration of the main sanctum is discussed. All the plans shown in the table have north up oriented

Case No. & Temple name:	Position of the Main Sanctum
CASE 01- Small Ahnik Temple: The rectangular size of the uterus (garbhagriha) is 18'-2" x 6'-6". The height of the temple from the ground to the moon is 17'-2". There is one entrance to the sanctum sanctorum on the south and three on the east wall with a total of four arched entrances.	
CASE 02: Boro Ahnik Temple: The main chamber is rectangular in size which measures 18'-2" X 9'-6" with the two adjoining square rooms measuring 8'-10" on each side. The sanctum Or the Garbhagriha is accessible through an archway from the north side chamber and south side chamber accordingly.	

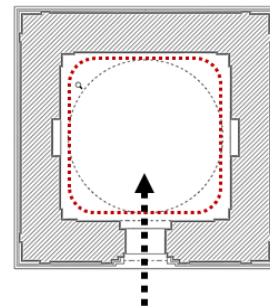
CASE 03: Choto Govinda Mandir

- The temple is divided into three rooms, including the main sanctum sanctorum. The interior of the sanctum measures 12'-4" north-south and 13'-2" east-west which is almost square. The room has a total of three entrances to the east, west, and south. But the south is the main entrance. The inner surface of the sanctum sanctorum is covered with a chauchala-style roof.



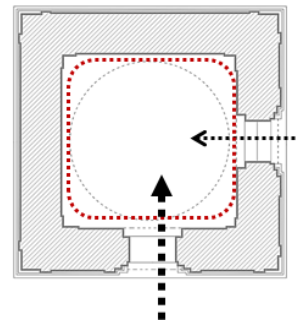
CASE 04: Small Shiva Temple

- This square and one-chambered temple measures 8'-9" on each side of the interior. There is only one entrance on the south side to enter the temple sanctum. The inner surface of the temple is covered by a semicircular dome built in the Pandantif style.



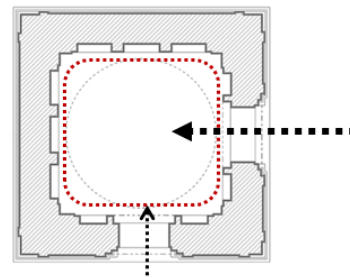
CASE 05: Small Shiva Temple-A, Krishnapur

- This temple is a square and one-room like the above small Shiva temple measuring 10'-3" on each side. The inner surface of the sanctum or garbhagriha is a semicircular dome.



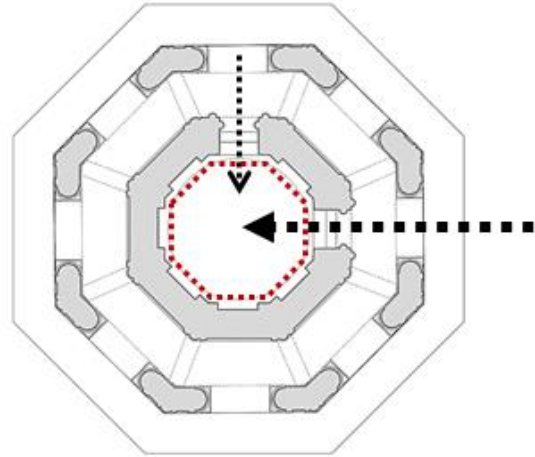
CASE 06: Gopal Mandir, Krishnapur

- This temple has one square room where each arm measures 10'-4" inside the room. There are two semicircular arches in the east and south to enter this main sanctum.



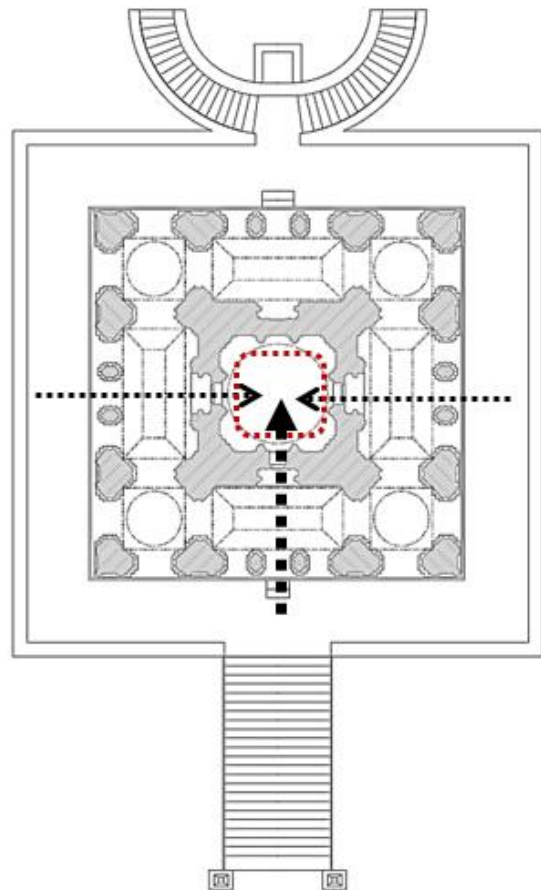
CASE 07: Ekratna Rathmandir

- The main sanctum is built on a 4'-0" thick octagonal wall. Each side of the octagon inside the sanctum measures 5'-10" and the distances of the east-west and north-south arms are 14'-6" respectively. The **Ratna** of the temple is placed on top above the main sanctum. There are two entrances, the main entrance is from the East and another one is from the north.



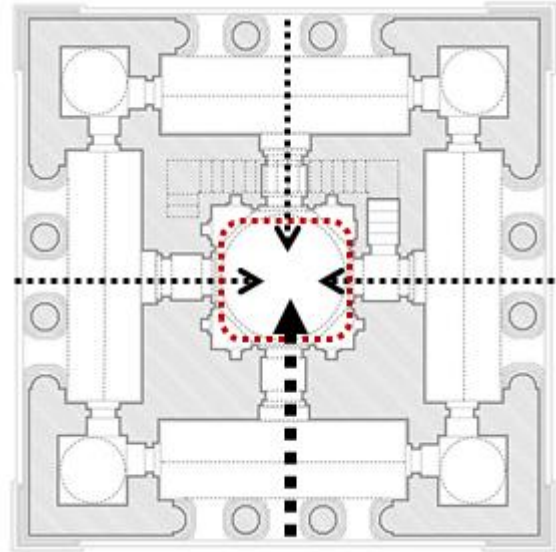
CASE 08: Pancha Ratna Shiva Temple

- The main sanctum sanctorum is in the center with verandas all around. The main sanctum is square in plan. Each of the inner arms of the sanctum sanctorum measures 14'-3". There are three entrances to the main sanctum from east, west, and south from east, west, and south, where the south is the main entrance. The interior of the main sanctum sanctorum and the small square rooms at the four corners are covered with a low dome, which is covered with a pandantif method, but it is not visible from the outside.



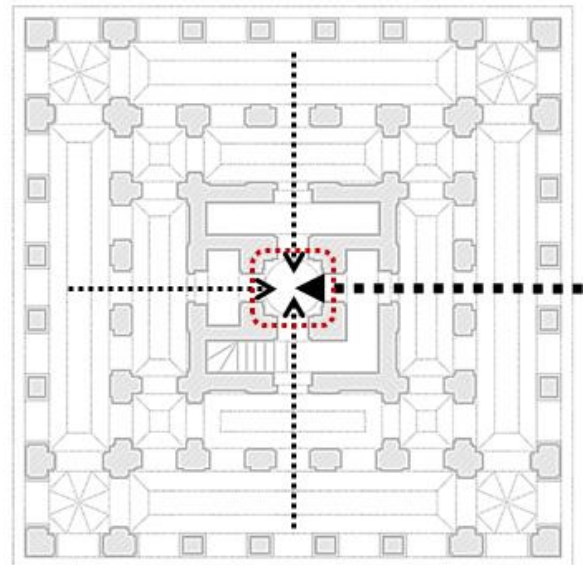
CASE 09: Pancha Ratna Boro Govinda Temple

- The main sanctum sanctorum (larger square) is placed at the center with four small squares at the four corners and four rectangular chambers at the four sides. The internal dimensions of a square womb (*Garbhagriha*) are 10'-9" x 10'-9" and there are four archways to enter the sanctum sanctorum. The interior of the sanctum sanctorum is covered by eight niches on each side of each entrance and the upper surface is covered by a small semicircular dome. The inner surface of the upper part of small cells is covered with small semicircular domes.



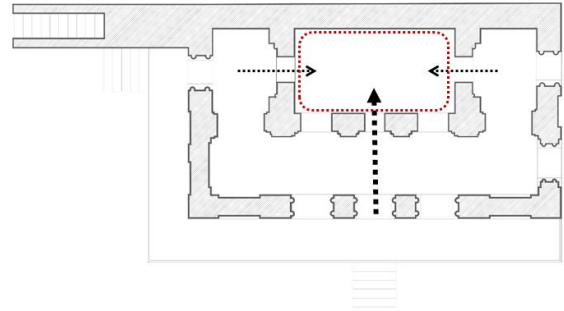
CASE 10: Four-Storied Dolmandir Or Dolmancha

- From the outside, the first and second part is the circular veranda, the third part is the small rectangular room located around the main sanctuary or central room and the fourth part is the main sanctuary or central room. This room is square in plan, with entrances from all sides. The first, second, and third floors have a layout with the square main sanctum in the center and four open angular arches. The inner roof of the third floor is covered with a large vein dome. Inside the room, there are four niches in each corner of the four walls.



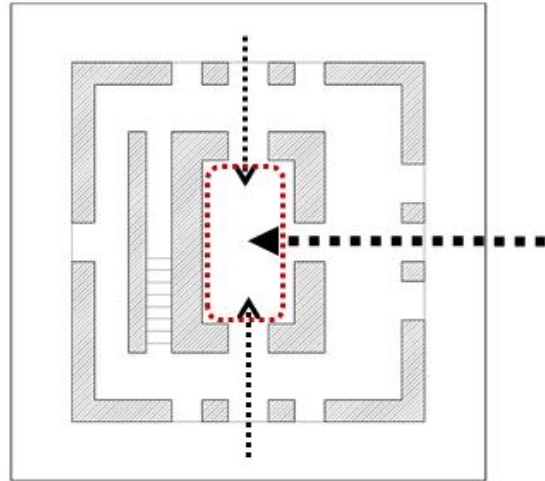
CASE 11: Radhakanta Temple Temple

- The temple's sanctum sanctorum is rectangular and measures 9'-4" in north-south and 17'-8" in east-west which is offset from east, west, and south edges of the veranda. The room has three entrances on the south wall and one each on the east and west walls. Of these, the western entrance was later closed. The entrances have semicircular arches. There are three niches in the north wall of the sanctum sanctorum. The sanctum sanctorum is surrounded by a rectangular junction or corridor on the west, east, and south.



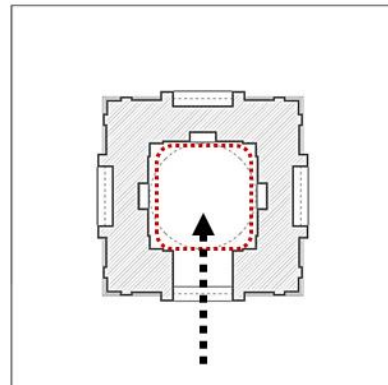
CASE 12: Tarapur Temple

- The only room or sanctum sanctorum of the temple and around the sanctum sanctorum is a narrow covered verandah in the middle. The size of the rectangular sanctuary is 16' x 9'-2". The room has three semicircular grooved open entrances (4'-0" x 7'-5"), one on each side to the north, south, and east. Although the inner roof surface of the room is covered with a chauchala roof.



CASE 13: Keshto Khyapar Math (A temple with small peaks at the head)

- The monastery has one square room and is situated on a low square platform, 5'-4" away from the edge of the stage. The inner side of the monastery measures 6'-2". The room has a single grooved archway entrance on the south wall to enter. The inner surface of the room is covered by a semicircular dome built in a pedantic manner.

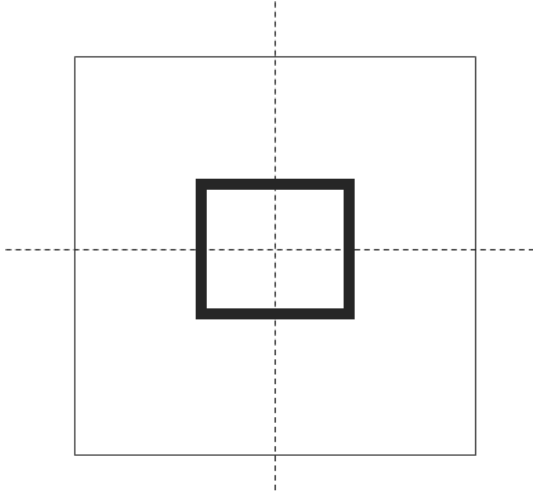
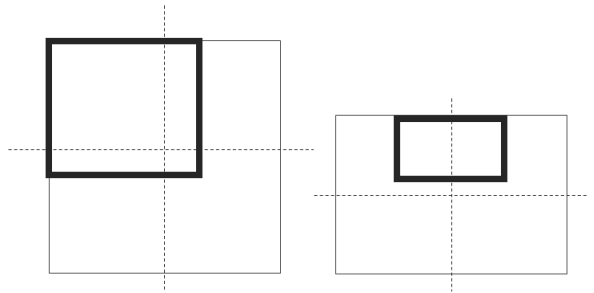


SUMMARY:

As we can see the garbhagriha or the main sanctum sanctorum is the womb of the temple. Everything else is arranged around the main sanctum. But there are some cases where the main sanctum is offset from three sides of the edges. Among the above-mentioned temples Case, no. 1,4,5,6,13 have only one

chamber which is the main sanctum where there are no secondary chambers or open verandas around it. In Case no 2,3,7,8,9,11,12 the main chamber is surrounded either by the secondary chambers or the open verandas or plinth.

Here we can see in Case no 03, 11 the main sanctum is located towards the north side with the main entrance from the south. And in other cases (2, 7, 8, 9, 10, 12) the main sanctum is located in the center.

	
Case no. 2,7,8,9,10,12	Case no 03, 11
<i>Table 9 : Analysis of Garbhagriha Configurations in Temple Cases</i>	

4.2.2.5 CIRCULATION

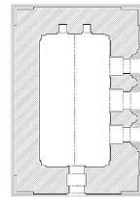
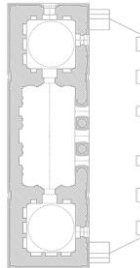
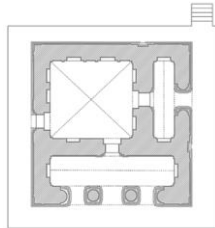
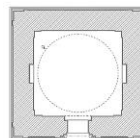
The term 'circulation' refers to the movement of people through, around, and between buildings and other parts of the built environment. Within buildings, circulation spaces are spaces that are predominately used for circulation, such as entrances, foyers and lobbies, corridors, stairs, landings, and so on. Circulation spaces may be categorized as those facilitating horizontal circulation, such as corridors, and those facilitating vertical circulation, such as stairs and ramps.

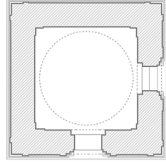
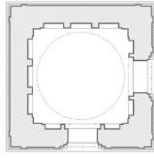
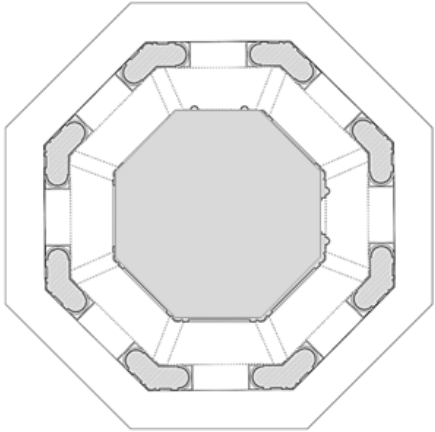
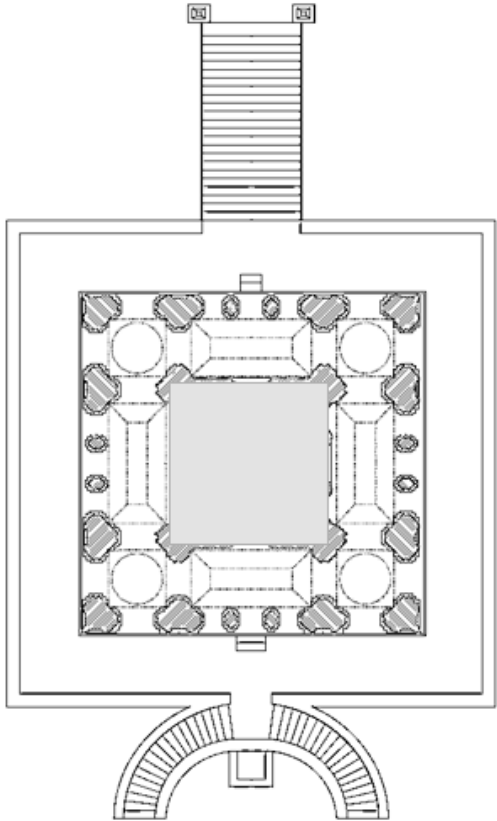
They may also be restricted to specific users groups, for example, in buildings used by the public there may be public circulation spaces, and also, restricted access to private circulation spaces. They may be closed spaces such as corridors, or open spaces such as atria and in some cases may serve multiple functions

4.2.2.5.1 VERANDA or HORIZONTAL CIRCULATION

A veranda or verandah is a roofed, open-air gallery or porch, attached to the outside of a built form. A veranda is often partly enclosed by a railing or columns and arches which frequently extend across the front and sides of the structure. In tropical countries, porches were a natural idea for designing any kind of built form.

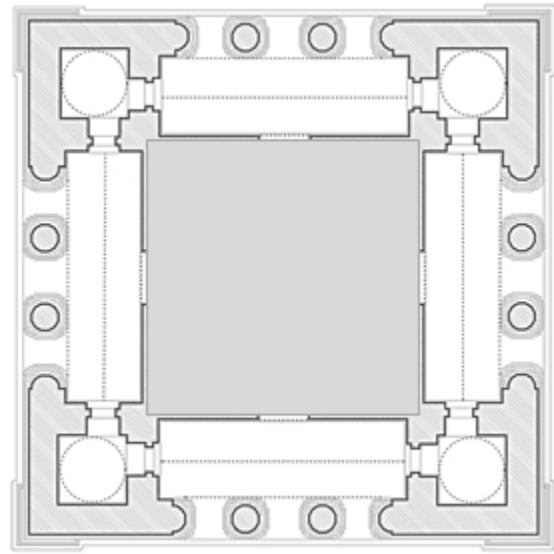
In Bengal architecture, the veranda is a common architectural element found in this region. Veranda also plays an important role in Hindu religious architecture as it is mainly used as the pradakshina path or circumambulation. In the following chart, the verandas are identified in the existing temples of Puthia.

Case No. & Temple name:	Veranda
CASE 01- Small Ahnik Temple: No Veranda	
CASE 02: Boro Ahnik Temple: No Veranda but has an extended Plinth on the east side.	
CASE 03: Choto Govinda Mandir No Veranda but a visible plinth is extended from all sides of the temple.	
CASE 04: Small Shiva Temple No veranda	

CASE 05: Small Shiva Temple-A, Krishnapur • No veranda	
CASE 06: Gopal Mandir, Krishnapur • No veranda	
CASE 07: Ektratna Rathmandir • The main sanctum is surrounded by the circular verandah. First, the temple is placed on a low octagonal foundation or platform. The length of each side of the octagon of the Plinth is 19'-6". The veranda is 4'-4" offset from the plinth edge. The width of this verandah is 7'-6" from the main sanctum in the middle and each arm of this octagonal row measures 16'-0".	
CASE 08: Pancha Ratna Shiva Temple • The temple is generally divided into nine rooms, but except for the main sanctum sanctorum in the center, all have open verandas. Outside the sanctum are four small square rooms measuring 8'-2" at the four corners of the stage and four rectangular rooms measuring 16'-10 " x 8'-4" in the middle at each side of the sanctum sanctorum. These rooms are open and each room is connected by a semicircular archway. The outer open rooms were originally designed as a continuous verandah surrounding the sanctum sanctorum.	

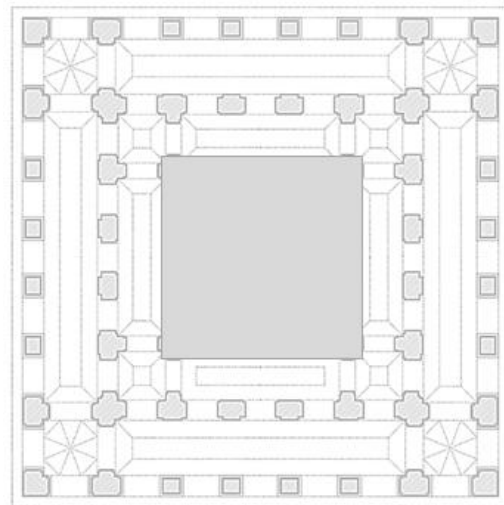
CASE 09: Pancha Ratna Boro Govinda Temple

- The main sanctum sanctorum (larger square) is placed at the center with four small squares at the four corners and four rectangular chambers at the four sides. The outer corner rooms and four rectangular open rooms were originally designed as a continuous verandah surrounding the sanctum sanctorum. In the four rectangular corridors on the outside of the sanctum sanctorum, there are three open semicircular grooved arches arranged on two pillars.

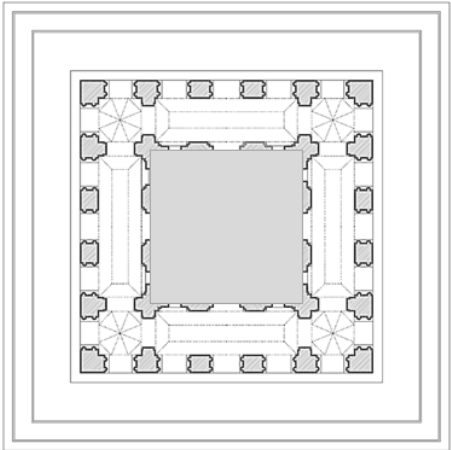
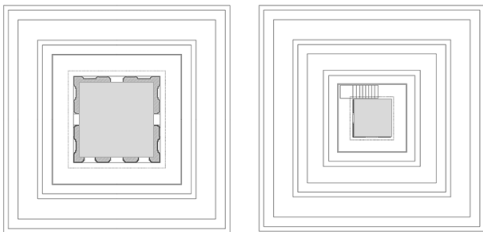
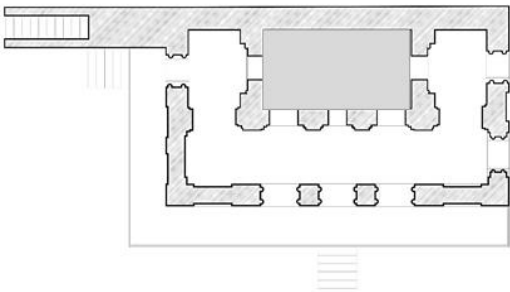
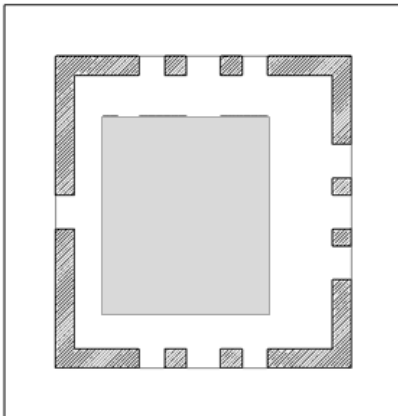


CASE 10: Four-Storied Dolmandir Or Dolmancha

- From the outside, the first and second part is the circular veranda, the third part is the small rectangular room located around the main sanctuary or central room and the fourth part is the main sanctuary or central room. In the second part, the ambulatory verandah of this part is also open by five archways, five on each side, and like the first part, it is divided into eight open rooms.
- The two-storied part of the temple is also divided into four parts. The first part is an open veranda or roof with a width of 8'-10" around the other three parts. The edges of the roof (above the cornice) are surrounded by a 2'-0" high roof. The second part, this part is an ambulatory verandah 2'-0" high and 6'-0" wide from the open verandah or roof of the first part. This verandah is also divided into eight rooms like the ground floor.

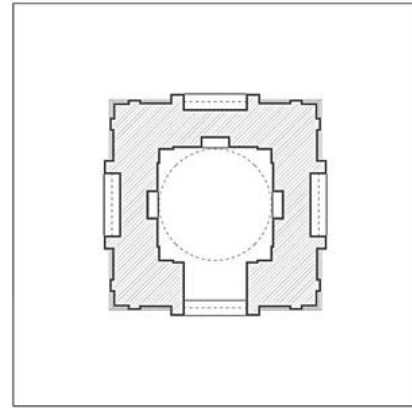


Ground floor

• The third floor of the temple is divided into three parts. The first part is a square open porch or roof with a width of 6'-6" like the first floor. The perimeter of the edge of the roof is surrounded by a 2'-0" high cornice. The second part is an open veranda or a veranda 4'-2" wide to the west, east, and south of the central room and 1'-0" above from the roof. • This layer is divided into two parts. In the first part of the room is a square open veranda or open roof of 5'-5" width. The edges around the roof are surrounded by a 1'-6" high cornice.	 First Floor  Second & Third Floor
CASE 11: Radhakanta Temple Temple • The sanctum sanctorum is surrounded by a rectangular junction or corridor on the west, east, and south. The west and east corridors have two short ranges than the southern ones. The interiors of the corridors are connected by open arches.	
CASE 12: Tarapur Temple • Around the sanctum sanctorum is a narrow covered verandah in the middle which is covered with a thought (pointed barrel) vault roof. This two-story room is surrounded by an open roof with a 2'-0" high parapet.	

CASE 13: Keshto Khyapar Math (A temple with small peaks at the head)

- No Veranda but a visible plinth is extended from all sides of the temple



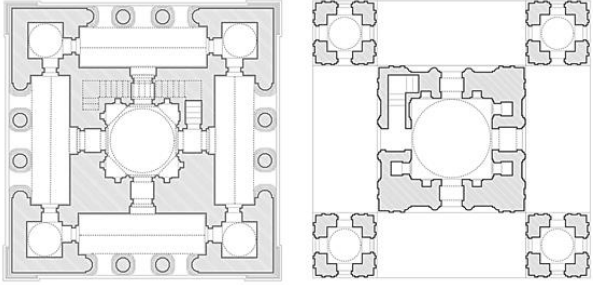
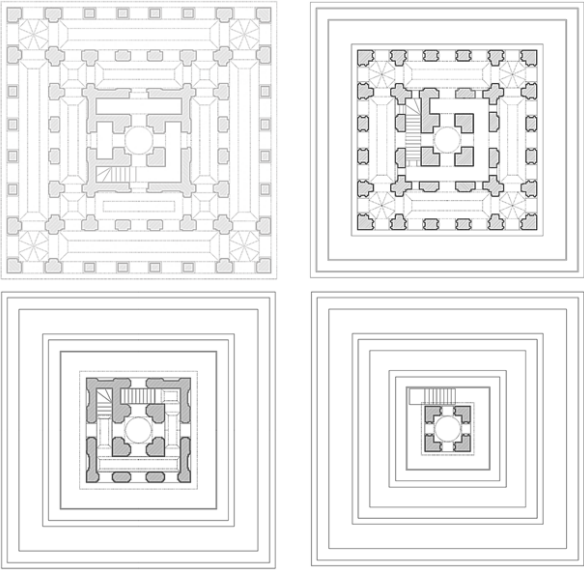
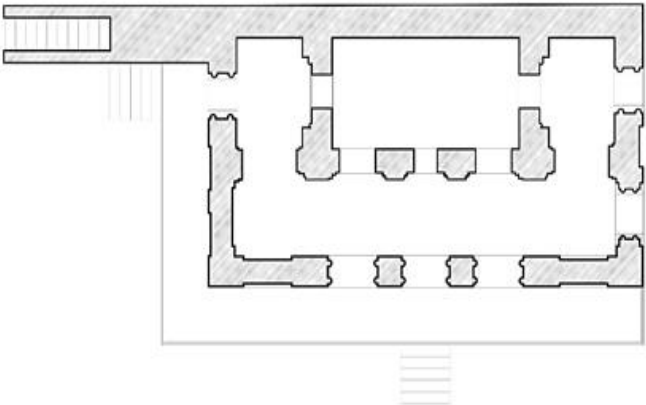
SUMMARY: From the above-mentioned cases, it is visible that Case no 1,2,3,4,5,6,13 has no veranda. Samples of larger temple plans show that Case 7,8,9,10,11,12 have circular verandas all around the main sanctum except from case no 11, Radhakanta temple where the veranda is seen on three sides.

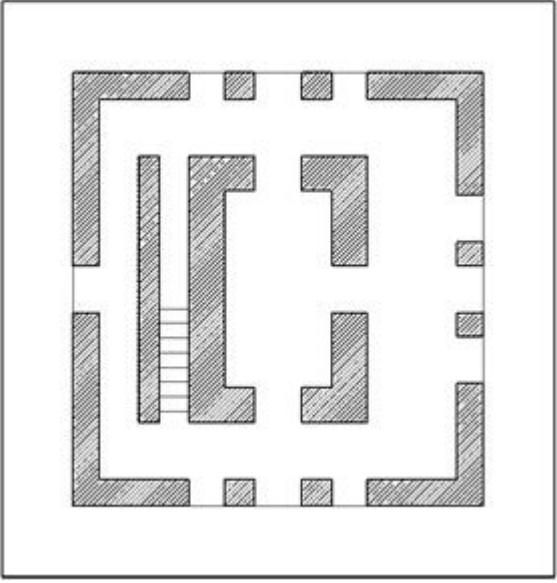
Table 10 : Analysis of verandas in Temple Cases

4.2.2.5.2 SATIR or VERTICAL CIRCULATION

Vertical circulation is how people move up and down within the built form, so includes things like stairs, lifts, ramps, ladders, and escalators which allow us to move from one level to another

Case No. & Temple name:	Vertical Circulation Position
CASE 01- Small Ahnik Temple	No Vertical Circulation
CASE 02: Boro Ahnik Temple	No Vertical Circulation
CASE 03: Choto Govinda Mandir	No Vertical Circulation
CASE 04: Small Shiva Temple	No Vertical Circulation
CASE 05: Small Shiva Temple-A, Krishnapur	No Vertical Circulation
CASE 06: Gopal Mandir, Krishnapur	No Vertical Circulation

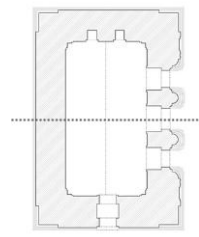
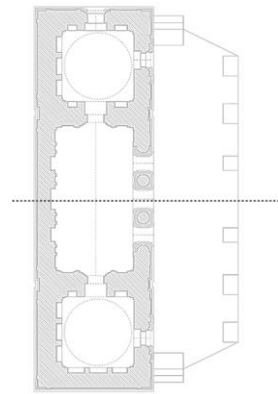
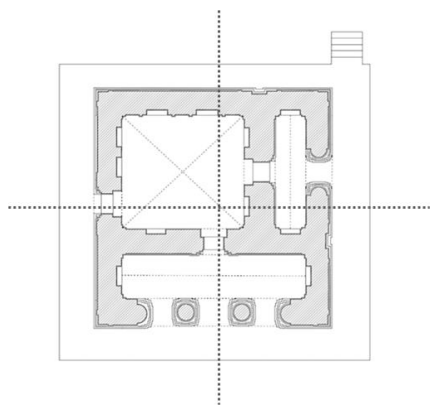
CASE 07: Ekratna Rathmandir	No Vertical Circulation
CASE 08: Pancha Ratna Shiva Temple	No Vertical Circulation
CASE 09: Pancha Ratna Boro Govinda Temple The stair around the ain sanctum leads to the upper floor. The stair starts from the east side on the ground floor and opens up to the west on the upper floor.	
CASE 10: Four-Storied Dolmandir Or Dolmancha Vertical circulation is arranged around the main sanctum of each floor.	
CASE 11: Radhakanta Temple Temple This is an exceptional case as the vertical circulation is located on the west from the exterior part leading towards the upper floor.	

CASE 12: Tarapur Temple • A Narrow staircase is visible on the west side of the main sanctum, leading towards the upper floor.	
CASE 13: Keshto Khyapar Math (A temple with small peaks at the head)	No Vertical Circulation
SUMMARY: From the above-mentioned cases, it is visible that Case no 1, 2,3,4,5,6,7,8, and 13 have no vertical circulation. In case no 9,10,12 have narrow staircases arranged around the main sanctum and an exception is seen in case no 11. So it is clearly visible that all the vertical circulations are arranged around the womb or the main sanctum.	
<i>Table 11 : Analysis of Vertical Circulations in Temple Cases</i>	

4.2.2.6 SYMMETRY IN PLAN

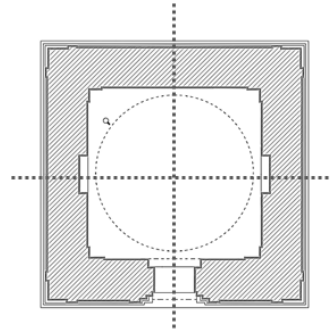
Symmetry occurs when there is congruence in dimensions, due to proportions and arrangement. It provides a sense of harmony and balance. Symmetry is a fundamental part of geometry, nature, and shapes. We see symmetry every day but often don't realize it.

Indian architecture reflects symmetry. From the rock-cut architecture to the monumental Hindu or Islamic architecture symmetry is quite visible. Even is the Bengal architecture symmetric layout of the plan is one of the most significant features.

Case No. & Temple name:	Position of the Main Sanctum
CASE 01- Small Ahnik Temple: The plan shows a single chamber that is not symmetric as along the north-south or east-west.	
CASE 02: Boro Ahnik Temple: The plan is almost symmetrical with the two secondary chambers along with the main sanctum on the north and the south.	
CASE 03: Choto Govinda Mandir The arrangements in the plans are not symmetrical at all, as the main sanctum is offset from the center to accommodate a secondary chamber.	

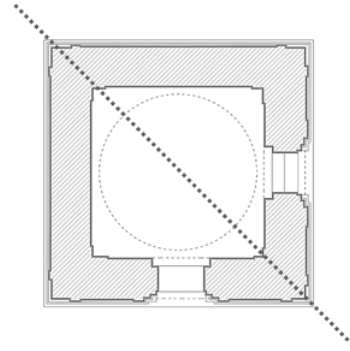
CASE 04: Small Shiva Temple

- It is a very symmetrical square plan with two similar niches at the opposite walls of the east and west.



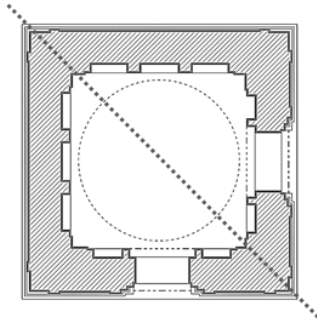
CASE 05: Small Shiva Temple-A, Krishnapur

- This is also a symmetrical plan along the northwest and southeast corner axis as there are two doors at a similar position on the east and south walls.



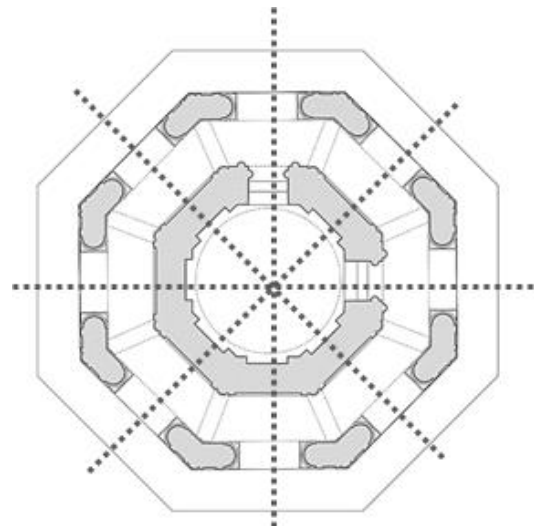
CASE 06: Gopal Mandir, Krishnapur

- This is also a symmetrical plan along the northwest and southeast corner axis as there are two doors at a similar position on the east and south walls. There are three niches on each wall of the north and west.



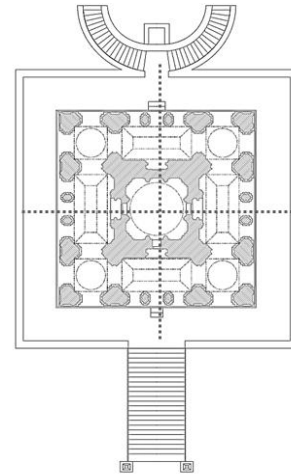
CASE 07: Ektratna Rathmandir

- This is a symmetrical octagonal plan. The doors and the niches are also placed symmetrically along the northeast and southwest axis.



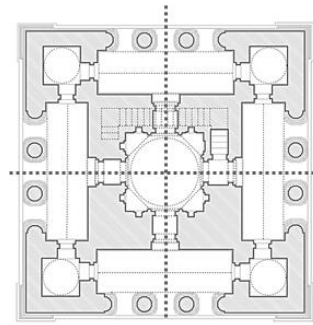
CASE 08: Pancha Ratna Shiva Temple

- The plan of this temple is pure square and symmetrical. Through the stair configuration is different but the position of the stair is also symmetrical to the north and the south.



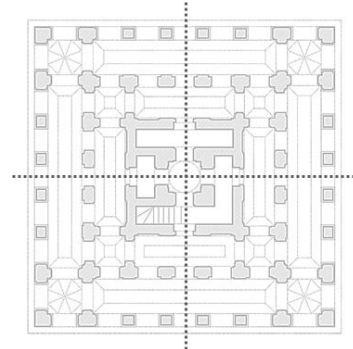
CASE 09: Pancha Ratna Boro Govinda Temple

- This is a pure square symmetrical plan accessible from all sides.



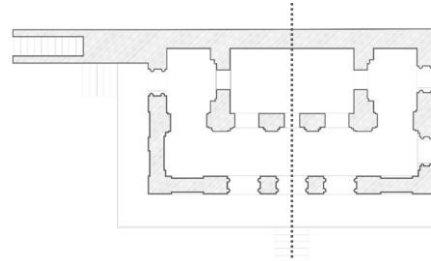
CASE 10: Four-Storied Dolmandir Or Dolmancha

- This square-shaped plan has a symmetrical layout from all sides, where verandas with open arches are seen.



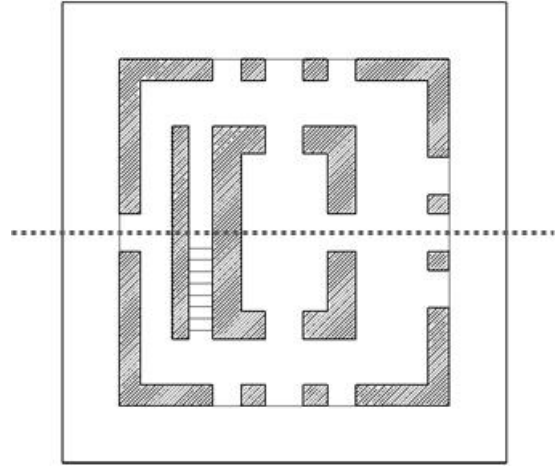
CASE 11: Radhakanta Temple Temple

- Though there is an external stair on the west, the basic arrangement of the plan is very symmetric.



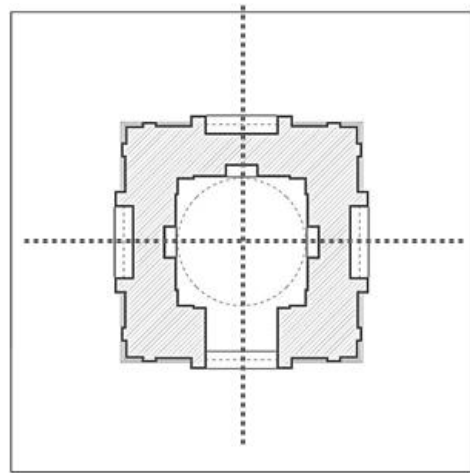
CASE 12: Tarapur Temple

- Except for the stair on the west, the plan arrangement is symmetric along the east-west axis.



CASE 13: Keshto Khyapar Math (A temple with small peaks at the head)

- It is a very symmetrical square plan with the main entrance on the south and three similar niches on the other sides as well.



SUMMARY: The garbhagriha or the main sanctum sanctorum is the womb of the temple, where everything else is arranged around the main sanctum. In the above-mentioned cases, we can see most of them have symmetrical space arrangements except case no 4.

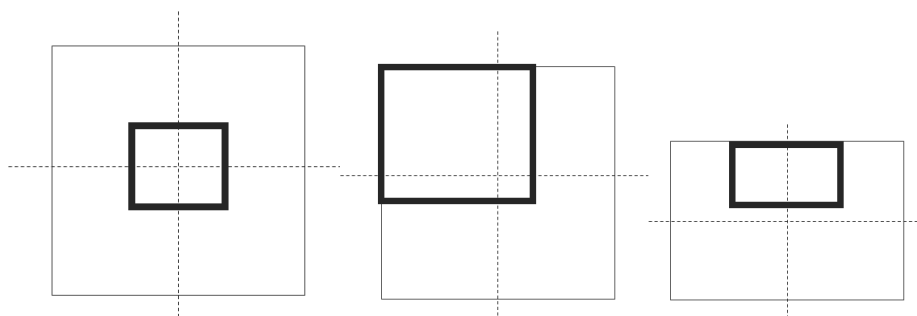


Table 12 : Analysis of Symmetry in Temple Cases

4.2.3 ELEMENTS

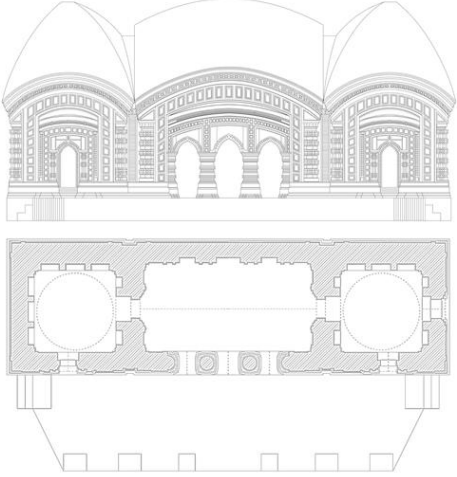
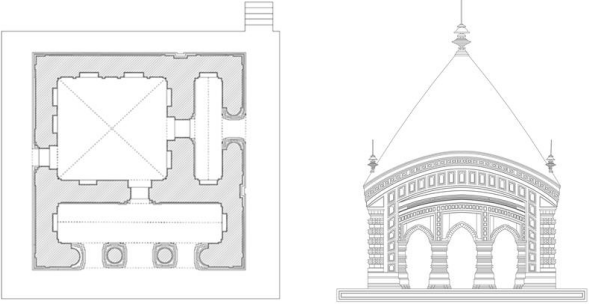
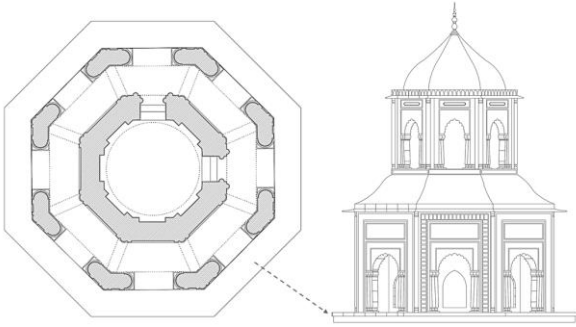
Architectural elements are the exclusive details and parts that, together, form the architectural style of a built form. Identification of architectural elements helps to discover the original characteristics of that specific built form. Over the ages, these heritage buildings have displayed a unique architectural style of ancient Bengal and still serve as a living sacred landscape heritage, and understanding of past, culture, and art got reflected through the architectural representation. The following elements can be seen in the temple of Bengal to identify its origin.

- Plinth
- Structural elements
 - Column
 - Wall
- Openings
 - Doors
 - Arches
- Roof configuration
 - Inner surface
 - Outer surface
- Drainage

4.2.3.1 PLINTH

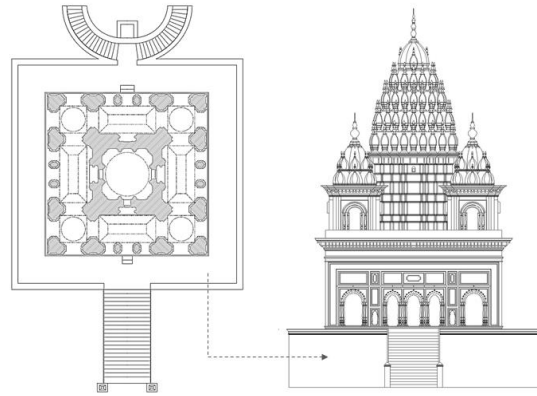
The plinth is one of the major features of Bengal architecture. The plinth is the high platform on which the built form is rested. In the Bengal region, each kind of built form has a plinth as this region is low land and flood-prone region. That's why all the domestic houses are built on a high plinth. Even this feature is sophisticatedly repeated to the other sort of built form like the Hindu temples in Bengal.

Case No. & Temple name:	Plinth details
CASE 01- Small Ahnik Temple:	No plinth is visible, but narrow recessed drainage can be found around the outline of the exterior.

CASE 02: Boro Ahnik Temple: The temple is situated on a plinth height 2.5' which is extended as an open veranda in the front with a staircase to approach the temple chambers.	
CASE 03: Choto Govinda Mandir The entire temple is situated on a 2'-6" high almost square platform that measures 32'-2" in north-south, 33'-6" in east-west. A stair is approaching towards the plinth on the north.	
CASE 04: Small Shiva Temple	No plinth
CASE 05: Small Shiva Temple-A, Krishnapur	No plinth
CASE 06: Gopal Mandir, Krishnapur	No plinth
CASE 07: Ektratna Rathmandir First, the temple is placed on a low octagonal foundation or platform. The length of each side of the octagon of the Plinth is 19'-6". The veranda is 4'-4" offset from the plinth edge.	

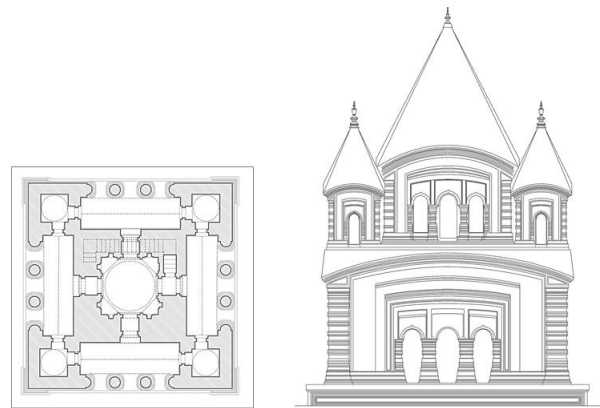
CASE 08: Pancha Ratna Shiva Temple

- The entire temple is rested on a large square platform with a height of 11'-6" with dimensions of each side of the platform being 65'-0".



CASE 09: Pancha Ratna Boro Govinda Temple

- The entire temple is built on a 3'-3" high square platform measuring 46'-6" to the north-south and 47'-3" to the east-west.

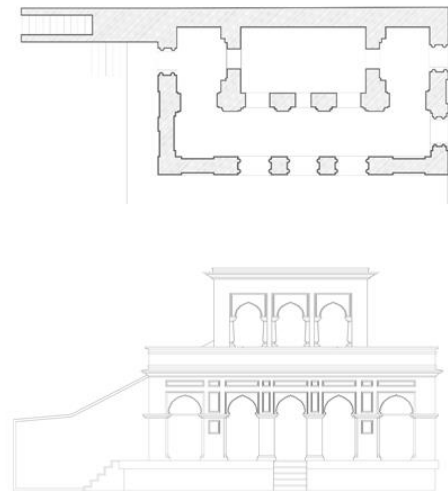


CASE 10: Four-Storied Dolmandir Or Dolmancha

No plinth but narrow recessed drainage can be found around the outline of the exterior.

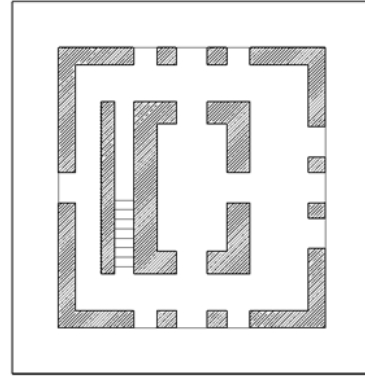
CASE 11: Radhakanta Temple Temple

- The temple is situated on a high rectangular platform. The stage measures 45'-9" east-west, 28'-0" north-south, and height 2'-9".



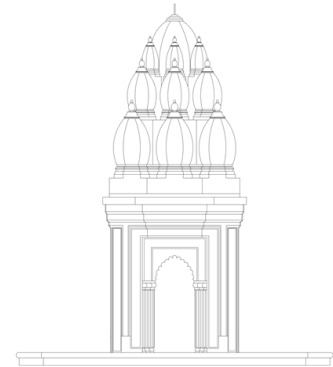
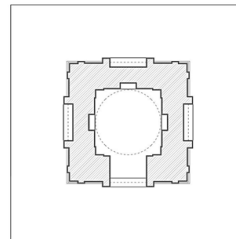
CASE 12: Tarapur Temple

- The two-storied temple is built on a square platform right in the middle of a huge pool of about 8.33 acres. The stage measures 48'-6" x 46'-6" and its height from the water is 4'-0". The stage is built on 28 arches with 7 tunnel-shaped arches on each side.



CASE 13: Keshto Khyapar Math (A temple with small peaks at the head)

- The monastery has one square room and is situated on a low square platform. Currently, the stage is almost wiped out. The dimensions of each side of the stage are 21'-10 ". The main building is built 5'-4 "away from the edge of the stage.

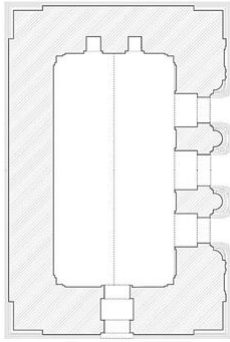
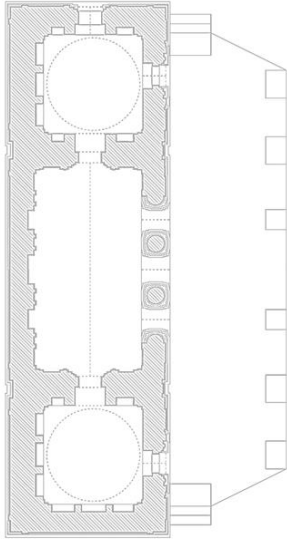


SUMMARY: Here, from the above-mentioned temples, case no 1,4,5,6,10 has no plinth or platform. Most of the other temples have square or rectangular platforms with the exceptional octagonal plinth of Ek Ratna temple (case no 7). These platforms can be high or low according to the scale and proportion of the temple.

Table 13 : Analysis of Plinth configurations in Temple Cases

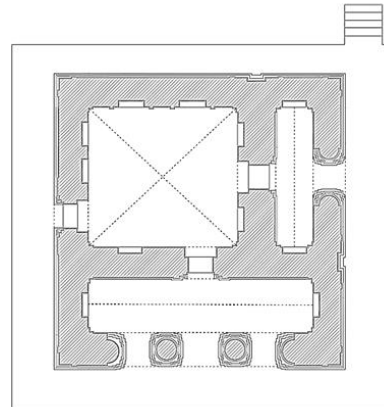
4.2.3.2 STRUCTURAL ELEMENTS

Structural elements may include external and internal load-bearing brick or masonry walls, mud walls or timber-framed walls; columns of stone, cast iron or concrete; stone, brick or concrete vaults; timber, iron or steel beams, trusses, girders, and many others. In Bengal temples, columns and thick walls are commonly seen as structural elements.

Case No. & Temple name:	
CASE 01- Small Ahnik Temple: ● Column: There are two Arch columns on the east facade which are strong and short. ● lintel: The lintel is made of wood, with two niches on the inside of the north wall and one on the west side of the south wall entrance. ● Walls: The walls of the temple are 4'-0" thick and the cornice is curved like a bow.	  
CASE 02: Boro Ahnik Temple: ● Column: The archway is enclosed in three rectangular frame structures with two short pillars shown in fig. ● Walls: The walls of the temple are apparently 2'-4" thick and the cornice is curved like a bow. These thick walls are the main structure.	  

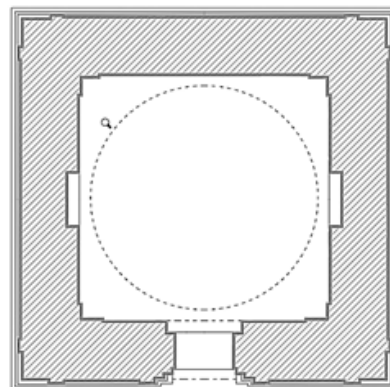
CASE 03: Choto Govinda Mandir

- **Column:** The three archways on the south facade of the temple are based on two short sturdy pillars and two corresponding pilasters.
- **Walls:** The walls of the temple are apparently the same as the boro Annik temples, with thick walls to support the structure.



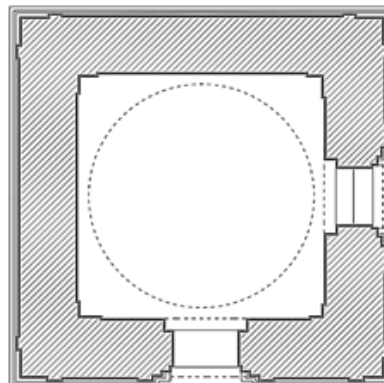
CASE 04: Small Shiva Temple

- **Column:** No columns
- **Walls:** The walls of this temple are 2'-4" thick and designed with curved cornices. Stone has been used as a step at the lower part of the entrance of the temple.



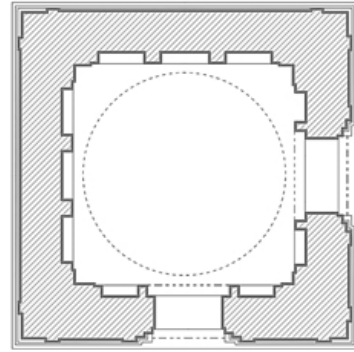
CASE 05: Small Shiva Temple-A, Krishnapur

- **Column:** No columns
- **Walls:** The cornice of the temple is curved and the walls are 2'-5" thick walls to support the entire structure.



CASE 06: Gopal Mandir, Krishnapur

- **Column:** No columns
- **Walls:** The cornice of the temple is curved and the walls are 2'-5" thick walls to support the entire structure.

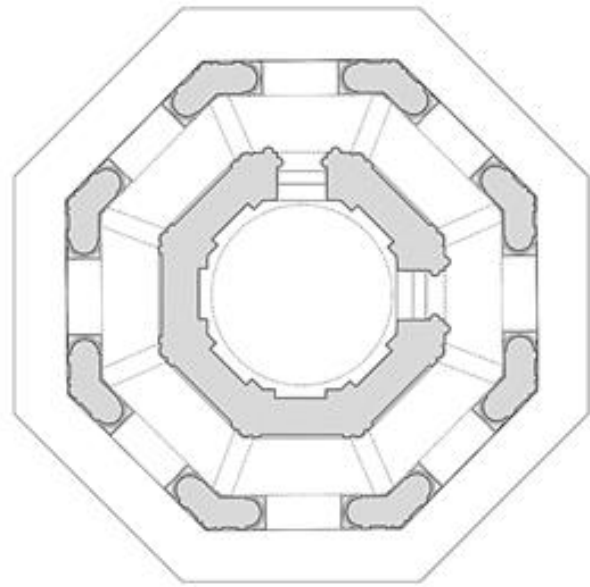


CASE 07: Ekratna Rathmandir

- **Column:** Eight columns are seen at the corner edges of the low octagonal platform. The pillars of this octagon have six surfaces and are exposed by grooves. The pillars are built-in Doris style.

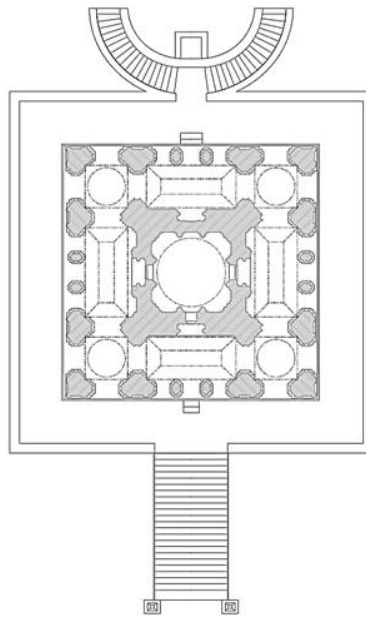
On the first floor, similar types of pillars are seen with arched openings. Eight pillars support the upper roof and appear to be a Ratna.

- **Walls:** The main sanctum is built on a 4'-0" thick octagonal wall. Each side of the octagon inside the sanctum measures 5'-10".

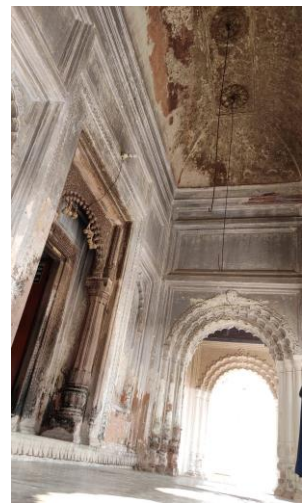
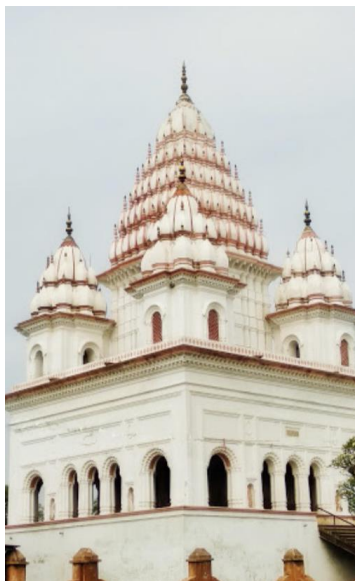


CASE 08: Pancha Ratna Shiva Temple

- **Column:** The temple has twenty matte pillars and four posts. Twelve of the pillars are rectangular and strong and the other eight are square. The rectangular columns measure 5'-8" x 3'-4" and the square middle columns measure 2'-9". The four posts are attached to the outer four corners of the sanctuary. The distances of the square pillars are 2'-6" and 3'-0" respectively.

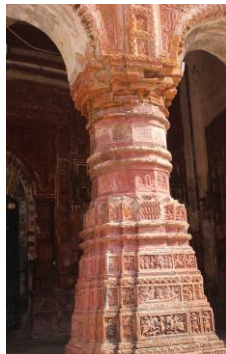
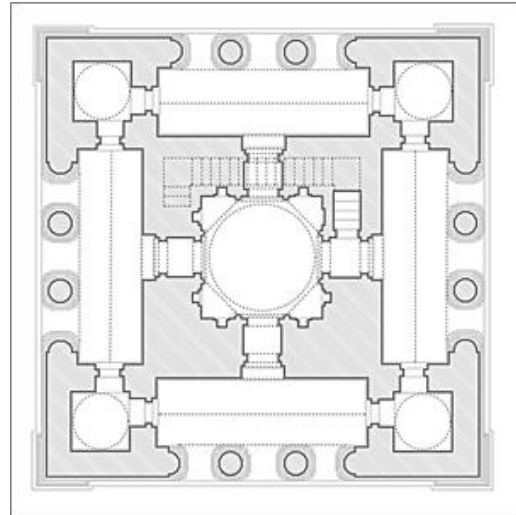


- **Walls:** The main sanctum is built on a thick wall structure. Wooden scales have been used at the entrance. A 1'-4" wide stone slab has been installed on the inner walls of the perimeter verandah as a damp-proof course.



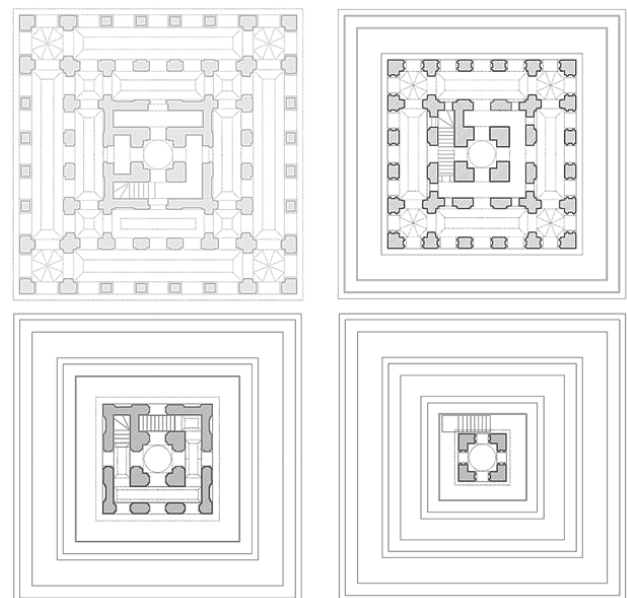
CASE 09: Pancha Ratna Boro Govinda Temple

- **Column:** The three archways on each facade of the temple are based on two short sturdy pillars and two corresponding pilasters. In total there are eight short pillars on the four sides.
- **Walls:** Walls are built with brick and lime. The main sanctum is built on a thick wall structure.



CASE 10: Four-Storeyed Dolmandir Or Dolmancha

- **Column:** From the outside, the first and second part is the circular veranda, the third part is the small rectangular room located around the main sanctuary or central room and the fourth part is the main sanctuary or central room. In the first part, there are 28 open archways with seven on each side. These arches have square columns. The plan of this temple shows the columned arrangement.

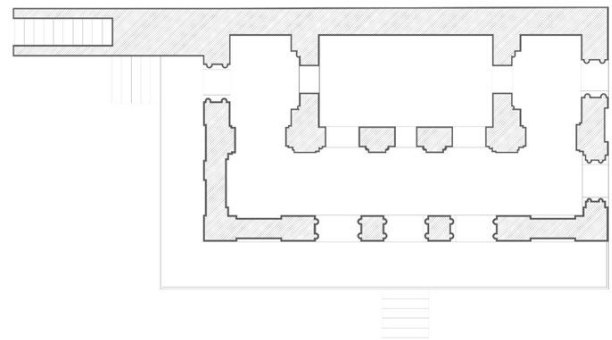


- **Walls:** Walls are built with brick and lime. A thick wall structure is seen in the third part around the main sanctum.



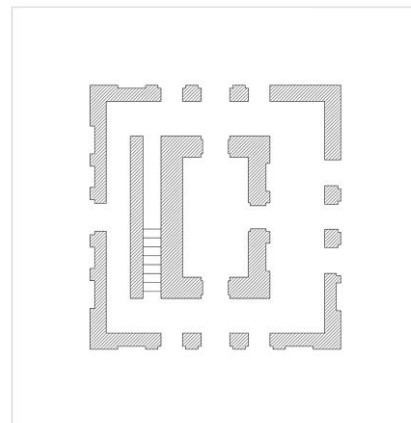
CASE 11: Radhakanta Temple Temple

- **Column:** The front of the south corridor is flanked by three semicircular arches on two square pillars. Columns are seen in the front facade on the ground and first floor.
- **Walls:** Walls are built with brick and lime. The walls are apparently 1.5' thick.



CASE 12: Tarapur Temple

- **Column:** The corridors are flanked by three semicircular arches on two square pillars. Columns are also seen on the east side of the first floor.

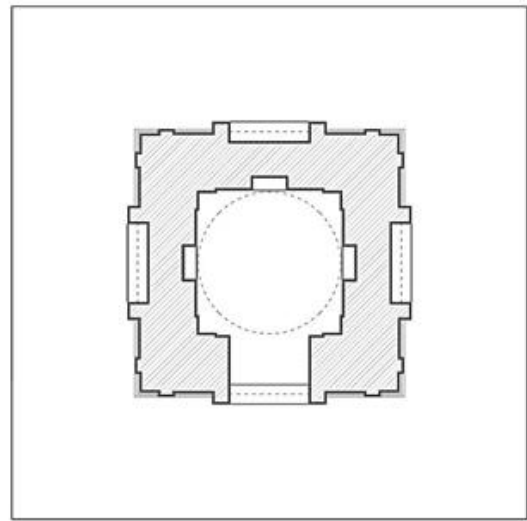


- **Walls:** Walls are built with brick and lime. The main sanctum is built on a thick wall structure.



CASE 13: Keshto Khyapar Math (A temple with small peaks at the head)

- **Column:** No columns
- **Walls:** The walls of the temple are 2'-5" thick to support the entire structure.



SUMMARY: In the above-mentioned temples, Case 4,5,6,13 temples have no columns and the entire built form is supported on a wall structure. On the other hand, the rest of the temples have column structures either at the front veranda or all four sides with the appearance of porches. Columns and walls are built with brick and lime.

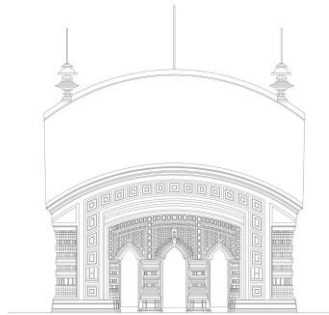
Table 14 : Analysis of Structural Elements in Temple Cases

4.2.3.3 OPENINGS

Building openings define the transition from reticent to exposed, from artificial to natural, from dark to light, from enclosed to open space. Having a direct connection with the outdoors is important to a building's users. In Bengal architecture, openings are one of the main features for design and this reflects the adaptation with the context of this region.

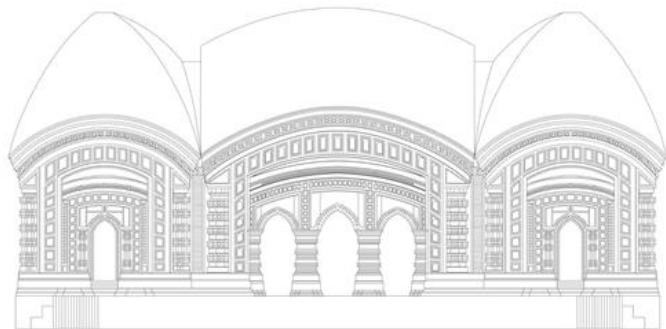
CASE 01- Small Ahnik Temple:

- **Arch:** the east side of the temple has a Mutifoiled pointed arch.



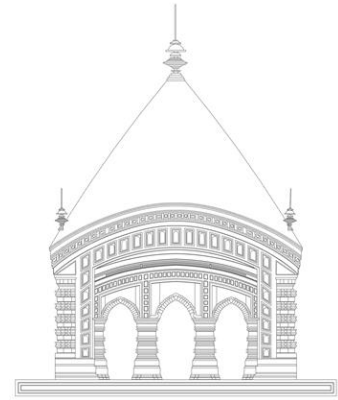
CASE 02: Boro Ahnik Temple:

- **Arch:** The front of the temple is exposed by three semicircular Mutifoiled pointed arches. The archway is enclosed in three rectangular frame structures with two short pillars.
- The north and south square room are connected with the Sanctorum by a pointed archway
- Total six openings, five at the front and another one at the north.



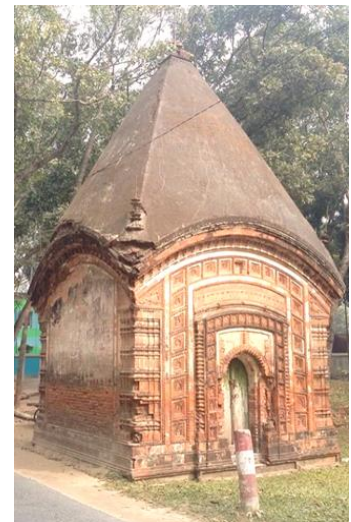
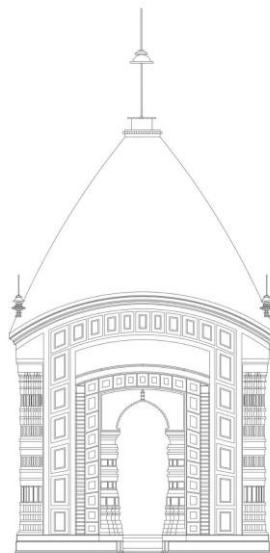
CASE 03: Choto Govinda Mandir

- **Arch:** The south chamber is opened by three as well as the east chamber by a semicircular archway. The three multifoil arches on the south facade of the temple are based on two short sturdy pillars and two corresponding pilasters. Of course, all the arches are placed in a rectangular structure.
- **Door:** there are three semicircular arched doorways to enter the sanctum



CASE 04: Small Shiva Temple

- **Arch:** The entrance with a designed three-step multifoil arch is housed in a rectangular structure.



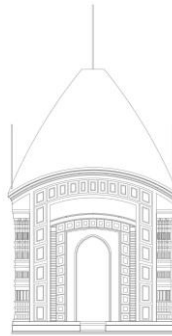
CASE 05: Small Shiva Temple-A,
Krishnapur

- **Arch:** The entrance with a designed three-step multifoil arch is housed in a rectangular structure.



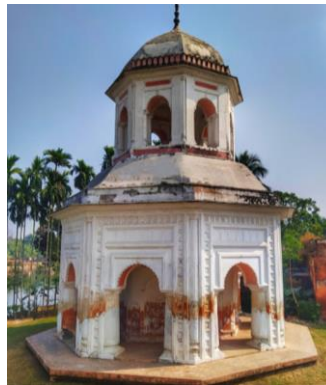
CASE 06: Gopal Mandir, Krishnapur

- **Arch:** The entrance with a designed three-step multifoil arch is housed in a rectangular structure.



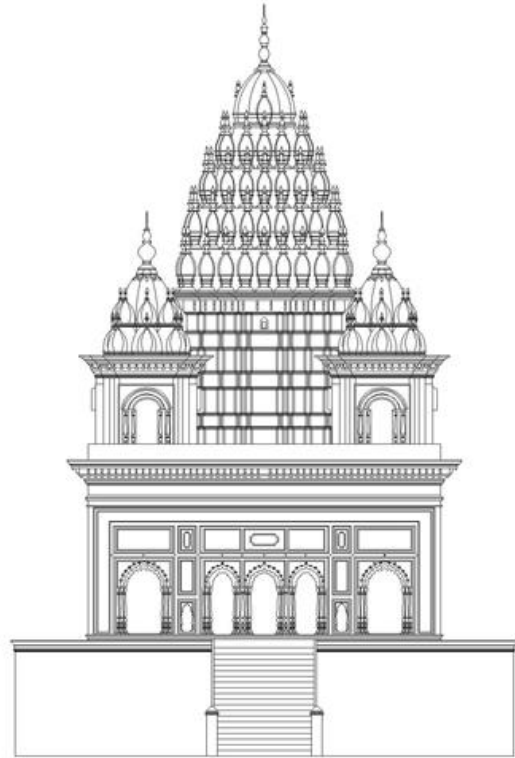
CASE 07: Ekratna Rathmandir

- **Arch:** Semicircular multifoil arches are seen on the veranda. Beneath that *khajkhilan* (খাজখিলান) or pseudo recessed arch, there is another simple surface of a pseudo recessed semicircular arch. The *Ratna* is also built to the size of the sanctum sanctorum and each arm of the *Ratna* is exposed by eight grooved paths or openings.
- **Door:** At the two entrances to the sanctum sanctorum, a serpentine frame and a *khajkhilan* or pseudo recessed arch are carved between the squares.



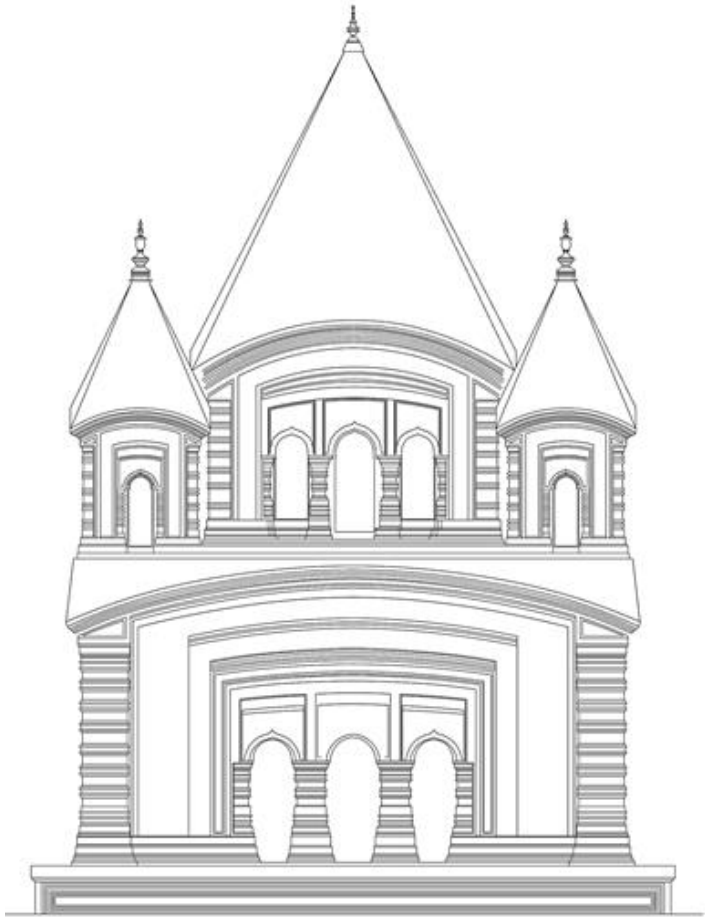
CASE 08: Pancha Ratna Shiva Temple

- **Arch:** The square rooms of the corner are open by two arches and the rectangular rooms in the middle are by three arches. These arches are three stepped multifoils pointed arches.
- **Door:** The front part is surrounded by a protruding *khajkhilan* (grooved rectangular doorway with a semicircular pointed arch) decorated with stone pillars.



CASE 09: Pancha Ratna Boro
Govinda Temple

- **Arch:** The sides of the temple are exposed by three semicircular Multi Foiled pointed arches. The archway is enclosed in three rectangular frame structures with two short pillars.
- **Door:** The main sanctum is approached by arched doors from food sides. Doorway with a semicircular pointed arch decorated with terracotta.



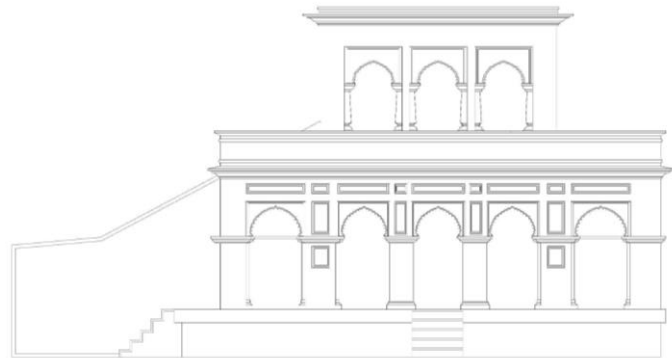
CASE 10: Four-Storied Dolmandir Or Dolmancha

- **Arch:** In the first part, there are 28 open archways with seven on each side to enter this part. These arches are multifoil semicircular arches.
- **Ventilators:** The rectangular chambers around the main sanctum have small ventilators with pointed arches.



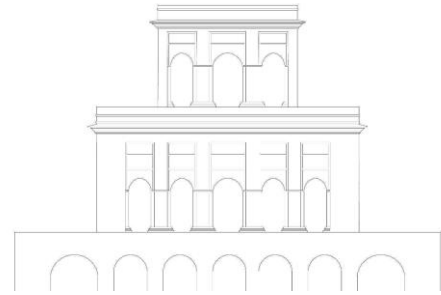
CASE 11: Radhakanta Temple Temple

- **Arch:** All entrances have semicircular multifoil arches.



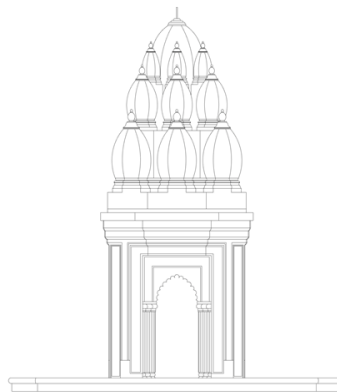
CASE 12: Tarapur Temple

- **Arch:** All entrances have pointed arches. The front of the south corridor is flanked by three semicircular arches on two square pillars and the east by an archway.



CASE 13: Keshto Khyapar Math (A temple with small peaks at the head)

- **Arch:** The rough entrance is a rectangular post lintel opening but designed with a pseudo semicircular multifoil arch over the rectangular structure.



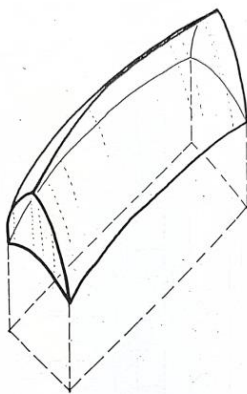
SUMMARY: Semicircular multifoil arches are seen in most of the cases. But case no 12 tarapur Temple has got both pointed arches and multifoil arches. Three-step multifoil arches are very common in terracotta façades.

Table 15 : Analysis of Openings and Arches in Temple Cases

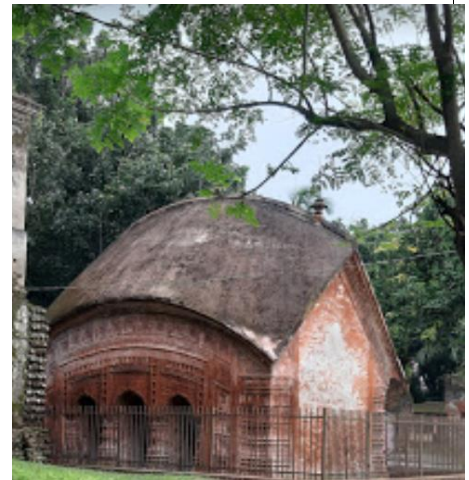
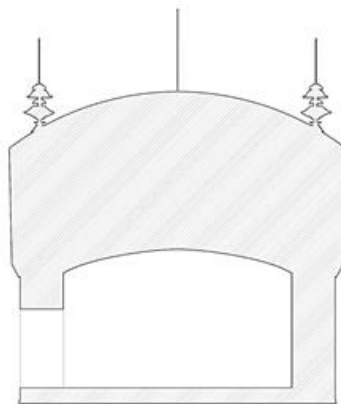
4.2.3.4 ROOF

Roof Construction is one of the main features in Bengal temples. Bengal temples have produced different styles due to the various configurations of temples. Even these temples have been classified according to the appearance of the temples. So Roof played an important role to identify their specific style. In Bengal temples, context and regionality have directly influenced the roof construction and confined it to a specific style of architecture.

CASE 01- Small Ahnik Temple:

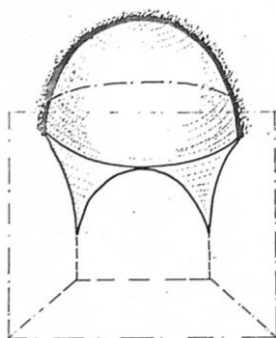


240. *bangla vault*

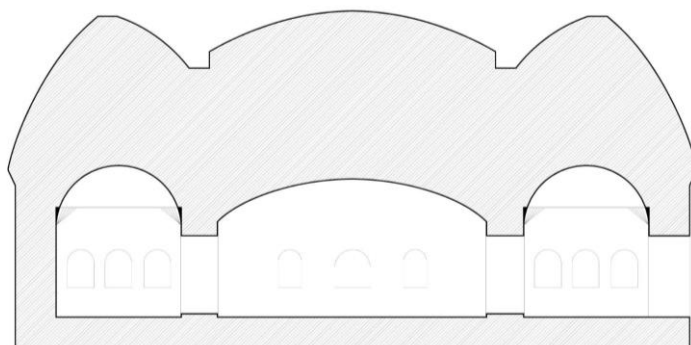


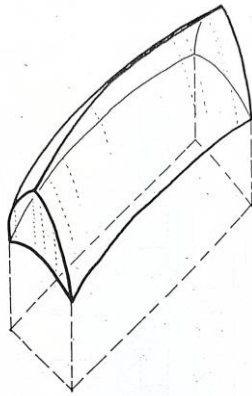
- **Inner Roof:** The inner surface of the roof is the bangla vault.
- **Outer Roof:** The temple appears to be like a hut. The roof is like a Bengal thatched roof with a curved cornice. The middle vertex is relatively large.
- **Cornice:** curved cornice.

CASE 02: Boro Ahnik Temple:



248. *dome on pendentives*



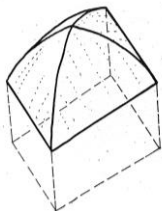


240. bangla vault

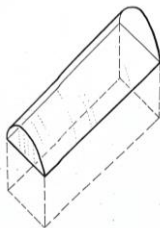


- **Inner Roof:** The inner surface of the main sanctum is bangla vault and The inner square of the two small square rooms on either side of the main sanctum sanctorum has a semi-circular dome built in the Pendentive style.
- **Outer Roof:** The upper part of the main sanctum is covered with a **dochala** Bengali-style low-pitched roof which is curved like a cornice bow. The two small square rooms on either side of the main sanctum sanctorum are built with a **chauchala**.
- **Cornice:** curved cornice.

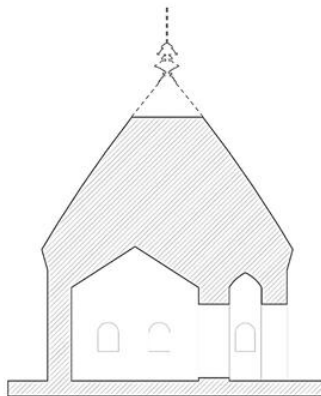
CASE 03: Choto Govinda Mandir



241. cross vault

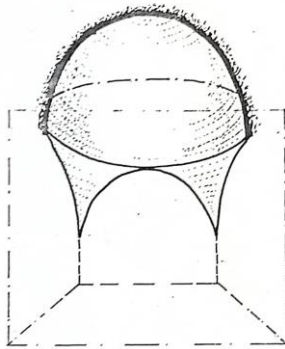


238. barrel vault

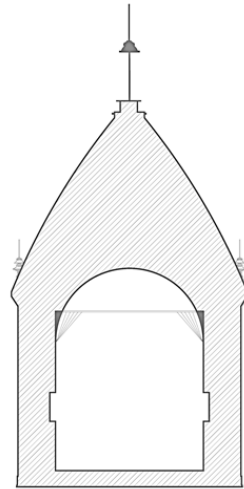


- **Inner Roof:** The inner surface of the sanctum sanctorum is covered with a chauchala-style roof and the upper part of the two-span rectangular chambers or verandas is covered with a barrel vault-shaped roof.
- **Outer Roof:** the outer surface of the entire temple is covered with a chauchala pyramid-shaped roof and the cornice is curved.
- **Cornice:** curved cornice.

CASE 04: Small Shiva Temple

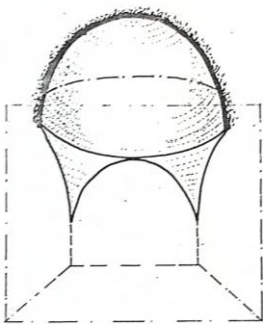


248. dome on pendentives

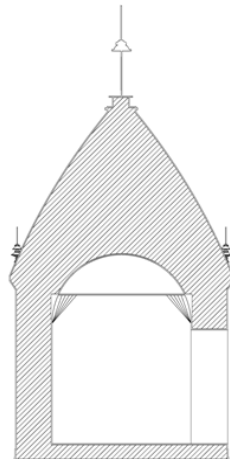


- **Inner Roof:** The inner surface of the temple is covered by a semicircular dome built in the Pandantif style.
- **Outer Roof:** The outer part is covered by a pyramid-shaped *chauchala* roof with a curved cornice.
- **Cornice:** curved cornice.

CASE 05: Small Shiva Temple-A, Krishnapur

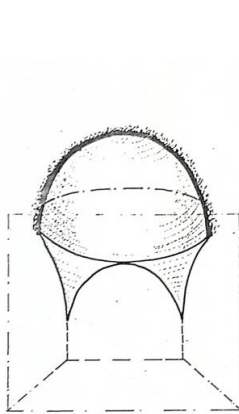


248. dome on pendentives

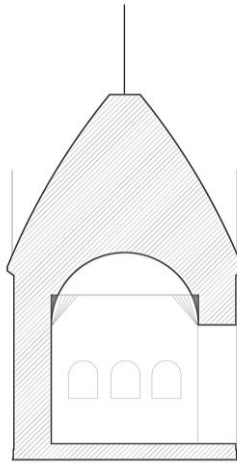


- **Inner Roof:** The inner surface of the temple is covered by a semicircular dome built in the Pandantif style.
- **Outer Roof:** The outer part is covered by a pyramid-shaped *chauchala* roof with a curved cornice.
- **Cornice:** curved cornice.

CASE 06: Gopal Mandir, Krishnapur

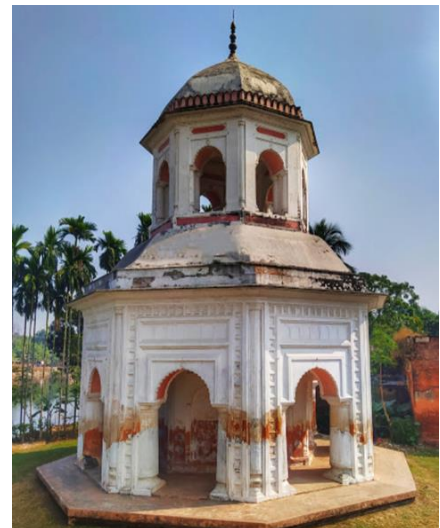
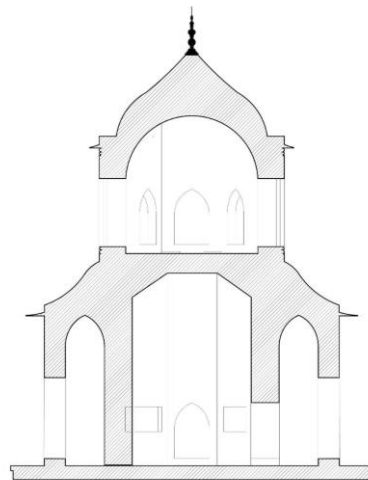
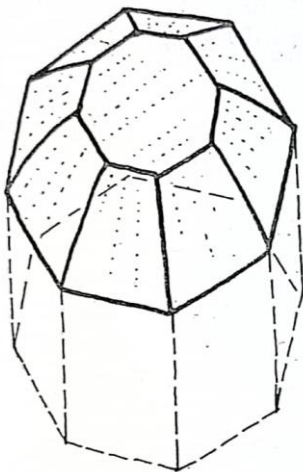


248. dome on pendentives



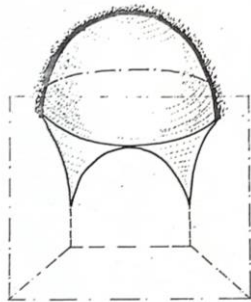
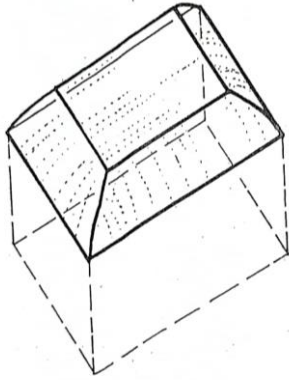
- **Inner Roof:** The inner surface of the temple is covered by a semicircular dome built in the Pandantif style.
- **Outer Roof:** The outer part is covered by a pyramid-shaped *chauchala* roof with a curved cornice.
- **Cornice:** curved cornice.

CASE 07: Ekratna Rathmandir

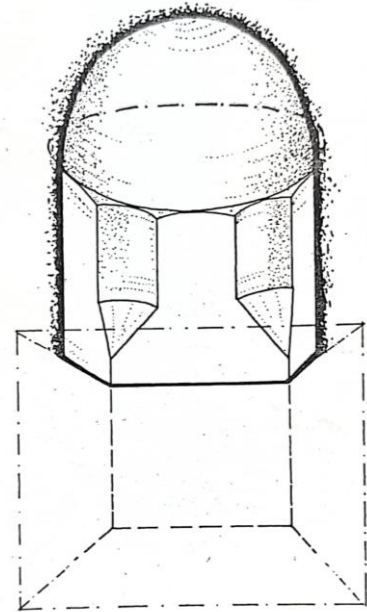
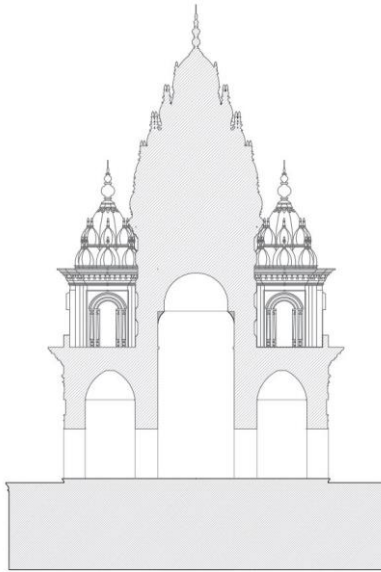


- **Inner Roof:** The inner surface of the perimeter veranda is covered with a barrel vault roof.
- **Outer Roof:** The *Ratna* of the temple is placed on top. The *Ratna* is also built to the size of the sanctum sanctorum and each arm of the *Ratna* is exposed by eight grooved paths or openings. The upper part of the *Ratna* is covered with octagonal domes.
- **Cornice:** The cornices of the roof are simply built and extended.

CASE 08: Pancha Ratna Shiva Temple

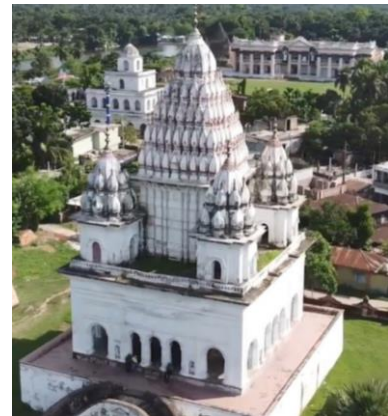


248. dome on pendentives



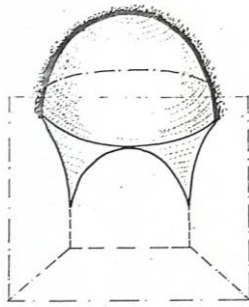
251. dome on octagonal drum with triangular pendentives

Inner surface of the main sanctum.

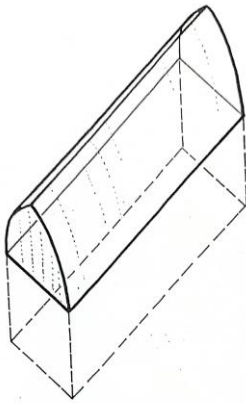
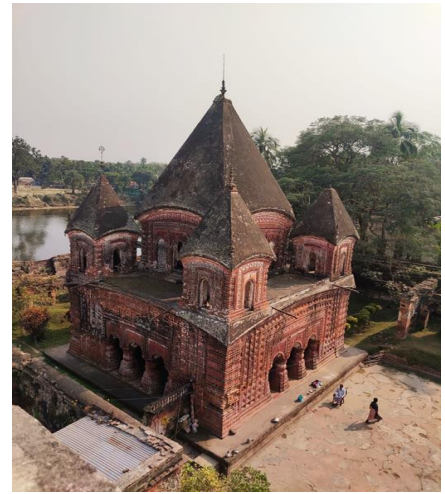


- **Inner Roof:** The interior of the main sanctum sanctorum and the small square rooms at the four corners are covered with a low dome, which is covered with a pendentif method, but it is not visible from the outside. On the other hand, the inner surface of the four rectangular open rooms is covered with a chauchala roof, but they are also out of sight as the outer part is leveled.
- **Outer Roof:** Because the outer shape is covered with five *ratnas* or peaks or kiosks which have been placed above the dome of the chambers. The *ratnas* or kiosks above the main sanctum are the largest ones and the other four are relatively the same small size.
- **Cornice:** The cornice of the temple is enlarged (plastered with molded designs) on the front through periodic expansion.

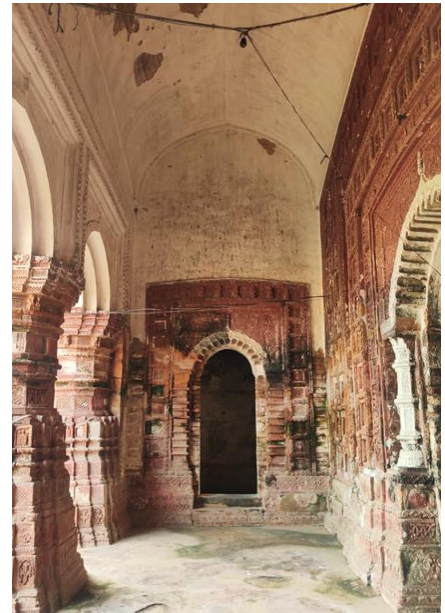
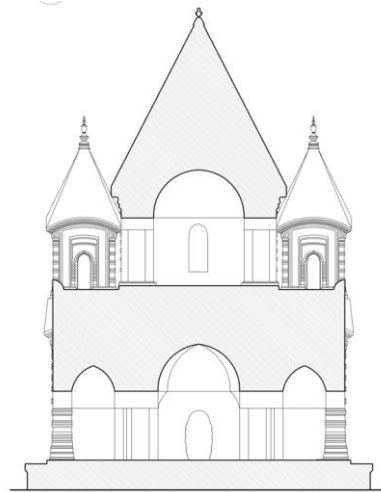
CASE 09: Pancha Ratna Boro Govinda Temple



248. dome on pendentives

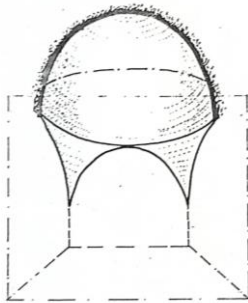
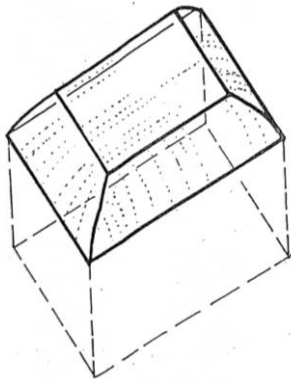


239. pointed vault



- **Inner Roof:** the inner surface of the main sanctum is covered by a semicircular dome. The inner surfaces of the upper part of the corner small cells are covered with small semicircular domes and the upper part of the rectangular corridors is covered with arched vaults (V-shaped). However, the tops of these domes are not visible as they are covered with a flat roof and five stones are made on the top of that flat roof.
- **Outer Roof:** The outer part of the ground floor roof is flat but there is a pseudo curved cornice seen from outside. There are five **ratnas** (kiosks) on the second floor of the temple in keeping with the layout of the ground floor plan below. The inner surface of the five **ratnas** is covered with low semicircular domes like the lower chambers and consists of a pyramid-shaped chauchala roof.
- **Cornice:** The ground floor roof has pseudo curved cornice seen from outside.

CASE 10: Four-Storied Dolmandir Or Dolmancha

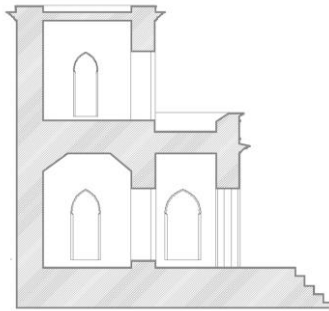
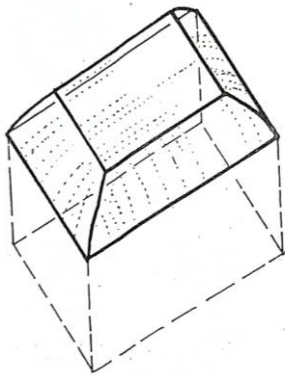


248. dome on pendentives



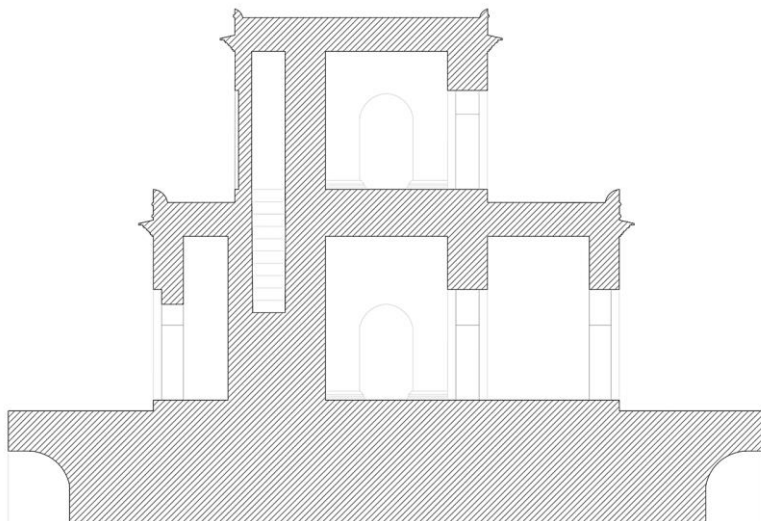
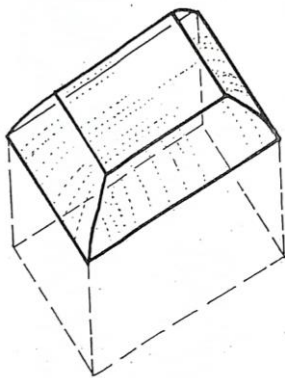
- Inner Roof:** On the ground floor, the inner surface of the upper part of the rectangular rooms is covered with a *chauchala* arched surface and the square corner is covered by octagonal domes. But the exterior of both the rooms is covered with a flat roof and the first floor of the temple is built upon the ground floor.
 On the first floor, the inner surface of the roof is a semicircular dome but the outer part is covered by a flat roof with an extended open roof around the verandas.
 On the second floor, the inner surface of the room has an inverted gabled dome, but the outer part is covered by a flat roof with an extended open roof around the verandas.
- Outer Roof:** The surface of the room is covered with a large vein dome. At the top of the dome, there is a top iron bar on two brass pitchers, and the lower roof and cornice of the dome are curved like the huts of Bengal. There was an iron bar at each corner of the open veranda or open roof which is not present.
- Cornice:** The cornices of the roof from the ground to the second floor are simply built the dome at the top. The cornice of the dome is curved like the huts of Bengal.

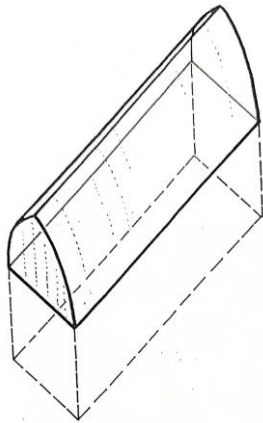
CASE 11: Radhakanta Temple Temple



- **Inner Roof:** The inner surface roof of the sanctum sanctorum is chauchala and the inner roofs of the corridors have a *slight quadrangle Chauchala*, but the outer ones are covered with flat roofs. On the first floor, the surface of the room is covered by a flat roof built on four strong wooden arches.
- **Outer Roof:** The outer part of the roofs of the ground and first floor are covered with flat roofs.
- **Cornice:** the cornices on both sides of the temple are simply built.

CASE 12: Tarapur Temple



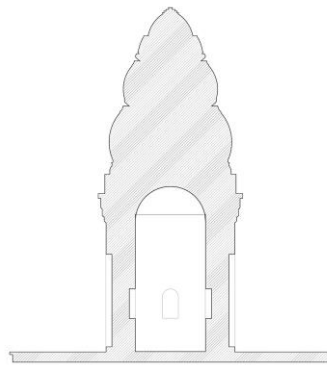
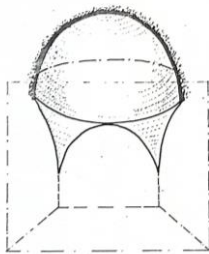


239. pointed vault



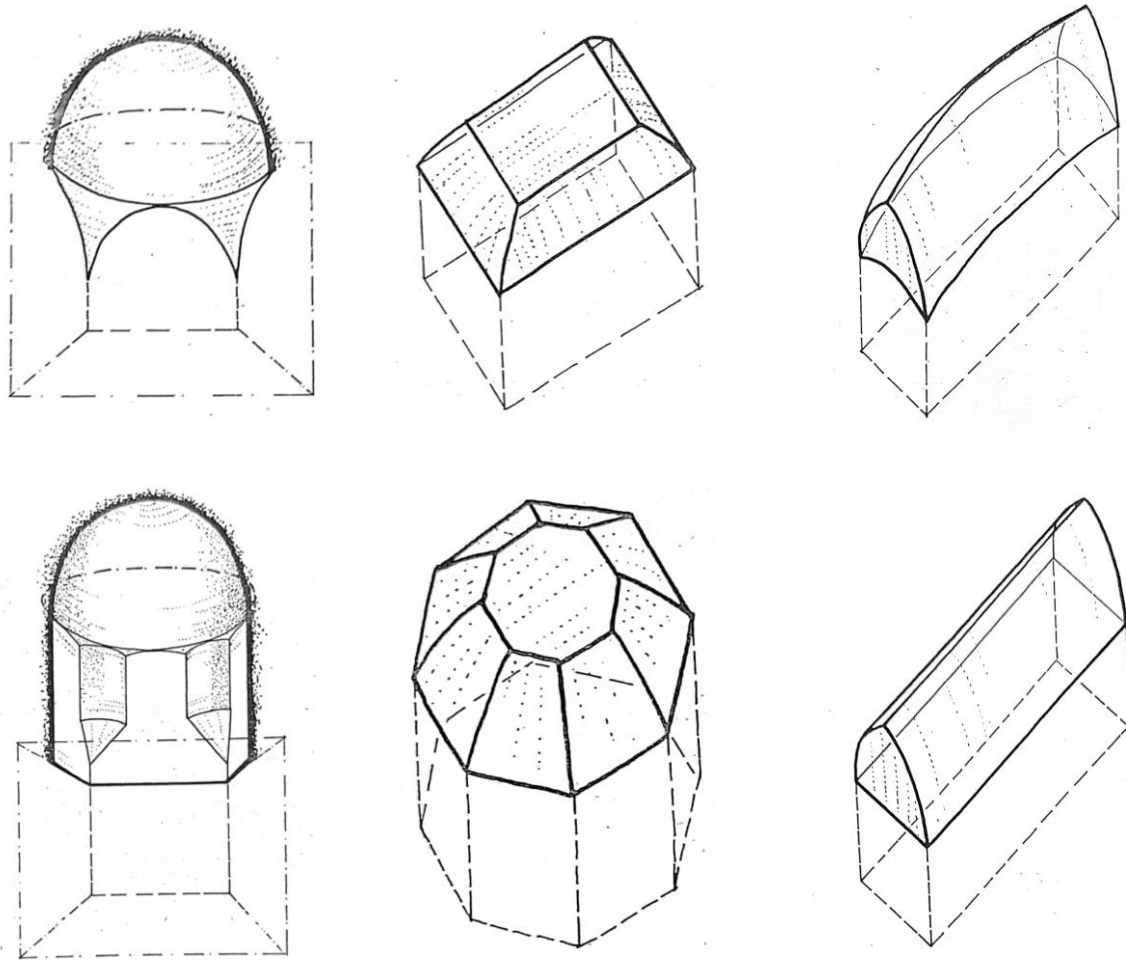
- **Inner Roof:** the inner roof surface of the room is covered with a chauchala roof, a flat roof has been constructed on the outside and a two-storey part of the building has also been constructed over the flat roof.
- **Outer Roof:** The outer part is a covered flat roof with a curved cornice.
- **Cornice:** Flat cornice.

CASE 13: Keshto Khyapar Math (A temple with small peaks at the head)



- **Inner Roof:** The inner surface of the room is covered by a semicircular dome built in a pedantic manner.
- **Outer Roof:** The outer part is covered with small pinnacles like the pinnacles placed on the *rantnas* of the Pancharatna Shiva temple on the outside.
- **Cornice:** Flat cornice.

SUMMARY: In the above-mentioned cases we can see, the inner surface of the roof of the main sanctum Sanctorum has a dome on the pendentives or chauchala flat roof. In veranda or circulation space barrel vault or pointed vault are used except in the case of Pancha ratna shiva temple where the corner rooms of the veranda have domes in the inner surface of the roof and flat chauchala at the side rectangle rooms. In cases 1 &2, both the annik temples have bangla vault inner roofs. The following inner roofs are commonly seen in most cases.



The outer structure of the roof, in case 1&2 annik temples have Bangla hut-style roofs. Case 3,4,5,6 have a Chauchala roof. Case 7,8,9 can be easily identified as Ratna temple and case no 13 has a similar roof as case no. 8. And Case 10,11,12 are flat-roofed temples where case no 10 has an exception with the top dome of curved cornice like the Bengal hut.

Table 16 : Analysis of Inner and Outer Roof Configurations in Temple Cases

Inner roof drawings reference from rick temples of Bengal : from the Achives of David McCutchoin, George Michell, 1972

4.2.4 DECORATION OF TEMPLE FACADE

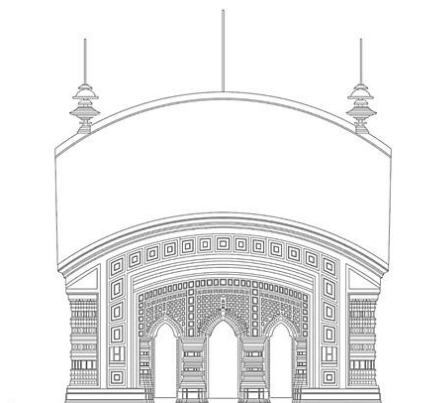
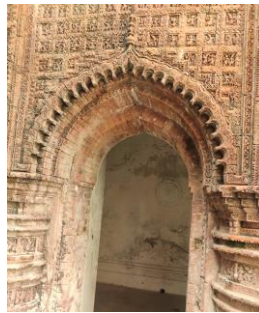
The Bengal region mastered the art of terracotta to such an extent that the artisans here were successful in the construction of huge structures from bricks alone, as evident from the Paharpur monastery which dates back to the 8th century CE. This trend of construction of monuments made of bricks in very many shapes and sizes continued for many centuries. Three major developments in religious architecture were seen in three different eras of Bengal's history – and the evolution of Nagara-style temples which were influenced by the Orissan Rekha deuls, followed by the developments of Islamic Architecture through mosques and tombs, and lastly, the generation of Terracotta Temples. The Terracotta Temples of Bengal, famous for the use of Terracotta Plaques for surface decoration, had developed a unique style of architecture, quite distinct from the major styles of temple architecture.

As a result, the terracotta plaques of ancient Bengal (used in the Buddhist monasteries of Mahasthan, Basubihar, Paharpur and Mainamati) were revived and popularized during the Sultanate rule (1338-158) under the patronage of local zamindars during the Mughal period.

The architecture of the temples of Bengal was of the highest order. Apart from the Pancharatna Shiva Temple, Rath Mandir, Dalan Mandir, Dolmandir, Krishnakshyapar Math and the temples of Lakshmi and Jagadhatri, all the other temples in Puthia have terracotta plaques as ornaments on the walls. The religious material of the hindu community as the subject of decoration in the plaques such as various gods and goddesses, kinnar-kinnari, avatar, lankakanda, shaivayatra, hunting of zamindars. The mythology of the Ramayana and the Mahabharata, which includes the dance festivals of various animals, Krishna-upakhyay or Radhakrishna premlila and gape-gapees, monks, musicians, bauls, etc. neatly presented. Especially in the history of architecture rich in terracotta plaques of present day Bangladesh, Kantji's Navaratna temple in Dinajpur. The Gavinda Temple and the Boro and Choto Ahnik temples are unique examples to this day.

However, sculptures with portraits of dead deer on the shoulders of hunters, various animals and gods and goddesses, etc., are also seen in the ornaments of the Buddhist temple at Paharpur, built in the 8th century. Thus, the Buddhist temple at Paharpur, discovered through archeological excavations, is a shining example of a sculptural plaque bearing such material that has been in use in Bengal since time immemorial. The terracotta plaques were widely used in the exterior decoration of the temple architecture of Bengal and it continued for some time during the English period.

CASE 01- Small Ahnik Temple:



The interior of the temple is completely covered with plaster. Only one or two at the top of the north and south walls, four at the top of the west wall, and one at the top of the east wall, a total of seven low relief carvings are not seen in the interior. However, the temple is richly decorated with terracotta plaques used on the exterior. The exterior of the temple faces its southern and eastern facades with terracotta plaques of various shades of red. Moreover, there are terracotta plaques in some parts of the north and west walls.

- The exterior facade is richly decorated with terracotta plaques
- The interior of the temple is completely covered with plaster

- **Material:** Brick, lime plaster, terracotta plaques, and iron bar on the top roof.
- **Repeated module:** There are six vertically panels from the cornice to the bottom on either side of the tri-archway or tri-archway on the east side and a curved panel row exists at the bottom of the cornice above. The number of panels in this panel row is eleven. The lower part of these panels is divided into three panels along north-south by a long strip of ornamentation and a triangular spandrel between the lower part and the two arches.
- **Art & Sculpture:** The terracotta plaques are engraved with Hindu mythological texts such as the Ramayana and the Mahabharata, social scenes, and various inheritances. The short arched pillars are also covered with terracotta. The edges (lines) on both sides of the paneled panels are adorned with rows of *tasbi* (small dots) grains, flowers, and geometric designs. In the terracotta plaques placed on the arched pillars, there are portraits of Rama, Lakshan, Durga, Saraswati, Kartik seated on a peacock, Krishna dancing, images of Balaram and Gop-Gopini, elephants, dancing peacocks, horses, musical instruments, cow milking scene, palaki and there are portraits of monster Putna, flutist Krishna, various leelas of Radha-Krishna, Lakshman horse, rat, etc.

CASE 02: Boro Ahnik Temple:



Most of the ornaments of the temple are in ruins. The plaster lining of the interior has been peeled off. However, it can be easily inferred from the fact that the surface of the two square arches connected to the inside of the main sanctum sanctorum was once decorated with terracotta slabs. But now they are all ruined. The interior walls of the main sanctum were divided into several vertical and horizontal panels. However, the interior of the panels did not appear to have anything but plaster covering.

- The exterior facade is richly decorated with terracotta plaques
- The interior of the temple is completely covered with plaster
- **Material:** Brick, lime plaster, terracotta plaques.
- **Repeated module:** There are six vertically panels from the cornice to the bottom on either side of the tri-archway or tri-archway on the east side and a curved panel row exists at the bottom of the cornice above. There are two repeated modules of side chambers on both sides of the main sanctum.
- **Art & Sculpture:** As the faces of most of the portraits are now ruined, it is difficult to identify them. There are scenes (portraits) of *Vaishnava* dances in the same style on the plaques. Rama Lakshmana holding arrows, war of Langka are in terracotta plaques.

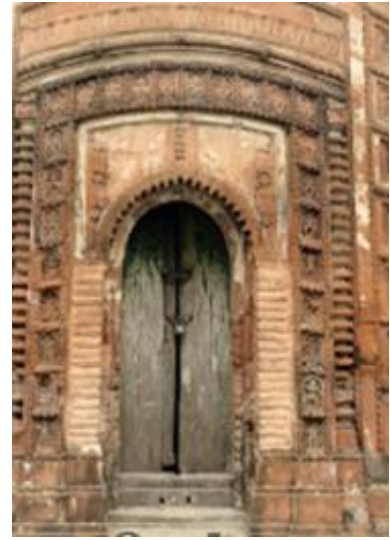
CASE 03: Choto Govinda Mandir



The entire interior of the main sanctum sanctorum of the temple, the north, south, and east walls of the rectangular chamber on the east side is covered with plaster. However, the whole of the south wall outside the sanctum sanctorum, both sides and triple-aisled archway surfaces of the entrance to the east wall, the whole of the south facade of the exterior of the temple and some parts of the east and west facades and every corner of the temple are decorated with exquisite terracotta paintings.

- The exterior facade is richly decorated with terracotta plaques
 - The interior of the temple is completely covered with plaster
 - **Material:** Brick, lime plaster, terracotta plaques, and iron bar on the top roof.
 - **Repeated module:** on the front south facade and small panels of different sizes.
 - **Art & Sculpture:** Various Hindu gods and goddesses, incarnations, the Lankayuddha, and Radha-Krishna are more prominent in the subject matter of the painting. However, the magnificent decoration of the temple has been a Triple-aisled archway on the outer facade of the south house. The entire wall is divided into small panels of different sizes and each panel is decorated with red terracotta plaques with different portraits. Square, rectangular, and diamond or ice-shaped plaques in thirty (thirty-three in total, now three ruined) panels arranged in an arched structure after three rows of plaques on either side of the open and on the lower side of the cornice above. The surface of the archway is adorned with spiral vines, dancing black and floral designs. The bulging lines dividing the blade are decorated with abstract flowers and lattice designs.
- These plaques include A deity holding two elephants with two legs and two horses with two hands, Ganesha, Shiva seated on a bull, Kartik, Lakshmi, Kali, Goddess Durga, and Vishnu seated on a Garur (গরুড়), respectively. In a bow-shaped row (placed horizontally) from the west, we can see Sita's abduction by Ravana, Shiva, probably Kalkibatar on horseback, Parshuram with an ax in hand, Rama, Balarama, Vishnu seated on a Garur (গরুড়), Nitai-gaur, Bamnabatar, Narsinghabtar, Varabhavar No repeated module except for the triple-aisled archwayExisting.

CASE 04: Small Shiva Temple



The facade of the temple is decorated with attractive ornaments. The entrance is surrounded by two adjacent or adjacent rectangular structures (the first rectangular structure is divided into eight vertical and ten horizontal panels at the top and the second structure is divided into seven vertical and nine at the top panels).

- The exterior facade is decorated with terracotta plaques
- The interior of the temple is completely covered with plaster.
- **Material:** Brick, lime plaster, terracotta plaques, and iron bar on the top roof. Although bricks and limestone are mostly used, a small amount of stone is also used in its construction.
- **Repeated module:** No repeated module small terracotta panels of different sizes.
- **Art & Sculpture:** The entire facade (both sides and surface of the entrance) is decorated with red terracotta plaques. These plaques contain images of gods and goddesses of Hindu mythology and Vaishnava dance, Ganesha seated with a mouse (rat), Saraswati with a standing harp in her hand, Goddess Durga holding the demon, Goddess Lakshmi seated on a lotus seat (two elephants on either side of the head), dancing Krishna or one of her companions, Kartik seated on a peacock (looks a bit like Ganesha as his face is obscure), Lakshmi or Saraswati on the latter, the latter obscure (portrait of a woman standing under a vine), then Goddess Durga with a sword in hand and There are three panels which contain a portrait of dancing Krishn

CASE 05: Small Shiva Temple-A, Krishnapur



The entrance of this temple, the four corners, and the east entrance are decorated with exquisite terracotta plaques.

- The exterior facade is decorated with terracotta plaques
- The interior of the temple is completely covered with plaster.
- **Material:** Brick, plaster, terracotta plaques, and iron bar on the top roof. Some stones have also been used in the construction.
- **Repeated module:** No repeated module small terracotta panels of different sizes.
- **Art & Sculpture:** The subject matter of these images are related to the story of Hindu gods and goddesses like the above small Shiva temple-like small Govinda-like plaques are depicting Matsyabatar, Karmabatar, Varahabatar, Bamnavatar, Narsinghabatar, Balarama, Krishna, Parashuram, Rahu, and Kalkibatar.

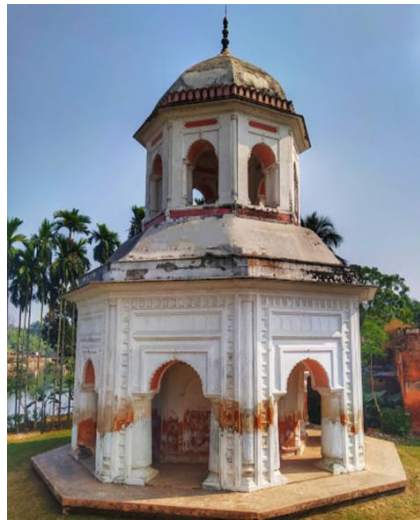
CASE 06: Gopal Mandir, Krishnapur



There are two rectangular panels on either side of the main entrance. The exterior and south walls of the temple are decorated with red terracotta plaques. However, now that most of the plaques have been destroyed, it is difficult to say what kind of sculpture they were on. Both sides and surfaces of the eastern archway of the temple are decorated like the other two small Shiva temples.

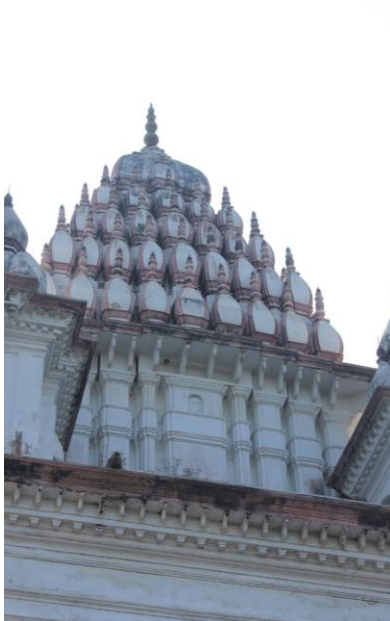
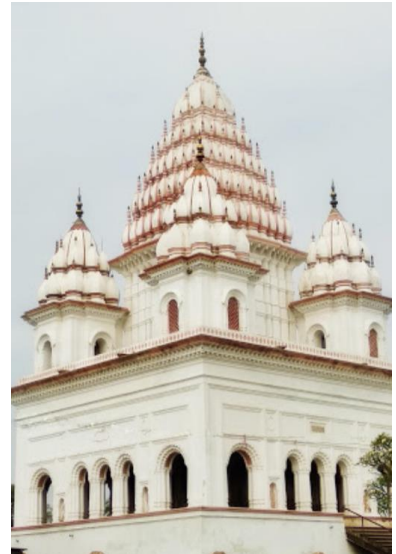
- The exterior facade is decorated with terracotta plaques
- The interior of the temple is completely covered with plaster.
- **Material:** Brick, limestone, terracotta plaques, and iron bar on the top roof. Some stones have also been used in the construction.
- **Repeated module:** No repeated module small terracotta panels of different sizes.
- **Art & Sculpture:** The subject matter of these images are related to the story of Hindu gods and goddesses like the other two small Shiva temple, Ganesha, Saraswati, Durga, Shiva, portraits of Krishna or Vaishnava dancing, Vishnu sitting on a *garuda*. There are portraits of *Kurmavatar*, *Varahabatar*, *Narsinghabatar*, *Bamnavatar*, *Balram*, *Rama*, *Lakshan*, *Rahu*, and *Kalkibatar*.

CASE 07: Ekratna Rathmandir



- Decorated with plater finishing
- The interior of the sanctum sanctorum of the temple is covered with plaster other than any kind of ornamentation.
- **Material:** Brick, plaster, lime-surki, and small amounts of stones.
- **Repeated module:** only repeated module is the archways on the ground floor veranda and first-floor open ratna.
- **Art & Sculpture:** At the two entrances to the sanctum sanctorum, a serpentine frame and a *khajkhillan* or pseudo recessed arch are carved. There is a rectangular vertical plane with a pseudo recessed arch at the base of each side of the octagonal wall on the outside of the sanctum sanctorum and a floral design at the apex of each arch. The exquisite ornaments of this temple have been created on the outer face of the house, i.e. each exterior of the octagonal arm is decorated with very attractive ornaments.

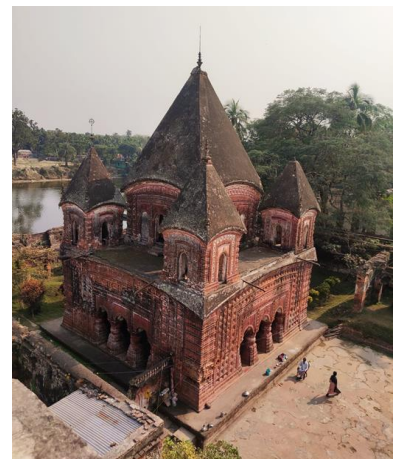
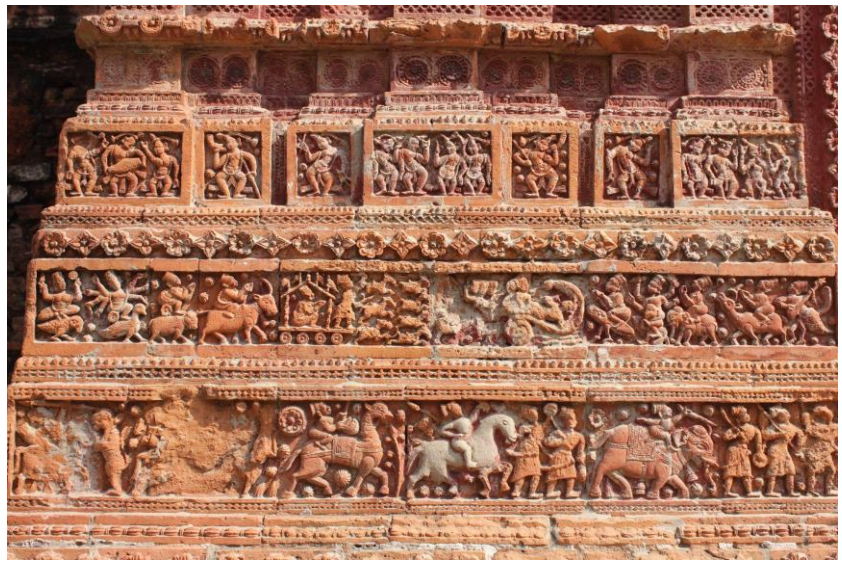
CASE 08: Pancha Ratna Shiva Temple

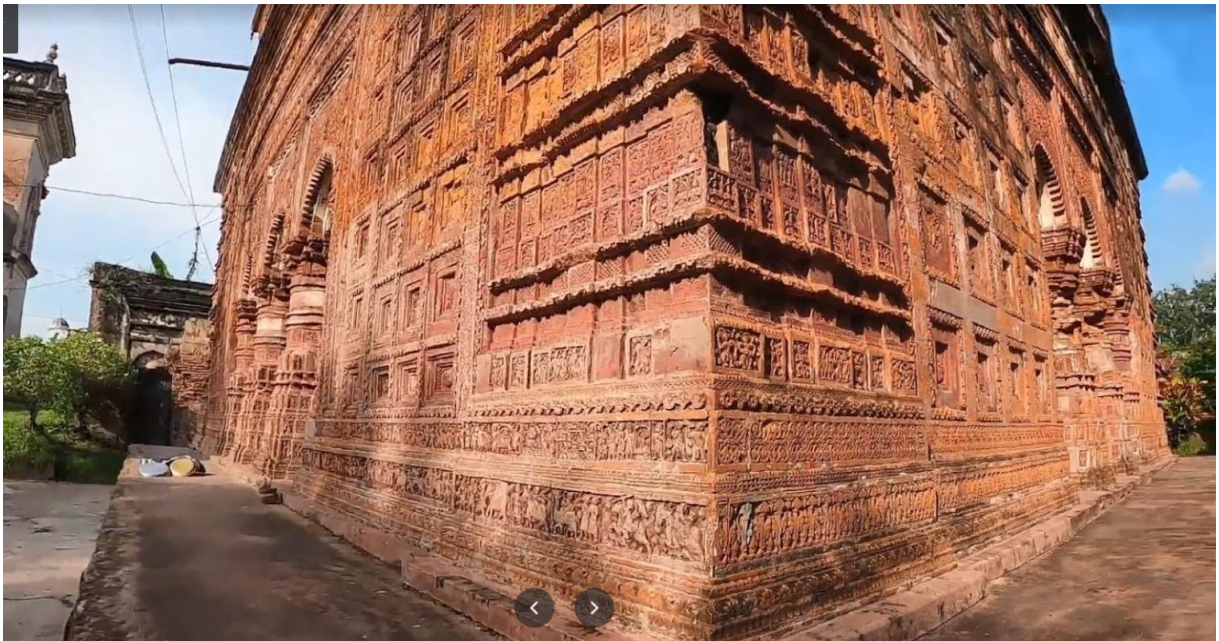
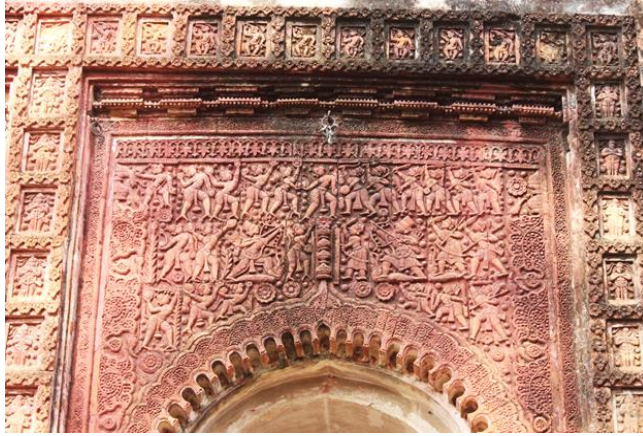


The beauty of the temple has been enhanced by the five **ratnas** of the temple and the successively ascending pinnacles on top of the **ratnas**. The central **ratna** is larger than the other four gems. There are a total of 177 pinnacles in five gems. From a distance, the pinnacles are visible like a honeycomb. The tops of each pinnacle were once covered with brass sheets, but are currently not observed in all but the top five pinnacles of the five **ratnas**

- The exterior facade is decorated with plaster finishing
- The interior of the temple is covered with plaster
- **Material:** Brick, plaster.
- **Repeated module:** Archways, successively ascending pinnacles at **ratnas**, the **Ratna** itself has repeated.
- **Art & Sculpture:** The idols are undoubtedly the deities of the Hindu community. But due to lack of proper care, they could not be identified.

CASE 09: Pancha Ratna Boro Govinda Temple





The beautiful decoration of the temple has been created on the outside. Each facade of the exterior of the temple is divided into several panels and the panels are decorated with reddish terracotta plaques. Originally, this temple is the most attractive among the temples of Puthia in terms of decoration.

- The exterior facade is richly decorated with terracotta plaques.
- The interior of the temple is completely covered with plaster.
- **Material:** Brick, lime plaster, terracotta plaques, and iron bar on the top roof.
- **Repeated module:** Tri-archways, rantis, the form of small Shiva temple has been seen as a repeated module for the decoration of Ratna at the four corners.
- **Art & Sculpture:** The idols are undoubtedly the deities of the Hindu community. . The special attraction of the innumerable terracotta plaques placed at the front of each house of the temple is the mythology of the Ramayana-Mahabharata and sculptures depicting various social events and animals. Along with passing various scenes of mythology in the decoration, various aspects of the social life of the then-rural Bengal have also been presented with wonderful artistic craftsmanship.

CASE 10: Four-Storied Dolmandir Or Dolmancha



The interior and exterior of the four floors of the temple are completely covered with plaster. However, plaster has fallen off in many places due to unused conditions and lack of care.

- The exterior facade is decorated with plaster finishing
- The interior of the temple is covered with plaster
- **Material:** Brick, lime plaster.
- **Repeated module:** Repeated archways are seen.
- **Art & Sculpture:** Each archway of the temple is arranged in a rectangular structure and the arches are grooved and the apex of the arch is decorated with a flower pattern.
At the top of the dome, there is a top iron bar on two brass pitchers, and the lower roof and cornice of the dome are curved like the huts of Bengal. There was an iron bar at each corner of the open veranda or open roof which is not present. The lower part of the top dome (third floor) and the fabric on each floor are decorated with Marlon designs. The upper chamber (third floor) of the temple has an iron chain around the inner dome. It is said that by putting a swing in these chains, Govinda or Gopal was given a swing.

CASE 11: Radhakanta Temple Temple



The temple does not have much ornamentation. The walls (interior and exterior) of both the ground floor and the second floor are covered with a layer of plaster. The outer plaster is mostly peeling off. The interior of the downstairs sanctuary and corridors are divided into vertical and horizontal panels or sections.

- The exterior facade is decorated with plaster finishing
- The interior of the temple is covered with plaster
- **Material:** Brick, lime plaster.
- **Repeated module:** Repeated grooved archways are seen.
- **Art & Sculpture:** The east, west, and south facades of the temple are divided into vertical and horizontal panels from the bottom of the stage to the cornice. Basically flower and spiral herb designs are seen.

CASE 12: Tarapur Temple



The interior and exterior of the temple are completely covered with plaster. But now that the plaster covers have been removed, the decoration on the corners of the temple is not noticeable.

- The exterior facade is decorated with plaster finishing
- The interior of the temple is covered with plaster
- **Material:** Brick, lime plaster.
- **Repeated module:** Repeated pointed archways are seen.
- **Art & Sculpture:** A flower design exists in the middle of the inner *chauchala* roof in the first-floor room. The open arches of the room are arranged in six-step grooves. The two pillars between the three arches on the east side of the room are galvanized and veined.

CASE 13: Keshto Khyapar Math (A temple with small peaks at the head)



Both the interior and exterior walls of the monastery are covered with a layer of plaster. Apart from the entrance, there are three closed arches on the north, east and west walls of the outer part of the monastery.

- The exterior facade is decorated with plaster finishing
- The interior of the temple is covered with plaster
- **Material:** Brick, lime plaster.
- **Repeated module:** Repeated pointed archways at four sides are seen and pinnacles at the top are similar to Pancha ratna Shiva temple.
- **Art & Sculpture:** At the bottom of the cornice is a fringe design with floral and herbaceous designs. At the top of the temple, eight small rows of small pinnacles have been placed to create a wonderful ornament. There were eight elephant heads in the space in the middle of each row of peaks, one by one.

SUMMARY: In the above mentioned, Case 1,2,3,9 seem to be richly decorated with terracotta plaques, whereas case 4, 5, 6 have terracotta decorations at the entrance facade. Other temples have floral decorations with plaster. The interior of all the temples is covered with plaster and sometimes at the top of the sanctum, a floral decoration is seen.

The terracotta plaques having idols are undoubtedly the deities of the Hindu community. The terracotta plaques are engraved with Hindu mythological texts such as the Ramayana and the Mahabharata, social scenes, and various inheritances. In the terracotta plaques placed on the arched pillars, there are portraits of Rama, Lakshan, Durga, Saraswati, Kartik seated on a peacock, Krishna dancing, images of Balaram and Gop-Gopini, elephants, dancing peacocks, horses, musical instruments, cow milking scene, palaki and there are portraits of monster Putna, flutist Krishna, various leelas of Radha-Krishna, Lakshman horse, rat, etc.

Table 17 : Analysis of ornamentations in Temple Cases

4.3 SUMMARY OF THE ANALYSIS

In previous section all the cases has been elaborately discussed in form of Architectural characteristics analysis. The key points can be concluded as a summary. In case of temples of Puthia, different types and styles are accommodated to find out the particular reasons behind the development process of these temples.

In puthia, maximum temple cases have square plan. Only exception is seen in Octagonal Ek ratna temple and rectangular hut styles temples which are influenced by the Bengal huts. Though most of the square plans have openings from all sides, maximum cases have main entrances from South or East except Boro Govinda Temple (case9). All the rectangular temples such as Choto Annik (case1), Boro Annik (case2) and Radha kanta temple (case11) have a soild wall on one side which was used as a background for the idols of deities. In such cases there was one main entrance (opposite to the solid wall) and secondary entraces from other two sides. In case of Puthia temples, the main Sanctum is placed in the center and all the other chambers and other semi open verandas are arranged around the main sanctum except Choto Govinda temple (case3). Although there are secondary entrances from all sides, the main entrance of the garbhagriha is seen from East and South.

All temple plans are symmetrical with exception case of Choto Govinda temple. Even the interiors (placement of niches) are also symmetrical. Most of the large scale temples have open or semi-open verandas from all sides whereas the small scale temples like small Shiva temple (case 4, 5, 6, and 13) has only one chamber which is the garbhagriha. Extended lower plinth is a very common feature in

the temples of Puthia except the high plinth of Pancha Ratna Shiva Temple (case8). Pancha ratna Shiva temple has the influences of Varanasi as Rani Hemanta kumara built this temple after her return from Varanasi. Vertical circulation is seen in the two storied temples like Ranta temples of flat roofed ones. Most of the single storied Temple don't have any vertical circulation or stairs.

Elevations of the temples of Puthia is pure symmetrical but exception is seen the Radhakanta temple due to the external stair on the west. In most of the cases in Puthia columns are supporting the arches and Walls supporting the whole structure. Semicircular multi foil arches are seen in maximum cases, except the pointed arch in Tarapur. Different types of inner roofs are seen in the temples of Puthia such as Domes, Pointed vault, Barrel vault, Bangla vault, Flat chauchala and Flat octagon. Here, the Dome, Pointed vault are inspired by the Muslim architecture and the barrel vault, bangla vault, flat chuchala can be easily marked as the repeatation of Bengal vernacular features accepting the context. Curved cornice is seen in single storied temples of Puthia, but in case of two storied temples flat cornice is seen.

The common materials of these temples are brick; lime plaster, terracotta plaques and sometime a small amount of stones are used. Iron bars are seen at the top and corners of the roofs. Repeated modules are noticeable in these temples. For example, Small Shiva temple was a unit of repeated module in case of Boro Govinda temple. In Puthia, the exterior facades of these temples are decorated with terracotta plaques or plaster finishing or both. The interior is covered with plaster.

As a whole it can be said that the Bengal context and its landscape have reformed the traditional temple structure into a Bengali Unique characters. From Bangla chala to plinth every architectural element has been influenced by the regional context. The adobe for deities was designed keeping in mind about the Bengal vernacular house forms. Sometimes vernacular design elements were taken as inspiration to modify these Bengal temples.

REGIONAL INFLUENCES ON THE LATE MEDIAEVAL TEMPLES IN BANGLADESH: A STUDY OF PUTHIA TEMPLE COMPLEX AT RAJSHAHI DISTRICT
SUMMARY ANALYSIS CHART

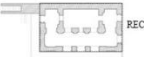
PLAN ANALYSIS					CIRCULATION		ELEMENTS ANALYSIS			ROOF STYLE ANALYSIS				ORNAMENTATION PATTERN			
CASE NOS.	SHAPE	ORIENTATION & ENTRY	GARBHAGRIHA	SYMMETRY IN PLAN	HORIZONTAL CIRCULATION	VERTICAL CIRCULATION	ELEVATION	PLINTH	STRUCTURE	ARCHES	INNER ROOF	OUTER ROOF SECTION	CORNICE	MATERIAL	REPEATED MODULE	DECORATION	DETAILS
CASE 01: SMALL ARNIK TEMPLE	 SQUARE			 Symmetrical	• No Veranda	• No Vertical Circulation		• No plinth is visible	• Columns supporting arches • Walls supporting the whole structure.	• Multi foiled pointed arch.		 BANGLA DOCHALA		• Brick, • Lime plaster, • Terracotta plaques • Iron bar on the top	• Tri-archway or tri-archway	• The exterior facade is richly decorated with terracotta plaques • The interior of the temple is completely covered with plaster	 
CASE 02: BORO ARNIK TEMPLE	 SQUARE			 Symmetrical	• No Veranda; extended plinth on the east side.	• No Vertical Circulation		• Low plinth is visible	• Columns supporting arches • Walls supporting the whole structure.	• Multi foiled pointed arch.		 DOCHALA CHAUCHAL A	• Curved cornice.	• Brick, • Lime plaster, • Terracotta plaques	• Tri-archway or tri-archway • Modules of side chambers	• The exterior facade is richly decorated with terracotta plaques • The interior of the temple is completely covered with plaster	 
CASE 03: CHOTO GOVINDA MANDIR	 SQUARE			 Not Symmetrical	• No Veranda; extended plinth.	• No Vertical Circulation		• Low plinth is visible	• Columns supporting arches • Walls supporting the whole structure.	• Multi foiled pointed arch.		 CHAUCHAL A	• Curved cornice.	• Brick, • Lime plaster, • Terracotta plaques • Iron bar on the top	• No repeated module except for the triple-arched archway	• The exterior facade is richly decorated with terracotta plaques • The interior of the temple is completely covered with plaster	 
CASE 04: SMALL SHIVA TEMPLE	 SQUARE			 Symmetrical	• No Veranda	• No Vertical Circulation		• No plinth is visible	• Walls supporting the whole structure.	• Three-step multi foiled arch.		 CHAUCHAL A	• Curved cornice.	• Brick, • Lime plaster, • Terracotta plaques	• No repeated module	• The exterior facade is decorated with terracotta plaques • The interior of the temple is completely covered with plaster.	 
CASE 05: SMALL SHIVA TEMPLE-A, KRISHNAPUR	 SQUARE			 Symmetrical	• No Veranda	• No Vertical Circulation		• No plinth is visible	• Walls supporting the whole structure.	• Three-step multi foiled arch.		 CHAUCHAL A	• Curved cornice.	• Brick, • Lime plaster, • Terracotta plaques	• No repeated module	• The exterior facade is decorated with terracotta plaques • The interior of the temple is completely covered with plaster.	 
CASE 06: GOPAL MANDIR, KRISHNAPUR	 SQUARE			 Symmetrical	• No Veranda	• No Vertical Circulation		• No plinth is visible	• Walls supporting the whole structure.	• Three-step multi foiled arch.		 CHAUCHAL A	• Curved cornice.	• Brick, • Lime plaster, • Terracotta plaques	• No repeated module	• The exterior facade is decorated with terracotta plaques • The interior of the temple is completely covered with plaster.	 
CASE 07: EK RATNA RAJESHMANDIR	 OCTAGONAL			 Symmetrical	• Continuous veranda; extended low plinth.	• No Vertical Circulation		• Low plinth is visible	• Columns supporting arches • Walls supporting the whole structure.	• Multi foiled pointed arch.		 EK RATNA	• Extended Flat cornice.	• Brick, • Plaster, • Small amounts of stones.	• Only repeated module is the archways	• The exterior facade is decorated with plaster finishing • The interior of the sanctum sanctorum of the temple is covered with plaster other than any kind of ornamentation.	 
CASE 08: PANCHA RATNA SHIVA TEMPLE	 SQUARE			 Symmetrical	• Continuous verandah surrounding the sanctum sanctorum; and open veranda on plinth.	• No Vertical Circulation to roof, stairs to get on the high plinth		• High plinth is visible	• Columns supporting arches • Walls supporting the whole structure.	• Three stepped multi foiled pointed arches		 PANCHA RATNA	• Extended Flat cornice.	• Brick, • Plaster, • Small amounts of stones.	• Archways, successively ascending pinnacles at various, the Ratna itself has repeated.	• The exterior facade is decorated with plaster finishing • The interior of the temple is covered with plaster	 
CASE 09: PANCHA RATNA BORO GOVINDA TEMPLE	 SQUARE			 Symmetrical	• Continuous verandah surrounding the sanctum sanctorum; and open veranda on plinth.	• Vertical circulation is arranged around the main sanctum.		• Low plinth is visible	• Columns supporting arches • Walls supporting the whole structure.	• Three-step multi foiled pointed arch.		 PANCHA RATNA	• Pseudo curved cornice	• Brick, • Lime plaster, • Terracotta plaques	• Tri-archways, the form of small Shiva temple has been seen as a repeated module for the decoration of Ratna at the four corners.	• The exterior facade is richly decorated with terracotta plaques. • The interior of the temple is completely covered with plaster.	 
CASE 10: FOUR-STORIED DOLMANDIR OR DOLMANCHA	 SQUARE			 Symmetrical	• Continuous verandah in three layers surrounding the sanctum sanctorum.	• Vertical circulation is arranged around the main sanctum of each floor.		• No plinth is visible	• Columns supporting arches • Walls supporting the sanctum surroundings.	• Semicircular multi foiled arches		 EK RATNA FLAT	• Extended Flat cornice.	• Brick, • Lime plaster	• Repeated archways are seen.	• The exterior facade is decorated with plaster finishing • The interior of the temple is covered with plaster	 
CASE 11: RADHAKANTA TEMPLE	 RECTANGLE			 Symmetrical	• Continuous verandah surrounding the sanctum sanctorum except north side.	• External Vertical circulation on the west		• Low plinth is visible	• Columns supporting arches • Walls supporting the whole structure.	• Semicircular multi foiled arches		 FLAT ROOF	• Flat cornice.	• Brick, • Lime plaster	• Repeated grooved archways are seen	• The exterior facade is decorated with plaster finishing • The interior of the temple is covered with plaster	 
CASE 12: TARAPUR TEMPLE	 SQUARE			 Symmetrical	• Continuous verandah surrounding the sanctum sanctorum.	• Vertical circulation on the west of the main sanctum.		• Low plinth is visible	• Columns supporting arches • Walls supporting the whole structure.	• Semicircular multi foiled arches & pointed arches		 FLAT ROOF	• Flat cornice.	• Brick, • Lime plaster	• Repeated pointed archways are seen	• The exterior facade is decorated with plaster finishing • The interior of the temple is covered with plaster	 
CASE 13: KESHTO KHYAPAR MATH	 SQUARE			 Symmetrical	• No Veranda; extended plinth.	• No Vertical Circulation		• Low plinth is visible	• Walls supporting the whole structure.	• pseudo semicircular multi foiled arch		 EK RATNA	• Flat cornice.	• Brick, • Lime plaster	• Repeated pointed archways at four sides are seen and pinnacles at the top are similar to Pancha ratna Shiva temple.	• The exterior facade is decorated with plaster finishing • The interior of the temple is covered with plaster	 
SUMMARY OF THE CHART	• Maximum cases have square plan. Only exception is seen in Octagonal, and rectangular plans. Rectangular plans are influenced by the Bengali hut.	• Though most of the plans have openings from all sides except but ones, maximum cases have main entrances from South or East.	• All the spaces are arranged around the main sanctum. Although there are secondary entrances from all sides, the main entrance is seen from East and South.	• All the plans are symmetrical with exception, case of Choto Govinda temple. Even the interiors are also symmetrical.	• Most of the large scale temples have a veranda from all sides. Even sometimes extended lower plinth is a very common feature.	• Vertical circulation is seen in the two storied temples like Ratna temples of flat roofed ones.	• Symmetrical Elevations.	• Plinth is a common feature in case of Puthia temples.	• Columns supporting arches and Walls supporting the whole structure.	• Semicircular multi foiled arches are seen in maximum cases, except the pointed arch in Tarapur.	• Domes, Pointed vault, Barrel vault, Bangla vault, Flat chauchala and Flat octagon are the common inner roof in Puthia Temples.	• Domes, Pointed vault, Barrel vault, Bangla vault, Flat chauchala and Flat octagon are the common inner roof in Puthia Temples.	• Curved cornice is seen in single storied temples but in case of two storied temples flat cornice is seen.	• Brick, • Lime plaster, • Terracotta plaques Interior covered with plaster.	• Small Shiva temple was a unit of repeated module in case of Boro Govinda temple.	• The exterior facade is decorated with terracotta plaques or plaster finishing or both. • The interior of the temple is covered with plaster.	• Details photos of all the temple cases at Puthia

Plate 15 : Summary Analysis Chart

Regional Influences On The Late Mediaeval Temples In Bangladesh: A Study Of Puthia Temple Complex At Rajshahi District
Prepared by the Author

CHAPTER 05

CONCLUSION

5.0 INTRODUCTION

5.1 CHARACTERISTICS DOMINATING PUTHIA'S TEMPLE ARCHITECTURE

5.2 REGIONAL INFLUENCE ON PUTHIA'S TEMPLE ARCHITECTURE

5.3 CONCLUSION

5.0 INTRODUCTION

The intrusion of modern Western ideas into the cultural heritage of the whole of India after the establishment of British rule in India also profoundly affected the cultural heritage of Bengal. And the local zamindars of this country and the Calcutta-based traders were the bearers and carriers of the fusion of western ideas in the culture of Bengal. Just as they imitate the British in their daily activities such as manners, eating, dress, movement, etc. The new style of Western architecture introduced by the British has penetrated the wider sphere of culture in the continuity of medieval architecture in this country. During the eighteenth century rural merchants, urban businessmen, agrarian producers, large and small landholders, and others rose to the top of society. It seems that the more arduous manual labor connected with temple building was traditionally assigned to these lower strata of the caste orders, some meritorious members of which learned in time the more sophisticated techniques of temple architecture and sculpture. Wealthy lower-caste persons also sometimes acted as temple founders.

5.1 CHARACTERISTICS DOMINATING PUTHIA'S TEMPLE ARCHITECTURE

Indigenous zamindars, in particular, reflect Indo-European architecture more than the religious buildings they have built. Thus the zamindari architectures of this country, built from the late eighteenth century to the first half of the twentieth century, are contemporary with Bengal. Built in a very different and special way from medieval architecture. The architecture built by the zamindars of Puthia was no exception.

PLAN is square in most of these temples of Puthia which is commonly seen in Hindu temple architecture. Even in the early years, square plans were followed in both Indo-Aryan and Dravidian styles as a result of following the Vastu-Mandala. In Bengal, only the hut style or Bangla temples are unique and follow the vernacular characteristics of the Bengal Hut. Temples of Puthia have no exception except Radha Kanta Temple (case 11), Choto Annik (case 1), Boro Annik temple (case 2), and Octagon Ekraṭna temple (case 7).

ORIENTATION is one of the essential features in both Hinduism and Temple architecture. In Puthia, with exception of Boro Govinda temple (case 9), most of the temples are oriented to the east or south which is considered to be very auspicious according to Hindu text.

SYMMETRY is one of the key features of the Temple plan with no exception in Bengal temples. In Puthia, all the spaces are arranged symmetrically around the main sanctum or Garbhagriha except Choto Govinda Temple (case 3).

CURVED CORNICE is seen in most of the temple cases. Among the temples of Puthia, the cornices of all the temples are built in a slightly curved shape except the Pancharatna Shiva temple (case 08), the octagonal Ek Ratna temple (case 07), the Krishnakhyapa monastery (case 13), and the two-storied temple. Such cornices have been constructed in the construction of indigenous houses (huts). The use of such slightly curved cornices has been observed in almost every building of the Sultanate period. In the eighteenth and nineteenth centuries, this style of construction continues in the temple architecture of Bengal and is also reflected in the temples of Puthia as well.

BARREL VAULTS one of the notable features of the indigenous material is the barrel vault. The barrel vault roof is used in boats seen on the rivers of South Bengal or bullock carts in the rural areas of North Bengal. The use of this cylindrical roofing style was also observed in the construction of the internal roofs of the verandahs of the Govinda Mandir, Rath Mandir, and Tarapur Dalan Mandir / Hawakhana at Puthia which shows examples of regional influence.

DOMES above the interior of the Puthiya temples are semicircular domes following Muslim architecture. However, in the two Pancharatna temples (Shiva temple and Boro Govinda temple) flat roofs have been built on these domes and gems have also been installed. On the other hand, the inner domes of the rooms of the Chauchala temples are covered and the outer Chauchala roof is built.

DOCHALA roof is an imitation of the dochala hut made of bamboo and straw in this country. In the fifteenth century, under the patronage of the Muslim rulers of this country, the indigenous hut-building style of chauchala and dochala was transformed into brick buildings. And this style of construction also deeply influenced the temple architecture of Bengal. Even later, the use of dochala and chauchala style as the roof of the building became widespread in the temple architecture of this country. However, the upper chauchala roofs of the Chauchala temples in Puthia have been given a pyramidal shape in the shape of a European church with a slight slope. The architectural style of *Dochala or Ekbangla* temple is unique to Bengal. Such temples are not observed anywhere else in India except in Bengal. However, there are many examples of Dochala or Ek Bangla temples in Bangladesh like this Ahnik temple of Puthia built in the last eighteenth and nineteenth centuries.

RATNAS OR GEMS on top of a building is a common feature of Indo-Muslim architecture. Although the construction of umbrellas is an Indian element, it is widespread in Muslim architecture. Such constructions are observed in the sixteenth-century buildings of the Mughal period. The idea of constructing gems or Ratnas on the roof of the temple is very likely taken from the idea of building an umbrella of Indo-Muslim architecture. The umbrella embedded in Muslim architecture is believed to have inspired Hindu architects to build gems. However, in general, there is a big difference between the structure of the umbrella of a Muslim building and the gem of a Hindu temple. One of the gems resembles a small temple and the nature of the structure is also different. Thus, it can be said that the

gems attached to the temple are different in terms of shape, but the idea of placing such a structure on the building or adding it may be taken from the construction of an umbrella of a Muslim building. In that sense, it would not be unreasonable to assume that the architecture of the Pancharatna temple in the medieval and modern temple architecture of Bengal is a continuation of Indo-Muslim architecture. The rites of the Pancharatna Shiva Temple and the Pancharatna Boro Govinda Temple in Puthia can be said to be a successful application of that continuity of Indo-Muslim architecture. On the other hand, there are some similarities between the Pancharatna Shiva temple's gemstone, the small pinnacle, and the high platform or the construction of the building on the foundation.

ARCHES of the temples of Puthia are a remarkable feature in the continuity of Bengali architecture. In the temple architecture of Bengal too, examples of such arched tri-gateways can be seen in many temples. The arched arches in front of the Boro and Choto Gavinda temples of Puthia and the Boro and Choto Ahnik temples have been constructed in the same manner. Only the arches of the Pancharatna Shiva temple and the pilasters on both sides bear the imprint of European art. Moreover, the khaj arches built one after the other at the entrances of the temples of Puthia have been used extensively in the construction style of the Mughal period. Originally built in such a multi-layered khajkhilana style, the architecture of Emperor Shah Jahan excelled, and so did the method of Mughal construction in distant provinces can be seen.

TERRACOTTA PLAQUES of ancient Bengal (used in the Buddhist monasteries of Mahasthan, Basubihar, Paharpur, and Mainamati) were revived and popularized during the Sultanate rule (1338-158) under the patronage of local zamindars during the Mughal period. The architecture of the temples of Bengal was of the highest order. Apart from the Pancharatna Shiva Temple, Rath Mandir, Dalan Mandir, Dolmandir, Krishnakshyapar Math, and the temples of Lakshmi and Jagadhatri, all the other temples in Puthia have terracotta plaques as ornaments on the walls.

ART AND SCULPTURE which was used for the decoration of the plaques was the religious material of the Hindu community. Various gods and goddesses, Kinnar-Kinnari, Avatar, Lankakanda, Shaivayatra, hunting of zamindars. The mythology of the Ramayana and the Mahabharata, which includes the dance festivals of various animals, Krishna-upakhyān or Radhakrishna premlila and gope-gopees, monks, musicians, etc. neatly presented. Especially in the history of architecture, rich in terracotta plaques of present-day Bangladesh, the Govinda Temple, and the Boro and Choto Ahnik temples are unique examples to this day. The terracotta plaques of these temples are sufficient for decoration.

THE INTERIOR of all the temples and palaces of Puthia and the Pancharatna Shiva temple, Rathmandir, Dolmandir, and Tarapur temples are covered with plaster and the use of vertical and horizontal panels is deeply associated with the architecture of the Mughal period. Such ornaments are

observed in every building built during the Mughal period. Because it can be said that the terracotta plaque used in the Sultanate period for architectural decoration did not exist in the Mughal period. However, at this time the terracotta plaques were widely used in the exterior decoration of the temple architecture of Bengal and it continued for some time during the English period.

HAWAKHANA or the Tarapur Temple at the center of the pool is rare in the architectural history of Bangladesh; there are examples of such buildings being built in the Indian subcontinent such as the tomb of Sultan Ghiyasuddin Tughlaq, Jal Mahal Rajasthan, etc. So it is assumed that the temple or hawakhana of Tarapur was built in the style of those buildings

LAYERED OR STEPPED DOLMANDIR or dolmancha construction infrastructure was already prevalent in India such as Fatehpur Sikri. The architectural features of Puthia Dolmandir are very similar to the successive pattern of the square plan. This temple in Puthia, built following the Sultani and Mughal architecture of India, is a remarkable building in the history of the multi-layered Dolmandir or Dolmancha developed in this country.

5.2 REGIONAL INFLUENCE ON PUTHIA'S TEMPLE ARCHITECTURE

Indo-European or Indo-British, or Colonial architecture is known as a combination of Indian and European ideas. Although such Indo-European or colonial architecture was developed in Calcutta by the British rulers themselves, it was popularized by the zamindars and urban traders of Bengal through proper upbringing. Excavation of trenches around the Puthia palace to protect it from external enemies is a notable feature that is also observed in the palaces of the zamindars of Natore and Dighapati. Various influences of local, Muslim, and European architecture as indigenous elements in architecture are easily observed. However, the influence of Muslim architecture is most noticeable in religious architecture.

The geographic scattering of the temples is strictly confined to the deposited delta of the Ganges River, which enlightens the popularity of terracotta material as well as the preference for curved roofs to protect from the heavy monsoon rains. Bangla Chala, hut style temple is one of the unique examples of regional influence in Temple architecture. Even in the case of ratna temples, for example, Boro Govinda temple small unit of char Chala temple is seen as a Ratna or gem which is a distinctive example of adopting Bengal character transforming from the umbrella of Indo-Muslim architecture. This type of Chala was useful to cope with the monsoon context of Bengal. Even the curved cornice in the temple represents the vernacular feature of the Bengal hut which depicts the preference for curved roofs to protect from the heavy monsoon rains. Even the inner barrel vault roof is also influenced by the boat roof seen on the rivers of South Bengal or the roof of bullock carts in the rural

areas of North Bengal. The extended veranda or plinth is one of the contextual features in temple architecture repeating the traditional house forms of Bengal.

Terra cotta decorations in these temples not only represent the images of deities but also show the portrait of Mughal soldiers with swords and spears, European Darayans with guns, boats, palanquin rides, cowherds, milking cows, milk sellers, old beggars, hunting scenes, kirtan, musicians, bell-players, Vaishnava dances, etc. which beautifully reflected the most subtle feelings of the social circumstances of that particular era.

Corresponding with the appearance of a new Bengali culture, the consecutive extent of the temples is also significant. Bengali temples may be perceived as one of the most vital indicators of this region's culture, thoroughly connected with existing activities in religion, literature, and the arts, as well as with broader political, social, and economic developments.

5.3 CONCLUSION

Though most of the European features are observed in the architectural style of the palace architecture of Puthia, the temples were very much influenced by regional characteristics. In conclusion, it can be said that regionalism in architecture leads to the building being essentially site-specific and unique. The building responds to the local climate and the culture of the place it is built in. Along with keeping with the distinctiveness of the context, regionalism takes sustainability into account. Thus, there is no doubt that the temple architecture of Puthia, a combination of Indigenous and Indo-Muslim European architectural styles, is a unique example in the history of Bengali temple architecture.

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Appendix

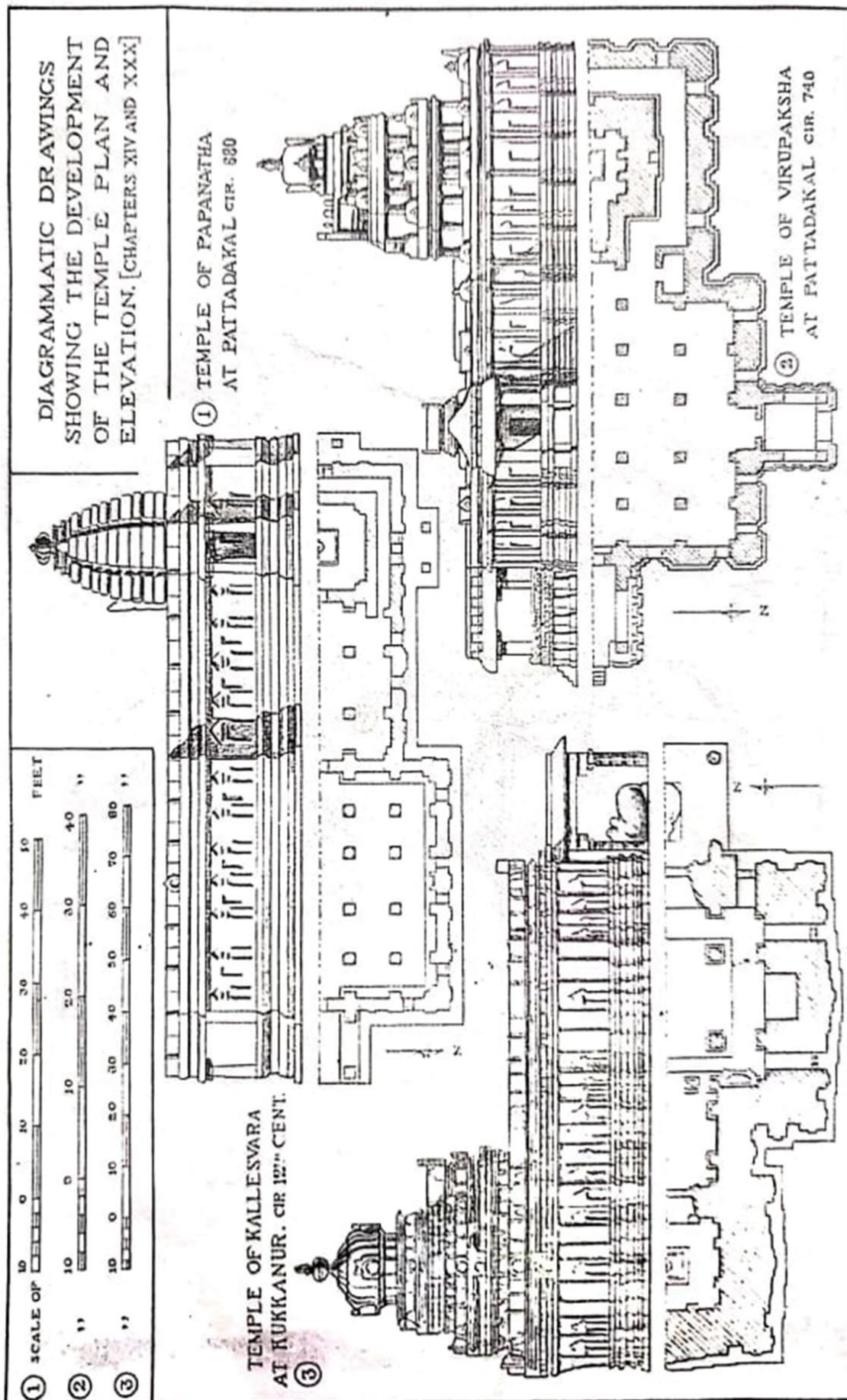


Fig: Dravidian Temples
Source: Indian Architecture (Buddhist and Hindu) Fletcher, 1952; plate no- IV

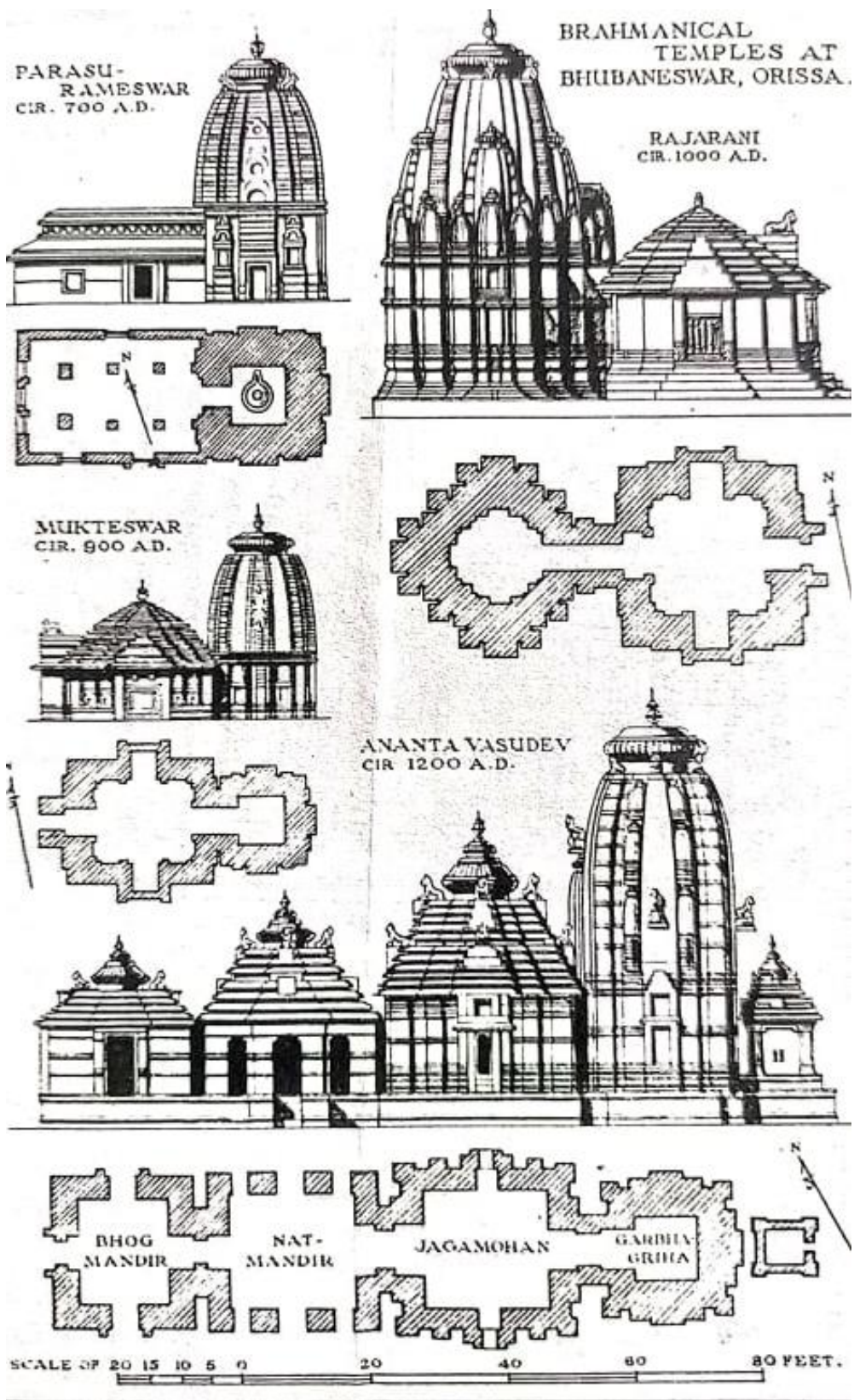
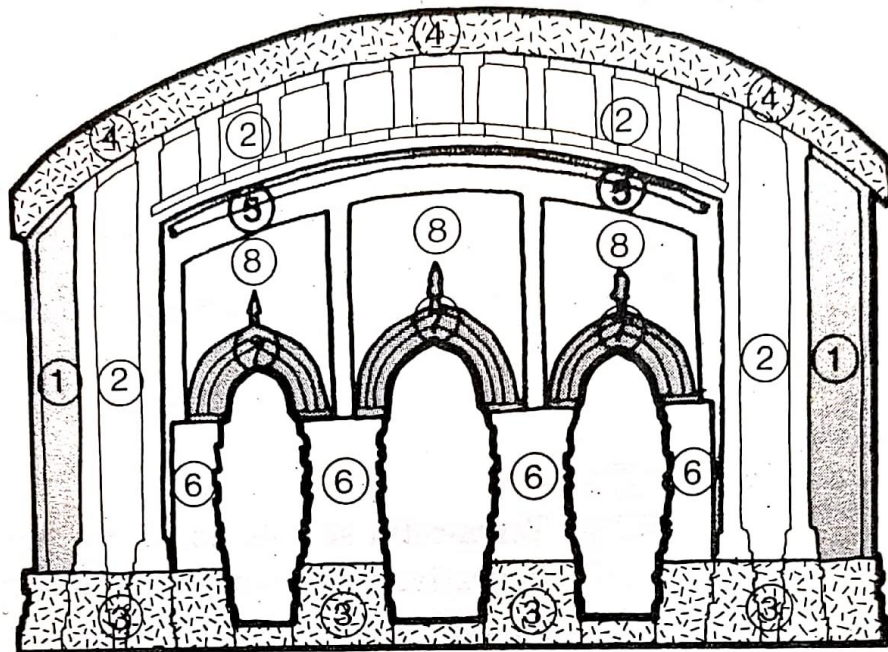
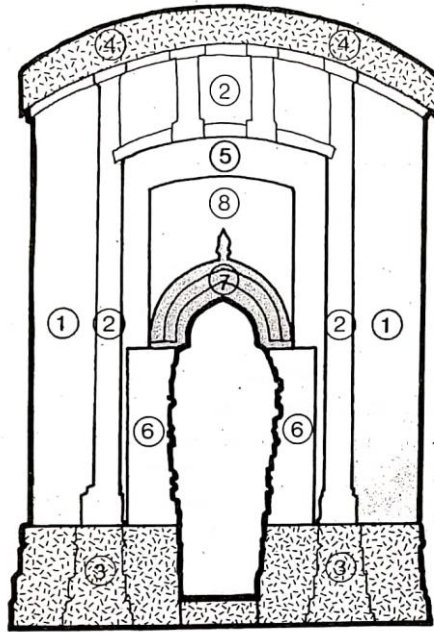


Fig: Indo-Aryan Temples
Source: Indian Architecture (Buddhist and Hindu) Fletcher, 1952;



252. 253.

Schematic single-entrance and triple-entrance façades

- | | |
|--------------------|------------------------|
| 1. corner elements | 5. entrance frames |
| 2. wall panels | 6. columns |
| 3. base friezes | 7. arches |
| 4. cornices | 8. panels above arches |

Fig: Archived photo by George Michell, *Brick temples of Bengal* Archives from the Archives of David McCutchoin (1983), Princeton University Press Archives

মহারানি হেমন্তকুমারীর দানের তালিকা^১

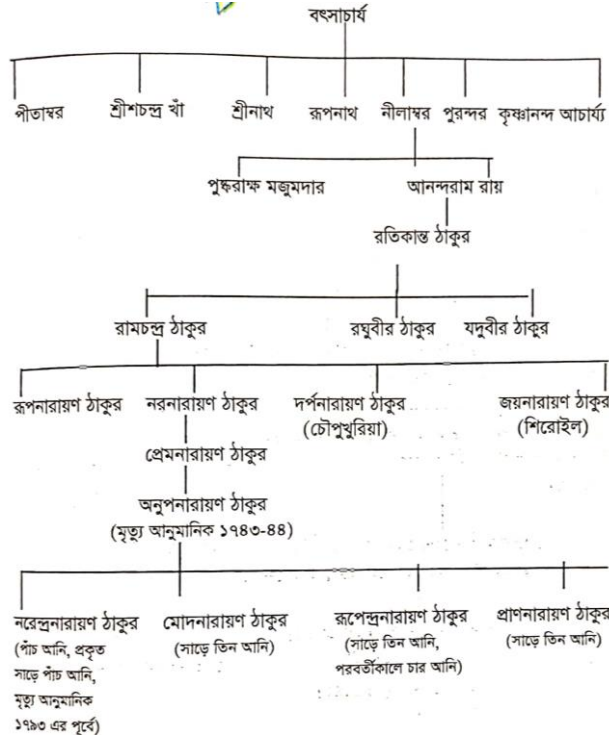
রানি হেমন্তকুমারী বোর্ডিং (রাজশাহী কলেজ) ভবন নির্মাণে	টাকা	২০,০০০.০০
রাজশাহী সংস্কৃত কলেজ ভবন নির্মাণে	"	২০,৫০০.০০
রাজশাহী কলেজ লাইব্রেরির জন্য	"	১,০০০.০০
রাজশাহী কলেজের বার্ষিক ব্যয় নির্বাহের জন্য	"	১,৭৮০.০০
রাজশাহী ডায়মন্ড জুবিলি ইভেন্টিয়াল স্কুলের কুঁচি শাখায়	"	২,০০০.০০
কলকাতা হোমিওপ্যাথিক কলেজ	"	১,০০০.০০
ময়মনসিংহ সিটি কনিজিয়েট স্কুল	"	১,০০০.০০
ধুল্লা (ঢাকা) মধ্য ইংরেজি স্কুলের ভবন নির্মাণে	"	১০,০০০.০০
ধুল্লা মধ্য ইংরেজি স্কুলের ব্যয় নির্বাহের জন্য বার্ষিক সাহায্য	"	১,৮০০.০০
পুরীধামের বেদ বিদ্যালয়	"	১০০.০০
বারান্দা মহাকালী বিদ্যালয়ের বার্ষিক সাহায্য	"	৬০.০০
দিল্লি ছাত্রদের বার্ষিক বৃত্তি	"	৩,২৫০.০০
বহুবন্দ বিদ্যালয়	"	৩০০.০০
কালীহাম (রাজশাহী) মধ্য ইংরেজি স্কুলের বার্ষিক সাহায্য	"	১২০.০০
নওগাঁ উচ্চ ইংরেজি বিদ্যালয়ের বার্ষিক সাহায্য	"	১২০.০০
সরদহ ইংরেজি বিদ্যালয়ে	"	৫০০.০০
পিংনা (ময়মনসিংহ) উচ্চ ইংরেজি বিদ্যালয়ের বার্ষিক সাহায্য	"	১২০.০০
ভূঞাপুর (ময়মনসিংহ) মাদ্রাসার বার্ষিক সাহায্য	"	৬০.০০

১ তালিকাটি বিমলাচরণ সৈকতের পুণ্ডিয়া রাজবংশ গ্রন্থ থেকে সংগৃহীত, পৃ. ২৮১-২৮৩ (পরিশিষ্ট-১)।

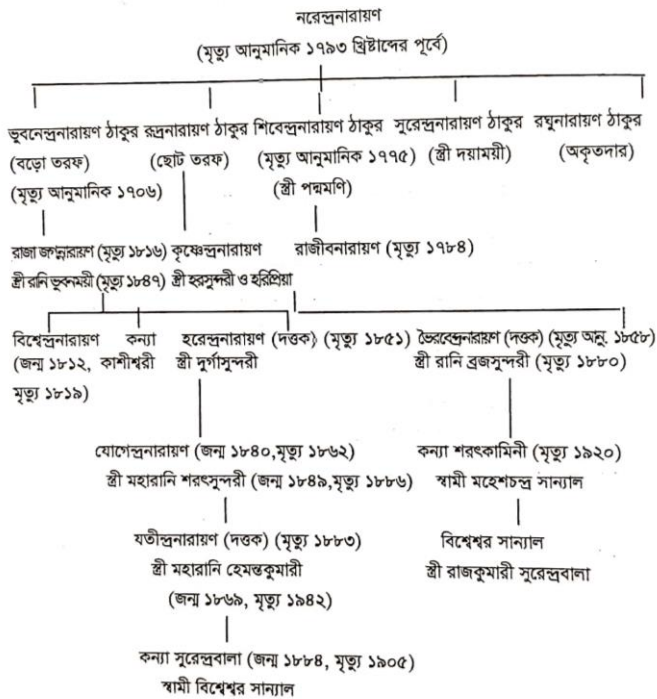
খাওয়াইল (ময়মনসিংহ) উচ্চ ইংরেজি বিদ্যালয়ের ভবন নির্মাণে	টাকা	৯,০০০.০০
খাওয়াইল উচ্চ ইংরেজি বিদ্যালয়ের বার্ষিক সাহায্য	"	২,৪০০.০০
নালিন্দা (ময়মনসিংহ) উচ্চ ইংরেজি বিদ্যালয়ের ভবন নির্মাণে	"	১,০০০.০০
নালিন্দা উচ্চ ইংরেজি বিদ্যালয়ের ব্যয় নির্বাহের জন্য বার্ষিক সাহায্য	"	৬০০.০০
সৌলতপুর (খুলনা) সারথত চতুষ্পাঠিতে	"	৫০০.০০
ধাকনা কলেজের ভবন নির্মাণে	"	৫০০.০০
ঢাকা নর্থব্রুক লাইব্রেরি	"	৬,৫০০.০০
লালপুর (বৃহত্তর রাজশাহী) ডিসপেনসারি ও স্কুল ভবন নির্মাণে	"	১২৫.০০
লালপুর ডিসপেনসারির আসবাবপত্র ক্রয়ে	"	৫০০.০০
নেতি ডায়রিন হাসপাতাল, কলকাতা	"	২০০.০০
নেতি ডায়রিন হাসপাতাল সংস্কারে	"	৫,০০০.০০
কালীহাম (রাজশাহী) দাতব্য চিকিৎসালয় নির্মাণে	"	২,৫০০.০০
মধুপুর (ময়মনসিংহ) দাতব্য ঔষধালয়	"	১২০.০০
পুরীধামের যাত্রী হাসপাতাল	"	১,০০০.০০
নওগাঁ দাতব্য চিকিৎসালয়ের বার্ষিক সাহায্য	"	১২০.০০
ভারত সম্রাটী মহারানী ভিক্টোরিয়ার স্মৃতিসৌধ নির্মাণে	"	২,০০০.০০
ভুলেশ্বর (উজিষা) মন্দির সংস্কার কার্যে	"	২০০.০০
ভাগীপাড়া স্রোতের ঘাট নির্মাণে কলকাতা	"	২,০০০.০০
কর্ণপ্রেমেশ্বর হাতে	"	১,৬০০.০০
দেশবন্ধু স্মৃতি তহবিলে	"	১০,০০০.০০
ময়মনসিংহ ডাকবাংলা, রাস্তা নির্মাণ ও পুষ্করিনী খননে প্রেলাবোর্ড-কে প্রদান	"	২,৬০৫.০০
ভারত সম্রাটের রাজ্যাভিষেক উপলক্ষে বিভিন্ন স্থানে প্রদান	"	১,০০০.০০
নির্দিষ্ট ভরত সম্রাট এডওয়ার্ডের মর-মূর্তি নির্মাণে	টাকা	১,০০০.০০

শক্তি উৎস তহবিলে	"	২০০.০০
নাটোর বার লাইব্রেরির ভবন নির্মাণে	"	১০০.০০
নাটোর জলের কল তহবিলে	"	৭৫০.০০
রাজশাহী বয়েসকাউন্ট তহবিলে	"	১০০.০০
রাজশাহী ভিক্টোরিয়া জামাটিক ক্লাবে	"	৫০০.০০
নালিন্দা (ময়মনসিংহ) দাতব্য চিকিৎসালয় নির্মাণে	"	৫,০০০.০০
নালিন্দা ডাকঘর নির্মাণে	"	৩,০০০.০০
দুর্ভিক রিলিফ ফান্ডে (নানাহালে)	"	১,২০০.০০
রাজশাহী ও ময়মনসিংহ জেলার পুরুষাণী খননের জন্য ভূমিদান	"	৫,৫০০.০০
কলকাতা বলরাম খোষা স্ট্রিটের অনাথ আশ্রম	"	২,০০০.০০
পুরীধামের অনাথ আশ্রম	"	১০০.০০
ভূঞাপুর এবং কামারের চরে (ময়মনসিংহ) দাতব্য চিকিৎসালয়	"	৭,৫০০.০০
দিল্লি ও অনহাযদের বার্ষিক সাহায্য	"	৭,৭৭৫.০০
বারান্দা প্রয়াগঘাট নির্মাণে	"	৩৫,০০০.০০
পুরীধামে হেমন্তকুমারের মন্দির নির্মাণে	"	১,০০,০০০.০০
উক্ত মন্দিরে দেবসেবার বার্ষিক ব্যয় নির্বাহের জন্য এডভান্সে	"	৮,৫০০.০০
কালীধামের সারের ব্যয়	"	৮,৫০০.০০
বৃন্দাবনধামের ভূবনমোহন বিহারে দেবসেবার বার্ষিক ব্যয়	"	১,২০০.০০
পুণ্ডিয়াতে গোবিন্দজি ও গোপালজির সেবাশ্রমাদির বার্ষিক ব্যয়	"	১২,০০০.০০
রাজশাহী মহারানি হেমন্তকুমারী ওয়াটার গার্ডেন	"	৬৫,০০০.০০

Fig: List of Donation; Rani Hemanta kumara ahman, K. M. (2017). Puthiar Rajbangsha: Irihash O Shapattya [History and monuments of. Dhaka, Bangladesh: Bangla Academy.



পাঁচ আনি রাজবংশ



Family tree of Puthia Raj Bongsho

ahman, K. M. (2017). *Puthiar Rajbangsha: Itihash O Shapattya [History and monuments of. Dhaka, Bangladesh: Bangla Academy.*

