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AN ARCHITECTURAL COMPARATIVE ANALYSIS OF BOROBUDUR, INDONESIA AND THE KUMBUM, GYANTSE, TIBET

A Thesis Submitted In Fulfilment Of The Requirements For The Degree Of Master Of Philosophy, Faculty Of Architecture, The University Of Sydney. March 2002

Jane-Amanda Jean, 119 Richmond Terrace, Richmond, 3121, Melbourne, Victoria, Australia.
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ABSTRACT

Stupas are symbols of the teachings of Buddhism and have for centuries marked the landscape of Asia. They have been built in many different shapes and sizes as a testament to the development and spread of Buddhism. Many Western studies have explored the symbolism of the stupa, its origin and evolution. This dissertation attempts to explain the similarities and differences between two monumental stepped pyramid type stupas located in very different geographical regions with different cultural and political backgrounds. They are the Kumbum in Gyantse, Tibet (built 1427-42) and Borobudur in central Java, Indonesia (built 775-835).

The thesis is based on data collected from site visits to the Kumbum in Gyantse, Tibet and Borobudur in central Java, Indonesia. The different attributes of the two structures are described and analysed with reference to the standardised design of a stupa. Design issues discussed include the setting, architectural design and structure, together with the decorative traditions as well as chronological development and use of the sites with respect to contemporary political context. Finally, the influences of religious doctrine, as expressed in architecture, are explored.

The thesis suggests that the two sites share a common evolutionary link to a single generic type of stupa, the stepped pyramid stupa, that evolved under the Pala dynasty of northern India and Bangladesh during the 7th and 8th centuries with links to cosmic theories developed by Chinese Buddhist schools. These teachings represent the highest Chinese Buddhist philosophical tradition and marked the second major development in Buddhism, corresponding roughly to the late Mahayana period. The findings of the architectural analysis show that the major differences between Borobudur and the Kumbum reflect the time lapse between the introduction of Tantric symbolism during the 7th and 8th century and its codification in Tibet during the late 14th century, just before the construction of the Kumbum. This is partly due to differences in the approach to the Tathagatagarbha teachings as
interpreted by Buddhist schools in China and Tibet. While the similarities between both monuments are due to the fact that the architectural layout and iconography of both Borobudur and the Kumbum are based on an integrated approach to the Hinayana, Mahayana and Vajrayana teachings within one pathway. This includes architectural reference to the Vinaya, the Sutras and Abhidharma texts. The architecture, bas-relief panels of Borobudur and the murals contained within the chapels of the Kumbum are a summae of all Buddhist traditions.

The thesis concludes by proposing that despite differences in religious approach to the interpretation of specific text the similarities between Borobudur and the Kumbum relate to the existence of a universal code of art and architecture in the Buddhist world which has sustained over two and a half thousand years. It is argued that Borobudur and the Kumbum belong to a series of Buddhist monuments which share certain common universal qualities. These sites have become major identification markers of ancient itineraries and can be found along the Asian world's ancient cultural routes.
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I thank the officers at the Faculty of Architecture for their help over the past five years of my part time status as a student. I thank my family for their patience and encouragement over the past years.

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1. INTRODUCTION

BACKGROUND AND SIGNIFICANCE

This research was inspired by a desire to explore the relationship of two significant works of religious architecture, Borobudur and the Kumbum which appear to have many similarities but separated both temporally (one being 8th century, the other being 15th century) and geographically. The communication of ideas between Indonesia and Tibet also stirred interest. For example one of the greatest Tibetan religious scholars, Atisa, spent twelve years training with his teacher in Sumatra in the early 11th century prior to assisting with the re-introduction of Buddhism in Tibet. He is associated with an extensive religious building program in Tibet. This could have been one example of where Indonesian Buddhist architectural concepts were brought to Tibet. The hypothesis that there was a relationship between the two monuments was first put forward by Professor Tucci in 1940s. He drew attention to the strong similarity between Borobudur and the Kumbum despite the enormous differences in environment and geographical location between the two.

The original plan of the research was to trace the cross cultural links between Indonesia and Tibet by a survey of religious structures that were re-creations of three dimensional mandalas. Dr. Adrian Snodgrass, my supervisor, advised that a comparative analysis of just two buildings would result in a more focused study. This would increase the likelihood of revealing associational links between the two places and highlight universal characteristics shared by all similar structures.
A comparative study between Borobudur and the Kumbum seemed reasonable for four reasons. Firstly, the possibility of an associational link between the two structures has been made by many other scholars who support Tucci's original claim. Secondly, it was possible to travel to both countries and carry out site surveys. The comparison of my own information collected from fieldwork with that documented by scholars, is the basis of this dissertation. Thirdly, the monuments are good examples of a stepped stupa type and recognised as wonders of the Buddhist world. Fourthly, the structures are sufficiently different to make an interesting study. The stepped terrace stupa of Kumbum contains murals that record the whole pantheon of Indo-Tibetan Buddhist religious iconography up to the time of its construction during the first half of the 15th century. While the stepped terrace stupa of Borobudur is decorated with superb bas-relief panels representing late Mahayana and early Vajrayana Buddhist religious architectural motifs and iconography, popular at the time of its construction in the late 8th and early 9th century.

The comparative analysis of religious monuments built six hundred years apart provides an understanding and appreciation of the sustained religious expression of Buddhist architecture and art that spread throughout Asia over many centuries. The evolution of Borobudur and the Kumbum can be traced back to the early practice of Buddhism and the early development of stupas, such as the Great Stupa at Sanchi, located in central India, constructed in the middle of the 3rd century BC. Their structural forms are also associated with the trans-continental spread of Theravada and Mahayana Buddhism. The evolving nature of Buddhism, reflecting the introduction of Vajrayana and the complex Tantric mandala rituals during the 8th and 9th centuries is clearly illustrated by both the structures of Borobudur and the
Kumbum. In addition, the socio-political importance of the structures as part of a greater schema of nation development can be explained by layout, strategic setting and geomancy.

Figure 6 The Great Stupa of Sanchi constructed in the middle of the 3rd century BC; served as the basic model for stupa design for around 700 years. (Wassman, Buddhist Stupas in Asia)

The main questions of this thesis are. What, if any, are the similarities between the monuments? Why are they similar? Are the associational links due to the use of a particular type of architectural form which had its origin in 8th century Indonesia and was promulgated by the cross cultural exchange of religious teachers? In other words if Borobudur could be regarded as an early surviving example of its type, was it a prototype that was used as a model for the next six or seven hundred years?

Alternatively, do they share a common evolutionary link to an earlier generic structural type that was based on an interpretation of religious doctrine introduced from elsewhere? And in consequence do both monuments possess certain universal
characteristics which were not contained by political boundaries nor constrained by
time?

RESEARCH OBJECTIVES

1. To examine the site layout, architectural form, design and decorative details
   of both the Kumbum and Borobudur in order to identify the commonality
   between the two structures.

2. To investigate the background historical context and religious interpretation
   of each monument in order to determine the origin and influences underlying
   the design principles of these specific stepped stupas. It is hoped this will
   highlight universal characteristics shared by both structures and identify those
   associational links or interchanges between the two cultures and regions.

RESEARCH METHODOLOGY

This thesis is primarily an architectural comparative analysis. The focus is on the
architectural design and form of the Kumbum and Borobudur. Fieldwork and on-site
analysis therefore form a major component of the study. A site visit of the Kumbum
in Gyantse was undertaken during October 1998, when I spent just under three weeks
in Tibet. During the trip I visited over ten different monastery and temple complexes
in central and southern Tibet. The first time I saw the Kumbum was on an official
tour guided by a Tibetan interpreter. The next day I was given permission to inspect
the building by myself, without any accompanying security officials. The advantage
of this was that I could meticulously inspect each chapel and spend as much time as I
liked looking at the exquisite murals by torch light in the pitch dark, noting the
construction and decorative detailing. The drawback was that I forfeited my right to take photographs. Over the course of a day I surveyed each of the 73 chapels, looking at every mural covered wall and altar shrine within the chapels, temples and passages and stairways. The ingenuity of the architectural design is astonishing. The murals that cover every single internal wall are absolutely exquisite and wondrous. The sculptures are superb and the timber roofing impressive in intricacy and detail.

I also circumambulated the building and tried to discover the original path, lined in many places with walls of prayer wheels. The time was paltry in comparison with the three months spent in Gyantse by Lo Bue and the Riccas, but it allowed a deeper understanding of the building than would have been possible by studying the several monographs on the place prepared by Tucci and Lo Bue and Ricca. Having visited the site I would concur with Tucci’s eloquent description of the impression he felt while visiting the place:

The images, now peaceful, now terrific, seem to jump alive before your eyes, to crowd on you like ghosts and to engrave themselves mercilessly into the bottom of your unconscious so as to haunt your dreams as well. You would think that the painters have by some wizardry conjured up living forces and driven them into their work, and that these float out of the walls, force their way into your soul and take possession of it by a magic spell.¹

Likewise, I carried out a field trip to central Java, which included visits to the temples on the Dieng plateau and all other Buddhist temples in the Opak and Prago river areas of central Java, including several Hindu temples. The visit included about eight hours of survey and inspection of Borobudur. The searing heat of the tropical sun makes circumambulation around the volcanic stone terraces an awe-inspiring

¹ Tucci 1987:56-57
feat. Again the time was brief, but enabled an extensive visual inspection of every terrace and level of Borobudur.

Data was collected from these field trips to produce a detailed survey of the context, layout, construction methods, materials and architectural design, artistic styles and iconography of the two monuments. Information was gathered relevant to an understanding of the place and its fabric and covers the following aspects of each: ²

- The cultural influences that have affected the form and fabric of the place.
- The duration of use or associational links of the place and its sequential development.
- The historical content of the place with particular reference to the ways in which its fabric has been influenced or has itself influenced the course of Buddhist architectural history.
- The relationship of the place to other places, for example in respect of design, technology, use, locality or origin.

The comparative analysis of Borobudur and the Kumbum is discussed under each of the above categories. To facilitate the analysis a list of questions is used to test the ‘universal’ characteristics of the structures.

1. What is the role of the sovereign state and development of international trading routes as precursors for the construction of the religious monument?

² The Burra Charter, revised in 1999, prepared by Australia ICOMOS, (the International Council on Monuments and Sites), an Australian non-government body with links to the international body ICOMOS, which is closely linked to UNESCO particularly in its role under the World Heritage Convention 1972. The Burra Charter is based on the International Charter for Conservation and Restoration of Monuments and Sites (Venice 1964) and is an accepted industry best practice guide.
2 What contribution did the role of merchants, missionaries, pilgrims and the spread of literature have in the creation of cultural routes?

3 Does the existence of cultural routes provide a setting for the creation of specific status markers such as monumental stupas and the consequential establishment of an international code in symbolic art, architecture and literature?

4 What role did developments in the philosophy of Mahayana and Tantric Buddhism have in the creation of a sovereign state and status markers?

LITERATURE REVIEW

The Kumbum: The fundamental reference body of literature relating to the Kumbum was written by Professor Giuseppe Tucci in 1941. This material was based on his extensive research and survey work carried out during an extensive field trip to central and southern Tibet in 1937. The results of the expedition to Gyantse were recorded in fourth volume of the Indo-Tibetica series published in 1941 by the Royal Academy of Italy, entitled Gyantse e i suoi monasteri (Vol. 4, Part I-III). In the late 1980s the work was translated into English, edited by Lokesh Chandra and reprinted in India. In 1987 CESMEO commissioned Erberto Lo Bue and Franco Ricca to undertake a further survey of the Kumbum and other important sites after the disastrous activities of the Chinese Red Guard in Tibet during the Cultural Revolution in the late 1960s. During their visit they completed a full colour photographic record of all the wall paintings and statues of the Kumbum. Twenty chapels which had been excluded from the Indo-Tibetica series were also surveyed. Further research work was carried out and in 1990 the book, Gyantse Revisited was
published. In 1990 Simone Ricca prepared a measured drawing of the monument during a further field trip organised by Erberto Lo Bue and Franco Ricca. This work was published in 1993 entitled *The Great Stupa of Gyantse*. This body of literature comprises the most comprehensive study of the Kumbum. It also was used as the main reference for this thesis.

**Literature on Tibet:** Literature relating to Tibetan religious life and artistic tradition is quite extensive. Again work by Professor Giuseppe Tucci has provided essential reading. Texts include the *Tibetan Painted Scrolls* (1949) and the *Religions of Tibet* (1973). The expanded edition of the catalogue of the Los Angeles County Museum of Art collection prepared by Prajapaditya Pal, *Art of Tibet*, (1990) together with the 1997 collection of papers edited by Jane Casey Singer and Philip Denwood in *Tibetan Art: Towards a Definition of Style*, provided a basic framework for the study of different Tibetan styles and sculptures. Other background literature about the socio-cultural history of Tibet includes work by David Snellgrove and Richardson. (1985)

**Literature on Buddhism:** A major part of the background reading included religious texts which allowed an understanding of the developmental changes in Buddhism. The Crystal Mirror Series published by Dharma Publishing provides basic information on the doctrine and religious concepts, including a categorisation of different scriptures and sutras. Their book, *'Holy Places of the Buddha'* (1994) is an invaluable introduction to the different archaeological sites in India as it gives a summary of the various teachers associated with the various Buddhist centres. It also traces the movement of teachers as the invading Muslim armies swept across north
India. The History of Buddhism in India written by the 17th century Tibetan scholar Taranathaa together with the translated diaries of Chinese pilgrims such as I-Tsing and Hsuan-Tsang provides a good socio-political contextual background. Another body of literature concentrates on the interpretation of Mahayana and Tantric concepts such as work by Chandra (1986) Richardson (1990) Williams (1989) Lama Govinda (1976) and Snellgrove (1987). There are many other doctrinal texts prepared by Tibetan religious scholars.

**Literature on Buddhist Stupas:** Four main works were used as a reference for development of the stupa. The Symbolism of the Stupa written by Snodgrass (1985) provided an invaluable reference document. But the first volume of the Indo-Tibetica is devoted specifically to an explanation of the origins and different types of Tibetan Stupas. Dorjee has translated a number of different ancient architectural manuals on stupa design as part of a thesis, which has since been published as a book (1996). This work together with detailed diagrams of the different stupas has been used in the dissertation to provide a standard ideal stupa on which to base the comparative analysis of the Kumbum and Borobudur. Another interesting survey of stupas in Burma was completed by Soni (1991), and the recent Lonely Planet Guide Cummings and Wassman, Buddhist Stupas in Asia (2001) to all the major Buddhist stupas is a useful regional comparative analysis.

A limited reading of works referencing mandalas and sacred mountains was undertaken. This included works by Chandra (1986) Leidy & Thurman (1997) Richardson (1990) Snodgrass (1988) and Templeman (1998). By the end of the study period, as my knowledge of the subject increased I was aware of the important
relationship between sacred mountains, mandalas and stepped stupas. This is an area
where further research would be worthwhile but could not be part of this thesis
because of limits of time and writing space.

**Literature on Buddhist Architecture and Art:** Central to the dissertation is the
body of literature on Buddhist art and architecture. At first, reading about this
subject appeared daunting as the history of India and the surrounding region is
essential to an understanding of the subject. It became important to be able to locate
each Buddhist religious site geographically in order to trace the different regional
styles. Ray's work (1994) on the development of trading routes in the Buddhist
world used in conjunction with the information on archaeological sites as described
in the *Holy Places of the Buddha* (1994) provided a background for the many
surveys of Buddhist art and architecture. Some of the work includes surveys by
buildings in South East Asia as well as China and covers works by Dumarcay (1978-
1998) and Mary Shepherd Slusser (1982)

**Literature on Borobudur:** There is an extensive body of research work and
literature on Borobudur. Professor Soekmono stated in the 1970s that there were
over 500 published texts on Borobudur. This includes works by Bernet-Kempers
(1979, a good introduction on the subject), Boeies (1985), Bosch (1961), Chihaara
(1980) and Gomez (1981), which has an excellent collection of essays. Krom
(1927) provides the classic work on Borobudur, while the work by Mus (1935) is an
extensive interpretation of the monument. Other scholars such as Frederic (1994), de
Casparis (1956), Fontein (1967) and Soekmono (1976) all cover important and
different aspects of the monument. The most useful information from this body of
literature has been the work by Dumarcay. A study of his work has led to a greater
understanding of the relationship between the architectural design of Borobudur and
central Javanese temples. This has provided a comprehensive background to the
field surveys of the temples. In consequence it has allowed a greater appreciation of
what constitutes the essential characteristics of classic Javanese stone architecture.

DISSERTATION STRUCTURE

This dissertation is divided into three chapters. These are described as follows:

Chapter 1: The Kumbum, Gyantse, Tibet

This chapter is divided into six parts: the layout of the site, its setting and associated
structures; the architectural plan and layout; the structure and construction
techniques; the decorative styles and architectural details; the religious interpretation
and symbolism of the architecture. Finally the chronology of site development is
explained with a short summary of similar structures within the region. In this
section the architectural plan and layout of the Kumbum are analysed with reference
to the ideal form of a stupa as set out in ancient religious manuals. The standardised
design of a stupa is used as a model to test whether the Kumbum can be categorised
as a stupa type.
Chapter 2: The Borobudur Temple Compounds

Borobudur is described according to the various attributes of the place: the layout of the site, its setting and associated structures; the architectural plan and layout; the structure and construction techniques; the decorative styles and architectural details; the religious interpretation and symbolism of the architecture. The chronology of site development is explained with a short summary of similar structures within the region. Again the architectural layout of Borobudur is analysed with reference to the ideal form of a stupa as set out in ancient religious manuals.

Chapter 3: Comparative Analysis Of Borobudur Temple Compounds And The Kumbum, Gyantse

A summary of the various similarities between the two structures is given with reference to the six descriptive sections used as the basis of analysis in the preceding chapters. The major differences and similarities between the two structures are then identified. Some suggestions for these similarities and differences are proposed.
CHAPTER ONE

THE KUMBUM, GYANTSE TIBET

1.1 LAYOUT OF THE SITE, SETTING AND ASSOCIATED STRUCTURES

1.2 ARCHITECTURAL PLAN AND LAYOUT

1.3 STRUCTURE AND CONSTRUCTION TECHNIQUES

1.4 DECORATIVE STYLES, SCULPTURE, ART WORKS AND ARCHITECTURAL DETAILS

1.5 RELIGIOUS INTERPRETATION AND SYMBOLISM

1.6 CHRONOLOGY OF SITE DEVELOPMENT

1.1 LAYOUT OF THE SITE, SETTING AND ASSOCIATED STRUCTURES

The town of Gyantse is an ancient city and important trading centre, located in the province of Gtsan in the southern central part of the present Tibetan Autonomous Region. The town was sited strategically in the part of the province known as Myang, located south of the river gTsangpo. It is sited at the crossroads of a number of major trading routes from Lhasa, Tsetang and Shigatse, to the north, east and west respectively. The centre became a major terminal for the wool and wood routes from Yatung in the south on the border of Sikkim, Bhutan and Nepal (Figure 6). The greatest Tibetologist of the 20th century, Professor Giuseppe Tucci, described the

3 Lo Bue & Ricca 1990 p. 57-75 provides an outline of the historical and artistic role of the Gyantse dynasty. See also Ricca & Lo Bue 1993: 11-32 for a similar historical overview.
place of Gyantse, as a dPal-'khor bde-chen or island, one of a series of sites that form part of the pilgrim's itinerary of sacred places in Tibet.

**Gyantse**

![Map of Tibet showing the location of Gyantse in Tibet and the major Buddhist pilgrimage sites in India. The shaded area is the area where the Buddha taught in India and the small triangles indicate the the eight holy sites marking major events in the Buddha's life (drawn by J. C. Huntington 1989).](image)

The first religious nucleus of buildings at Gyantse was founded when Gyantse was made the capital of the principality of the clan of rGal-mkhar rtse, (Gyantse), whose territories stretched as far south as Phari near Yatung in the mid 14th century. By the mid 15th century most of the religious buildings, including the Kumbum and all the decorative interior murals had been completed. Thereafter the place declined in importance. Building activity reached its peak during a thirty year period of total independence, peace and prosperity. During this time Rab-brtan Kun-bzang, (Rabten

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5 Tuuci 1941:147
Tsuklak Khang), (1389-1442), the ruler and prince of Gyantse, converted the dPal-'khor bde-chen, the walled monastery into a large palatine monastery, a teaching monastery known as dPal-'khor chos-sde (Pelkhor Chode).

The place became famous all over Tibet. Five centuries later a team of visiting Chinese archaeologists in 1959 declared the place as unique in the Peoples Republic of China from the point of view of artistic value. The site has been identified for potential inscription under the World Heritage Convention for its universal values to humankind. Tucci elaborated on the unique importance of these monuments. He maintained that added significance was due to the extensive documentation and inscriptions found in each chapel. The inscriptions record the contributions of the entire ecclesiastical and lay nobility of the territory. Tucci now believed that this information together with explanatory contemporary literature and liturgical texts, gave the monuments new significance. He stated that it put us in direct contact with the religious psychology of the esoteric schools of Indo-Tibetan Buddhism. In contrast, those monuments and images without such information, such as for example those buildings Tucci had previously documented in Western Tibet, he now believed, had by comparison lost their value to some degree.

The first phase of the town’s transformation began in 1414, when Rab-brtan Kun-bzang commissioned the construction of a six-arched bridge over the river Myang,  

6 The Myang Chung used the term dPal-'khor bde-chen for the monastery, which later became known as dPal-'khor chos-sde. Lokesh Chandra in the forward to Tucci. 1941 p. xviii.
7 Lo Bue & Rica 1990:75 quoted from Karmay 1975:27
8 World Heritage Convention website (http://whc.unesco.org) for a list of Republic of China’s prescribed and indicative world heritage sites
9 Tucci 1941: 9. Tucci writes that an iconographic collection without detailed explanatory scriptures loses some of its value, as the ideal religious connection, that imbues the artifact with meaning, is lost.
10 Tucci. 1941:10
11 Ibid.p. 9
just outside the town. The bridge was said to be magnificent with a ‘teaching’ Stupa erected in the centre, beneath which the road passed. The structure provided an impressive entry to receive the many Indian religious teachers and Chinese emissaries that were invited to Gyantse in the early 15th century.\(^\text{12}\) Four years later, Rab-brtan Kun-bzang embarked on an expansion program for the monastery, sited just north of the town of Gyantse.\(^\text{13}\) The gTszug-lag-khan, the main temple, was enlarged with additional chapels, statues and murals. In 1425, the abbot’s palace was completed and in 1427 the foundation for the Great Stupa of Gyantse, known in Tibetan as sKu’-bum bkra-shis sgo-mang mchod-rten (Kumbum) was laid, although, possibly not completed before 1442.\(^\text{14}\)

The religious buildings, which make up the monastery, were built like a fortress in a natural amphitheatre at the end of the town. The site was surrounded by high craggy peaks on three sides. In 1425 the encircling fortified walls with sixteen towers and turrets were constructed, along with the circumambulation passage and six main gates. Two gates were located on the northern and southern sides and two smaller gates on the eastern and western sides, giving access to the complex.\(^\text{15}\) The high rendered masonry boundary walls perched on top of the spur of a hill. Towering above the town, the mountainous spur terminates in a craggy cliff on which the fort and castle of Gyantse was built in 1365, at the entrance to Gyantse.\(^\text{16}\)

\(^{12}\) A description of the bridge is given in Lo Bue & Ricca 1990: 66, referencing Myang Chung, 51-52
\(^{13}\) Cf. Tucci 1949: 665
\(^{14}\) Ibid.
\(^{15}\) Ricca & Lo Bue 1993:29, the decoration of the 4th storey, the bumpa and at least part of the turret and harmika, were completed by 1442. This is known as Rab-brtan Kun-bzang died in that year and is mentioned as a donor.
\(^{16}\) Tucci 1941:146-148.
\(^{16}\) Lo Bue & Ricca 1990:62, there is also a description by Tucci of the royal palace and temple that were built on the spot where the fort (redzon) can be found, Tucci 1941:61
These walls have been altered several times by the Chinese. However, the massive stretch of wall constructed directly above the main abbots palace, designed for display of several enormous silk appliqué thangkas, which are unfolded for exhibition on religious occasions, has survived intact.

Many buildings at the time had been badly damaged by the English in 1904 when Colonel Younghusband occupied the outskirts of Gyantse shellng the fort and dynamiting the main gateway.

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17 Tucci 1941: 146
18 Observation on the field trip in 1998 and also inspection of the folded thangkas kept in the temple. Tucci 1949 To Lhasa and Beyond, a travelogue of Tucci’s expedition to Gyantse and Lhasa, his field survey which formed the basis for his works, Indo-Tibetica Volumes 1-4. He repeatedly observes the devastating affect of the English invasion in 1904, the destruction of monasteries and forts along the Yatung - Gyantse route, and the fact that even after 45 years he saw that in many places the locals had not recovered from the destruction. Traveling in 1998, the destruction was again described to me by a fellow traveler, a grandson of one of the members of Youghushand’s infantry, who had inherited a bundle of photographs taken of the campaign, showing British troops looking at decapitated Tibetans fighters and destroyed buildings.
At the time of Tucci's visit in 1937 the monastery enclave was tightly packed with buildings. Tucci, describes the monastery as a walled city complete with its streets and lanes and densely built up area located at the edge of the town of Gyantse.\(^{20}\)

By the end of the 17\(^{th}\) century the powerful dGe-lugs-pa religious school took control of the monastery increasing the residences to seven dGe-lugs-pa colleges, four Sa-skya-pa one, four Dus-'khor-pa, school of Kalacakra, and one Zhalu-pa and one gSar-khong-'og pa college.\(^{21}\) Each college was constructed according to the different Buddhist schools and managed under their own abbot. During the Chinese Cultural Revolution in 1966-7, visiting Red Guards destroyed most of the buildings in the monastery. Only the Kumbum, the Main Temple, dPal-'hkhor chos-sde and the Abbots palace/quarters were spared through the personal intervention of Chou

\(^{20}\) ibid.

\(^{21}\) Lo Bue & Ricca 1990 p73-74. No major innovations were made after the end of the 15\(^{th}\) century
Enlai. Three religious colleges, the dGe-lugs-pas, Sa-skya-pas and the Zhalu-upas, are now permitted to operate on site by the Chinese authorities.

Figure 10 View to the castle of Gyantse from the front monastery courtyard (M. Jean)

Figure 11 The front entrance to the Gyantse monastery (M. Jean)

22 Lo Bue & Ricca 1990: 75 the advent of the Cultural Revolution caused havoc and destruction in the religious enclave in 1967
23 Followers of Bu-ston, cited in Tucci 1941:147
Figure 12 Two views of Gyantse and the religious enclave from the castle, the top photo was taken by Federick Spencer-Chapman in 1937 and the lower photo by Ricca in 1990, showing the extent of demolition carried out by the Chinese Red Guard in the late 1960s (Gyantse Revisited)

The previous building sites are now identifiable by large earthen mounds, which spread across the site and steep slope, a scarred backdrop to the remaining structures.

On the flat lower level of the site, the main temple dominates the large entrance courtyard. The courtyard is lined with prayer wheels and faces immediately opposite the gigantic timber entrance door built post-1966. This entrance opens south onto a long elegant boulevard, the new main street of Gyantse.
The second dominant structure in the monastery is the Kumbum. It is located two to three metres to the west of the main temple, wedged in the centre of the site and surrounded by a number of one and two storey lesser buildings. The building to the west of the Kumbum could be an earlier extant smaller structure. It is clear, that several earlier buildings to the front were either damaged or destroyed during the Red Guard’s attack on the monastery. In the south eastern corner the historic smaller gates remains insitu, giving access to the older, narrow original main street of Gyantse.

24 The buildings are clearly visible in both comparative photographs taken in 1937 and 1990 taken from Ricca & Lo Bue 1993:115
Figure 15 The Kumbum is sited surprisingly close to the Temple (M. Jean)

Figure 16 The building on the left pre-dates the 1960s (M. Jean)
1.2 ARCHITECTURAL PLAN AND LAYOUT

The Kumbum belongs to one of the eight basic types of Tibetan stupas/mchod-rten known as ‘the multiple auspicious stupa with many doors’ or ‘bKra-shis sgo-mang mchod-rten’, also known as the stupa of ‘Divine Wisdom’. A monumental stupa type derived from the Indo-Tibetan tradition. Its architectural form and design is described and standardized in several Indo-Tibetan treatises.

Figure 17 Eight stupa types Dzogchen monastery Kham Tibet (Wassman)

Figure 18 A mural painting of 8 stupas at Lakharg Marpo in Tserparang Western Tibet (Wassman)

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26 Lo Bue & Ricca 1990:75 the ‘bKra-shis sgo-mang mchod-rten’ is one of eight basic types of stupas which Tibet derived from Indian tradition. Tucci dealt with this subject in the first volume of Indo Tibetica 1932. See p 27, stupas or caityas, known by the name of ‘dharma-kaya-caitya’ are caityas of the body of the law as distinct from stupas that contain relics. See also the text cited on p.21 n.1 (Cordier Catalogue 2.358 no 129) folio 154

27 See Dorjee 1996 for a survey of important texts on the architectural principles of the Buddhist stupa, including the commentary on the Vimalosnisa. attributed to Sahajavilasa.
The original stupa type, ‘the multiple auspicious stupa with many doors,’ reflects the particular design of so-called Gandharan style of stupa found in Central Asia, although it commemorates the site where the Buddha delivered his first discourse, known as the ‘Turning of the Wheel of the Law’ (*dharmacakra-pravartana*).

*dharmacakra-pravartana* is the name given to the Buddha’s first teachings of the doctrine, the ‘Four Noble Truths,’ in the Deer Park at Sarnath, near Varanasi.  

Essentially, this particular type of stupa celebrates ‘preaching’ representing the fundamental meaning of the *chos-sku*, (embodiment of the Law, physical representation of the *dharmakaya*, the essence of all the Buddhas). This references the Mahayana symbol of the Bodhisattva’s vow to liberate all sentient beings through unit of measurement which, as Tucci writes, variously multiplied determines the

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28 Lo Bue & Ricca 1990:75
the propagation of the doctrine. The Kumbum is the chos-sku / dharma-kaya, the body of the law made visible. The devotee progresses through each chapel, ascending each level, which 'corresponds also to an ascension to ever more subtle and secret truths' ascending through the higher planes of Tantric cycles from the Kriyatantra as on the first level to the Annuttaratantras on the top of the building.

Figure 20 A gigantic 'Multiple Auspicious /Doors Stupa' south west of Leh, a typical early pre 14th century design, whether it was influenced by the Tibetans or from earlier sources in the region is unclear. (Dorjee, Stupa and its Technology)

Architectural treatises on the design and construction of the stupa, found in the Tibetan canonicals of the Kagyur and Tangyur testaments, set out the rules of construction and design of the building of stupas, all images, statues and decorative details. These texts include construction manuals on Buddhist stupas prescribing their symbolism, ornaments, proportions, the correct number of elements, places where they can be erected and various components of the structure. The rules use a unit of measurement which, as Tucci writes, variously multiplied determines the

29 Lo Bue & Ricca 1990: 76
30 Tucci 1941: 170.
proportions of the elements and levels of the structure or image. The unit of measurement was the cubit or khru, slightly larger than the length of four fingers or the forearm of a person. 31

There are few variations between the manuals, which date to the early centuries of the millennium. These manuals include works from Vinaya sources, translated from the Sanskrit originals such as the \textit{Vinaya-ksudraka Vastu} of the Mulasarvastivadans text found in the \textit{Kagyu}.\textsuperscript{32} They also include two works on the \textit{Vimalosnisa} which is found in the Tantric section of the \textit{Tangyur}. In addition there are the architectural texts such as the Caitya-Vibhanga-Vinayoaddhita-sutra and the Kamsadesavyakarana which are lost in their original Sanskrit form, but both are found in translation in Tibet.\textsuperscript{33}

As well as the information provided by these architectural manuals, the layout, design, sequence of chapels and their many thousand images, sculptures and mandalas as well as artists, sculptors and even sponsors of the Kumbum are all carefully recorded in the inscriptions found in each chapel.\textsuperscript{34} In addition to the inscriptions there is an interpretive guide on the inner symbolic meaning of the place and its parts, called \textit{Sgrub-thabs-rgya-mtsho}, which is included in the \textit{Tangyur} (LXXI Nos.93-340). The guide is the fundamental ritualistic work of the \textit{Sa-skyu-pa} school.\textsuperscript{35} The Kumbum therefore was designed under the aegis of the most renowned religious leaders of the time and built to depict the strict classification of the

\textsuperscript{31} Ibid.
\textsuperscript{32} P. Dorjee 1996:1 quotes \textit{Kagyu}, Vinaya, Derge, vol THA, (Toh.6), fol. 244b3-247a4
\textsuperscript{33} Ibid. p.11 quotes \textit{Tangyur}, Lekha-Parikatha, Derge, vol NGE, (Toh.4202), fol. 172b3-173a2
\textsuperscript{34} Tucci 1941: 16
\textsuperscript{35} Tucci. 1941:14
Buddhist canonical literature, the *Kagyu* and *Tangyur* scriptures. This classification system had previously been prepared by Bu-ston (1290-1363) prior to the construction of the place. Bu-ston is also author of the *‘Proportional Manual of the Stupa of Enlightenment’* which is contained in the *Tangyur*, which could well have been used as a model for the place.

In summary, the Kumbum is an architectural rendering of a compilation of known and approved Buddhist traditions of mid 15th century Tibet. Its architectural and iconographic form are based on a vast summa of scriptures which describe the various experiences able to rescue creatures from the domain of births and deaths and to raise them to higher planes of existence.

Interestingly the Kumbum form of the stupa had a relatively short period of popularity. It is first recorded in Tibet in the 12th century and culminated in the design of the Gyantse Kumbum in the mid 15th century. After the end of the 15th century this particular form of monumental stupa type was never built again in Tibet. The reason for its short lived popularity can be explained to some degree in the complexity of its architectural design and the expert skill required in the construction of this structural type. The design was unsuited to the local materials and vernacular building traditions. It also required vast resources and community co-operation to complete the building program. In the biography of the master builder, Thangtong

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36 Tibetan form *bKa‘-‘gyur (Kagyu)* and *bsTan-‘gyur (Tangyur)* Bu-ston (1290-1364) is primarily associated with the ordering of the Buddhist scriptures that were included in the *Kagyu* and wholly responsible for arrangement of the *Tangyur*, which includes all the available translations of commentaries, literature and discourses by Indian Buddhist scholars and yogins. Master copies were kept at *sNam-thang*, Snellgrove & Richardson 1995:170

37 Tucci.1941:15
Gyalpo, authored by Lo chen 'Gyur me bde chen, the difficulty of constructing Riwoche Stupa, (1449-1456) a similar design to the Kumbum, is described. The whole structure collapsed three times when construction had reached the bumpa level. This was due to the massive dead load of the solid green brick core and the inadequacy of the buttressing system.

It was an extraordinary task to incorporate 75 chapels, temples, corridors and stairways within the standard proportions and design of a stupa. This meant the design had to incorporate all the fundamental elements of the stupa as specified in the manuals such as the basement, throne, four steps, the dome, turret and spire. The achievement remains an architectural and structural engineering feat unparalleled in Tibet. Accordingly, the Kumbum of Gyantse is recognized as the pinnacle in the evolution of the 'many door stupa’ in Tibet.39

**Description Of The Tibetan ‘Many Door’ Stupa**

The following section examines the standard components of a Tibeto-Buddhist stupa, based on ancient architectural manuals, in relationship to the design of the Kumbum. The findings show how despite the Kumbum’s strikingly different appearance, the architectural design and structural elements still faithfully adhere to the basic elements and proportions of the ideal stupa model.

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38 Vitali 1990:123-128
Figure 21 Bu-ston’s proportions for the stupa of enlightenment (Dorjee)
According to the various architectural treatises the structural components of a stupa are made up of three main sections:

(1) The Basement or Lion Throne.
(2) The Intermediate Section.
(3) The Upper Section.

Each of the components and their various elements are symbolic and reference the fundamental teaching of Hinayana and Mahayana Buddhism. Therefore each element is critical to the design of a stupa. While the individual elements which make up each component are common to all architectural manuals, the measurements and proportions set out in the different manuals vary to some degree.

The Tibetan architectural manuals make no references to the dimensions of the base and stepped terraces as specified in the *Vimalosnisa*. It appears that modifications to the base of the stupa evolved over time in contrast to the design of the vase shaped dome which remained constant over many centuries.

Both Tucci and Lo Bue point out a two-fold symbolism in the Kumbum. The first aspect of the symbolism references the fundamental teachings of Hinayana and Mahayana Buddhism, corresponding to the fundamental symbolic value of *chos-sku*, as defined by the different elements and symbolic components that make up the ideal

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40 Dorjee 1996:61-70 the details given here are from Bu-ston’s manual, which were based on a commentary of the *Vimalosnisa*, both of which are included in the Tantric section of the Tangyur. The authorship of the *Vimalosnisa* is accredited to Sahajavilasa Dorjee 1996:8. Dorjee maintains that all eight basic types of Tibetan stupas are identical to the patterns found in the commentary on *Vimalosnisa*, excluding the modifications to base and steps. Dorjee 1996: 19 The structural elements are also identified in the *Vinaya Kadappukavatsa* included in the Kagyur. Lo Bue & Ricca 1993:34.

41 Dorjee 1996: 71 A table sets out the different proportions propounded by various Tibetan scholars showing differences in height and width to each component of the stupa.

42 Dorjee 1996:19

43 Lo Bue & Ricca 1990:98
stupa. All these symbolic components are incorporated within the design of the Kumbum despite the design showing certain unique characteristics, associated with multi-chapel stupas.

It is probable that adjustments to the design were made to the approved stupa proportions as a structural and construction expediency in the Kumbum. The constraints imposed by the materials, which in all multi-chapel stupas in Tibet were green handmade mud bricks, created a massive dead load weight on the foundations. Solving the problems of slippage was critical to the success of the design. In consequence, these stupas have a truncated appearance when compared with the ideal stupa shape.

The second aspect of the symbolism of the Kumbum is specifically Tantric. It relates to the saving role of all the teachings, set out through the visual aspect of the murals and statues. As the transition from Mahayana mysticism to esoteric Tantric liturgy\textsuperscript{44} in the symbolism of the Kumbum is not clearly defined by the architectural elements of the ideal stupa, a full explanation of this aspect of the structure is set out in Section 1.6 Religious Interpretation.

The architectural properties associated with Hinayana and Mahayana symbolic components relating to the ideal stupa and the Kumbum are discussed below.

\textsuperscript{44} Tucci 1941:170
The Foundation or Lion Throne\footnote{Architectural terms such as base, bumpa, harmika, done and the like are given lower capitals in the text. Specific symbolic components as referenced in architectural manuals are defined by Capital letters such as Throne and the like.}

The ‘Lion Throne’ \footnote{Tucci 1932:39 a description of the symbolism of the stupa. See also Snodgrass 1985, *The Symbolism of the Stupa*; and Dorjee 1996, *Stupa and Its Technology*, a translation into English of many Tibetan texts on the construction of the stupa.} is the lowest part of the structure and is sometimes referred to as the basement or plinth. In Tibet this section forms the foundation of the four stepped terraces. According to the architectural manuals\footnote{Bu-ston, *Byang chub chen po l mez hod rten gyi tshad bzhugs so* Collected Works of Bu-ston, vol PHA (14) Ed. by L. Chandra 1969 quoted in Dorjee 1996:13}, the ‘Throne’ is divided into two sections. The first section consists of three steps located at the base of the throne (See Fig 24). Technically, Tucci states that this element is called ‘the lunar
lotus’ because the moon becomes the lotus of Vajradhara symbolizing the fusion of two elements, beatitude and insubstantiality. The second section is the throne itself, which symbolises the imperturbabilities of Buddha. The shape of the ‘Throne’ is always the same as the shape of the next structural section known as the Steps (or Terraces). In the Kumbum the ‘Throne’ is made up of five rebated sides to each facade.

The ‘Throne’ section is often decorated with animal symbols and the eight auspicious symbols as set out in Hinayana and Mahayana Buddhism. In later Mahayana and Tantric Buddhism, the association of animals provided additional symbolism with the Cosmic Buddhas.

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48 Tucci 1941: 170
49 Ibid.
50 Tucci 1932:50 and Tucci 1941:171. In the case of the Kumbum, these are represented by the symbols of the five Buddhas of the supreme pentad. These are the lion (Vairocana) symbol of imperturbability, the elephant (Aksobhya) symbol of the ten mystic forces, the horse (Ratnasambhava) symbol of psychic powers, the peacock (Amitabha) symbol of the ten dominant capacities and the eagle (Ameoaghasiddhi) symbol of the forces of non-attachment to anything. Sometimes illustrations of the garuda are present. For an explanation of the five Dhyani Buddhas and the five Wisdoms see Foundations of Tibetan Mysticism by Lama Anagarika Govinda 1960 p.108
Figure 24 The three steps to the base are clearly shown at the lower centre of the photograph. The central portion of the cornice is decorated with auspicious signs (M. Jean)

The foundation plinth supports the whole of the Kumbum, referred to as the ‘Lion Throne’, complete with three base steps. The upper wall of the throne is decorated with a cornice, designed in the form of a parapet wall. This is made up of a double lesser border, which projects beyond the face of the wall and is supported by projecting floor rafters on which rests a lintel that provides support for another deeper border above. This in turn is capped by a projecting roof on top of which rests a smaller parapet wall. The design of the cornice is based on traditional vernacular Tibetan building techniques.51

51 Tucci 1941 b: 82 and cited in Lo Bue & Ricca 1990:78 and Ricca & Lo Bue 1993:42
Figure 25 Showing the traditional style cornice and parapet design of the Kumbum and the adjacent wall of the main temple at Gyantse (M. Jean)

The Intermediate Section

The main structure of the ideal stupa is divided into two sections. The first part is called the Intermediate Section and the second part, the Upper Section.

The Intermediate Section comprises six symbolic components. All six elements are identifiable in the architectural layout of the Kumbum.\(^\text{52}\) The first symbolic structure is the ‘Base of Ten Virtues’. This element corresponds to the base plinth on the first terrace level (See Fig. 24 showing the base plinth on the first terrace level). The second symbolic structure is the stepped terrace section called the ‘Four Steps’.\(^\text{53}\)

\(^{52}\) Tucci 1932: 39 The symbolism of the stupa is outlined
\(^{53}\) The first terrace floor symbolizes the four coefficients of awareness. The second floor signifies the four renunciations. The third floor symbolises the four coefficients of miraculous powers. The fourth floor symbolizes the five faculties
The third symbolic structure of the Kumbum is called 'The Vase Base', clearly defined by three low steps at the base of the bumpa. This element signifies the five corresponding powers to the five faculties of the fourth floor. The fourth symbolic structure is the 'Vase', known as the bumpa, and represents the seven concurrences of illumination. The bumpa supports the 'Harmika', which also has three low steps, called the 'Harmika Base', regarded as the fifth symbolic structure. The sixth symbolic structure is the 'Harmika', which symbolises the eightfold path.

In the Kumbum, the 'Harmika' is divided into two levels. These levels are clearly differentiated from each other by the architectural design. The flat skillion roof of the first level separates the upper section which is designed as a lotus flower and forms the base to the tower (Figure 27). The first level of the 'Harmika' is included within the six symbolic components of the Intermediate Section while the upper section belongs to the next symbolic section of the ideal stupa known as the Upper Section.55

54 Harmika is sometimes called the pentola or anda.
55 Dr. Lokesh Chandra explains the relationship of the stupa and the mandala on Sumeru, Mt. Meru in the introduction to the Indico-Tibetica Vol 1, Tucci 1932:xvii edited by Chandra 1988.
The Upper Section

The top section of the stupa is called the Upper Section or the ‘upper extremity’ and comprises all structural elements above the ‘Harmika’, from the ‘Lotus Supporting Umbrella’ to the ‘Spherical Pinnacles’. The upper level of the ‘Harmika’ in the Kumbum is designed as an open lotus flower and is associated with the ‘Lotus Supporting Umbrella’. On this rests a tier of thirteen wheels or disks, which taper in height to form a tower or spire. Incorporated within the spire is an octagonal pavilion, the last chapel within the Kumbum.

Figure 27 Showing the Lotus Supporting Umbrella, the upper level of the Harmika designed in the shape of a lotus, the thirteen wheels of the spire, the Formula of Compassion and Cover to the Umbrella and finally the Spherical Pinnacles (M. Jean)

56 Dorjee 1996:64
An axis pole, which rests on the fourth terrace level, rises through the centre of the tower to support the moon and sun disk high above the Kumbum. The solid square central core of the structure encloses the axial pole in the two levels of the ‘Harmika’. But by the final level of the octagonal pavilion, just the square profile of the timber axis pole is visible. According to Tucci, the first ten rings of the tower symbolize the ten powers of the Tathagata and the last three rings symbolize the supports of the absolute awareness, which characterizes the Tathagata.\(^{57}\) The axial pole symbolises the ten types of knowledge.\(^{58}\)

A structure known as the ‘Formula of Compassion’ rests on the thirteenth and final disc of the spire. It is shaped in the form of a lotus inscribed offering cup similar to those containing oblation water placed before the images of deities in chapels. A small secret upper section to the octagonal pavilion is located within this structure. The area is hidden from view, covered by the ‘Cover of the Umbrella.’ The umbrella is constructed out of perforated metal. The ‘Umbrella’ symbolizes the great mercy of the Buddha.\(^{59}\)

A crescent Moon and full Sun rest on top of the ‘Umbrella’ and support the ‘Spherical Pinnacle’, which is made up of a small vase shaped structure topped by a double spherical vase, or \textit{amalaka-kalasa}.\(^{60}\)

\(^{57}\) Lo Bue & Ricca 1990: 99  
\(^{58}\) Tucci 1932:42  
\(^{59}\) Tucci 1932:43  
\(^{60}\) Dorjee 1996: 65
Description of the External Layout

The stupa is set out on a north-south axis, laid out in the shape of a quadrilateral of about 44 metres in width.\textsuperscript{51} There are twenty staggered sides consisting of five stepped facades to each elevation, which provide the facades for the twenty chapels on each terrace level. Tucci records the diameter of the building as 216 cubits\textsuperscript{62} in traditional measurement, that is 108 cubits on either side of the central point. The structure is oriented towards the four points of the compass. The site slopes slightly having a fall of about 1.5 metres, the highest point being in the north east corner, where a rocky outcrop causes the chapel above on the first level to have several access steps.

\begin{figure}
\centering
\includegraphics[width=0.5\textwidth]{kumbum.png}
\caption{North elevation of the Kumbum showing the north exit door (M. Jean)}
\end{figure}

\textsuperscript{51} Measurements scaled off the scaled plans prepared by Simone Ricca, Ricca & Lo Bue 1993:41
\textsuperscript{62} Tucci 1941:170 A cubit is equivalent to the length of a forearm or the length of four fingers.
The stupa is built of green mud bricks with massive adobe walls. There are three steps to the base course, which varies in height from 2.15m to 0.70m. The presence of a solid basement is a common feature in Tibetan stupas. The base of the Kumbum has no internal access and is used as a solid foundation built in the shape of the four terraces, which it supports above. Each of the four terraces gradually recedes in size, allowing the external facades to similarly recede back to the central solid core.

Figure 29 Cross section showing each level of the Kumbum (drawn by S. Ricca)

The roof of the terrace below provides a generous external walkway around the exterior of the structure and gives access to the chapels on the next level. Elaborate cornices provide a solid external balustrade to the walkways encircling the five floors of the four terraces and the circular bumpa level. This provides a protected circumambulation passage to the devotee. Each of the twenty sides of the terraces has twenty external doors, or false doors or windows, one to each face of the terrace.
The bumpa has a diameter of 20 metres and is 6 metres high and terminates in a circular slightly sloping roof with projecting eaves supported by five brackets in the Chinese Song or Ming dynasty style. There are four major temples in the bumpa, facing each of the four directions. Each has a large double timber doors, framed by large toranas in high relief.

Figure 30 Showing the bumpa roof and lower harmika roofs supported by Ming style bracket system. The torana outlines each of the central doors to the bumpa temples (M. Jean)

The sixth level of the harmika is accessed internally and has four large windows set centrally in each elevation. The windows act like doors and open out onto the unprotected roof of the bumpa, which is currently used as an external walkway. The upper level of the harmika has four windows similar to the level below, although in this case the windows are not so obvious, being part of the lotus base of the pinnacle or spire. The upper level of the harmika has a small skillion roof similarly using the five bracket roofing system of the Chinese Song or Ming architectural style. On this
rests the lotus base to the spire made up of thirteen gilded copper rings. The roof of the lotus base is also in the Chinese timber bracket style roof.

The huge copper parasol or umbrella sits on top of the spire, supported by concentric rows of 8 pillars, two on either side of the centre of each elevation. The central axis pole extends above the structure to support the topmost gilded pinnacle, which is made up of the spherical pinnacle, sun and moon symbols resting on the cover of the parasol. This in turns covers a second lotus base, located above the octagonal pavilion. The gilded pinnacle above the top of the parasol consists of a vase and double spherical structure. The whole of the upper roof structure is Chinese influenced in style and construction.

Figure 31 Elevation of the upper section of the Kumbum (drawn by S. Ricca)
A Comparative Analysis Of The Kumbum, Gyantse, Tibet And Borobudur In Java, Indonesia

According to Tibetan architectural manuals on stupa of the ‘multiple auspicious doors,’ also called the stupa of ‘divine wisdom,’ there should be a range of either 16 to a maximum of 108 doors or niches around the structure with an intermediate number of 56 niches. Multiples of 8, 12 and 16 doors on each elevation are also permitted, each number symbolizing a quality of Mahayana Buddhism. There are 80 doors on the first four terrace levels, including several false doors and clerestory windows. However, this excludes the main front: south entrance through the plinth and the rear exit north east side door, the small window situated high on the bumpa wall, which provides light for the internal stairway and the openings of the uppermost chapel under the umbrella. Each of the four stepped terraces and bumpa level are divided into a number of different chapels:

| Step/Floor One- 4 major temples and 16 minor chapels | 20 |
| Step/Floor Two- 16 minor chapels | 16 |
| Step/Floor Three- 4 major temples and 16 minor chapels | 20 |
| Step/Floor Four- 12 chapels | 12 |
| Vase or circular Bumpa/ Floor Five - 4 major temples constructed in the round | 4 |

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| Total number of chapels is | 72 |

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Harmika Base/Floor Six & Seven- is square in shape, comprises two levels of internal square access corridors or spaces with timber access stairs. | 2 |
Upper octagonal pavilion temple/chapel, level eight. | 1 |
Above the pavilion is a small loft area, level nine. | 1 |

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| Total number of shrine or mural spaces is | 76 |

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"Dorje 1996: 52
"Tucci did not make reference to this area in Inda-Tibetica. It is usually locked and not available to visitor, but during my visit I was permitted to climb up to this level. The area is also recorded by Lo Bue & Ricca 1990 and Ricca & Lo Bue 1993.
Detailed Description of the Internal Layout

The following three sections, describing the physical layout, structure and decorative detailing, are largely based on my own fieldwork.

First / Second Floor Chapels

The main entrance to the first level of the Kumbum is from the south by a short steep flight of stone stairs. These lead to a double pair of solid timber doors and landing protected by a typical Tibetan style cantilevered porch with decorative banners.

Figure 32 Southern front entrance to the Kumbum Gyantse (M. Jean)

The landing gives access to a second flight of stairs to the first level of the terrace.

The landing and stairs take up almost the whole width of the plinth. The double
doors support the cornice and balustrade of the first terrace level above, thereby maintaining the symmetry of the plan design. A secondary entrance located in the north east at the lowest height of the plinth was originally used as an exit allowing only a half a dozen or so shallow steps onto the first terrace (See Figure 28).

Directly in front of the southern main entrance stairway is the first of the four large two-storey temples, centrally located on the first level of the terrace. Likewise in each of the four directions, a two-storey temple is centrally placed in the widest face of the elevation. The ceiling of temple forms the floor to the external access corridor on the third terrace.

These four main temples are divided into two sections. The first section is single storey and forms the roof of the external corridor on the second terrace above. While the inner smaller space is two-storey in height, top lit by small clerestory windows built into the exterior wall of the terrace above. When seen from a distance the row of windows appear like a door in the façade, thereby maintaining the symmetry of the design. The inner double storey section contains the altar and massive statues, which extend the full height of the second terrace level. There is no access into the temples from the second floor.

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65 Tucci. 1941:172
On either side of these two important temples are two smaller temples flanking one another. There are also two smaller temples on the second floor, one on each side of the central temple. The external corridors on the first floor extend from the first floor chapels and lead to a small gateway. The first floor has a height of 10 feet above the entrance of the gateway.

There are twenty external doors on the first floor and sixteen doors and four clerestory windows on the second floor. The height of the first terrace is eight feet and has the aforementioned 10 feet gate.

There are four groups of four external doors on each floor, one on each side of the central temple. The right difference in layers of the temple due to the rise of the two terraces below. The symmetry of the second floor is mirrored on the first floor, with the external doors and clerestory windows on the third floor making their counterparts on the fourth floor.

**Figure 33 & 34** First & second Floor plans of the Kumbum showing the chapels and temples (Ricca)
On either side of these four major temples are two associated smaller flanking chapels. They form a cluster of four small chapels along each diagonal between the four central temples located in each cardinal direction. The outer second chapel of one elevation seems to overlap the corner of the outer second chapel of the other elevation on each of the main four diagonals. This provides a solid square in each external corner of the main building. This acts most possibly as a structural post support. The smaller flanking chapels totalling sixteen chapels on both the first floor and second floor. On each terrace level the chapel sited on the east and south diagonal is designed as a vestibule. The entrance to the vestibule is a gateway that leads to a small timber staircase providing access to the floor above. The height of the first terrace floor is eight cubits and has a circumference of 354 cubits.\(^6\) There are twenty external doors on the first floor and sixteen doors and four clerestory windows on the second floor.

**The Temples and Chapels on the Third to Fifth Levels**

The plan of the third floor of the Kumbum is very similar to the two terraces below. There are four groups of four smaller single-storey chapels arranged around each diagonal set between four central two-storey directional temples, numbering altogether 16 minor single-storey chapels and four two-storey temples. The slight difference in layout on the third floor is due to the fact that the two storey temples rise infront of the single-storey chapels on the fourth terrace floor above. The symmetry of the whole design of the Kumbum is retained as the upper clerestory windows of the third floor temples are designed to look like doors on the fourth level.

\(^6\) Tucci 1941:172
There are twelve single-storey chapels on the fourth floor. These are unusually long in width, but shallow in depth. The chapels on the diagonal are almost triangular in shape, creating a simple cross shape to the base of the circular bumpa above. Blind
doors have been built into one of the external facades of the triangular chapels to maintain the sequence of doors around the exterior. Again the eastern diagonal chapel on the southern end forms an entrance gateway to the bumpa above. The height of the floor to ceiling level is seven cubits and the perimeter is 262 cubits. There are twenty doors on the third floor and sixteen doors on the fourth floor, of which four are blind doors.

The Bumpa And The Harmika

The bumpa has been designed and constructed as a solid circular structure out of which are carved four large temples. The diagonal spaces are solid except for the south eastern access stairway and vestibule, which leads from the interior chapel on the fourth floor below to the interior of the southern temple. The stairway vestibule has no external access. The exterior circular walkway is built on the roof of the chapels below and is similarly protected by a high parapet balustrade. All the four temples have large and elaborately decorated toranas in high relief around the doorways. Access to the upper level is provided by a small timber stairway built behind the large statue of Vairocana in the eastern temple. Tucci points out that the plan of the structure and reading of the inscriptions starts from the eastern side of the bumpa.67

The rectangular shaped harmika on the floor above the bumpa is considerably smaller in scale and rests on three base steps of the circular flat roof of the bumpa. The regular spaced timber rafters of the exposed eaves project generously out past the lower circular walls of the bumpa. The shape of the harmika is designed like a

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67 Tucci 1941: 173 see also Lo Bue & Ricca 1990:96-97 for a further explanation about the order to which the chapels should be visited
twelve-sided rectangle. The central face only slightly projects forward to form a low relief shaped cross. The interior space forms a square corridor turret on two levels, which encases the central axis pole or core of the building. There are four timber windows deeply set into the thick outer walls of the lower level of the harmika, through which it is possible to walk outside onto the sloping roof of the bumpa. A further four windows are located in the lotus base of the spire, just beneath the skirt of the first wheel of the umbrella, one in each cardinal direction.

Figure 37 Bumpa plan of the Kumbum (Ricca)

Access to the upper level of the harmika is by a narrow straight timber staircase, located on the western side. The upper level corridor of the turret is wider than the one below as the central core tapers upwards. A small timber ladder gives access on the south-western side to the octagonal pavilion like temple above. The shape of the bumpa and harmika is Nepalese in style with four eyes painted on the exterior upper façade, although all the structural timberwork and roofing is Chinese in style.
The Octagonal Chapel

A large lotus structure rests on the roof of the harmika, out of which rises the thirteen wheels of the tapering spire terminating in another lotus bulb often called the ‘Formula of Compassion.’ the lotus bulb is hidden from view, covered by the skirt of the parasol. Surmounted on top of the spire, the parasol is supported by eight concentric timber posts. The spire on which hangs the thirteen copper rings is made up of a series of beams set at 45 degree angles, gradually tapering in size to form an octagonal prism in the Chinese style.  

68 The first ring of posts supporting the parasol rises externally from the seventh copper ring, and rests on the octagonal structure below. The second ring of posts rests on the lower wall of the lotus bulb, in which there is a small pavilion-like octagonal chapel.

Figure 38 Plan of the harmika levels and the octagonal chapel (Ricca)

Above this chapel is a small room, accessed by a narrow ladder. The room is naturally lit through the skirt of the parasol. The large circular umbrella, equal in width to the fourth copper ring, has a massive circular geometrically patterned skirt

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68 Lo Bue & Ricca 1990: 79
with vajra fringe at the bottom and top of the structure. It is constructed out of perforated metal. A gilded pinnacle adorns the top of the building made up a gilded vase and a double spherical pinnacle, known as *amalaka-kalasa*.

1.3 STRUCTURE AND CONSTRUCTION TECHNIQUES

The Kumbum is constructed in the traditional Tibetan building style. It is designed so that the solid mass of the central core of the structure progressively leans inwards decreasing in size as the height increases to its full 35m. The outer load bearing walls of green handmade mud bricks lean inwards supported by the central core of the structure. Wooden floor joists embedded in the masonry central core on one side and the outer periphery walls on the other, support the ceilings, floors and terraces on each level. This is a typical Tibetan building detail which anchors the timber joists both vertically and laterally. Only relatively modest size timber joists are necessary as the chapels are surprisingly narrow. Timber columns are only found in the double storey main temples. The variations in the depth of the chapels from the first to the fourth terrace levels are caused by the diminishing thickness of the inner core of the building (See Figure 25).

The floor joists support narrow butt jointed timber floorboards. A layer of small flat stones have been laid over the boards and covered by a mix of earth and compressed rubble to form the interior and exterior flooring. This method of using compacted earth and rubble in construction is also used for the skillion roofs of the Kumbum. The construction method is referred to as pise style. The timber floor joists extend right through the outer walls where the exposed ends are covered by a stone lintel,
which supports the projecting adobe cornices above. The cornice forms the balustrade to the open terraces above. The balustrade, which is about 1.5m high, is made up of a series of stepped cornices, each projecting out over the other (See Figure 22). The whole structural element is held in place by the counter weight of an additional small abode parapet recessed back from the outer edge of the last cornice.

The massive multi-layered cornice is a traditional Tibetan devise evolved from the practise of storing winter fodder in stacked rows on the edge of the roof's perimeter. Bundles of willow branches stored for winter fuel were all built up in layers and held in place by stones, straw and mud render, which formed a parapet on top of the flat roofs. In Tibetan buildings the depth of the willow sticks are traditionally expressed as a deep red painted border just beneath the parapet capping. This feature can be seen around the walls of monasteries and wealthy residences.  

Figure 39 Showing the traditional style cornice and parapet design of the Kumbum and the adjacent wall of the main temple at Gyantse (M. Jean)

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69 Paul Murdock, 'Vernacular House form in Ladakh', chapter included in 'Man and His House in the Himalayas' edited by Gerard Toffin 1991:236
The whole roof structure of the Kumbum combines Tibetan vernacular building methods with traditional Chinese timber bracket system and octagonal pagoda construction methods. For example the roof of the bumpa and harmika is a blend of pise roof structure supported by five timber-bracketed corbels, a typical detail found in early Yuan and Ming buildings. Again there is a mixture of Tibetan and Chinese timber framing techniques used in the internal construction of the octagonal temple. Here the main roof is Tibetan in style and is supported by four timber columns which support several layers of short horizontal brackets or joists. The main ceiling joists are supported by these short brackets, a common type of construction used in Tibet to increase the height of the ceiling. However, the outer concentric rows of eight posts,
which support the parasol above the octagonal temple, are differently designed and show Chinese influence. The timber roof is a complex form of construction associated with circular roofs. The posts are connected both diagonal to the central core and laterally to the other posts arranged around the perimeter of the structure.

Chinese influence is also visible in the construction of the spire rising above the harmika. The spire is constructed out of a series of giant timber beams set at a 45 degree angle to form an octagon that gradually steps inwards and upwards to form a prism. The exterior is covered in large gilded copper rings of about 400mm in width. To accommodate this blend of both Tibetan and Chinese building techniques, the timber members are differently profiled to those traditionally found in Chinese construction. This is due to the fact that the timber members are resisting tension and compressive forces rather than bending or fulcrum forces, as they would be in a Chinese timber structure.\textsuperscript{70} The axial pole, which rises through the centre of the Kumbum, appears to be non-structural.

Rainwater and melting snow is drained from each external walkway by rainwater gully traps or discharge openings. These are located in the inner areas on either side of the diagonal corners of the terraces. Rainwater is collected in large rain hoods and circular down pipes and discharged onto the floor below from where it drains to the next floor below.

\textsuperscript{70} Singer & Denwood 1997:225
Figure 41 The Datayuan stupa (7.5 metres high) Wutai Mountain, Shanxi Province, China, built in 1407 in the fifth year of the reign of the Ming Emperor Yongle.

Figure 42 The Datayuan stupa is similar to the Miaoing stupa in Beijing, built in 1271, designed by the Nepalese architect/painter, Anige (1245-1306) (Liu)
1.4 DECORATIVE STYLES, SCULPTURE, ART WORKS AND ARCHITECTURAL DETAILS.

Exterior Detailing

The green mud bricks of the Kumbum are finished externally with a thick layer of render, which is regularly lime washed. The exterior decorative detailing is limited to the projecting cornices on each level of the terraces and the timberwork on the upper section.

Figure 43 Showing decorative paintwork on the external cornices (M. Jean)

In typical vernacular Tibetan style, each cornice and parapet is painted creating a strong horizontal rhythmical pattern on the building. The motifs used to decorate the cornice are similar to those found in the outer concentric circles of a mandala.\(^7\) The decorative detail of the parapet to the basement level is different from those of the

\(^7\) Leidy & Thurman 1997: 152
terrace above. The main section of the cornice is painted a dark blue on which light blue swirling clouds interspersed with lotus flowers and other auspicious symbols are painted at regular intervals in typical Southern Central Tibetan style. The border beneath is decorated by a continuous row of Sanskrit seed-syllables. In contrast, the upper terrace parapet walls are white, decorated with lozenge shaped circular motifs and flaring double vajra symbols. This design may represent the outer circle of a mandala containing the interlocking fence of golden vajras, symbolizing the space element. The border beneath is decorated with beautifully written Sanskrit seed-syllables painted in gold on a blue background. The lower and upper borders of the cornice are painted in rich terracotta.

![Figure 44 Detail showing the patterning created by the cornices (M. Jean)](image)

The main body of wall beneath the cornice on each of the four terraces is lime washed white. The space is broken up by the series of small timber doors to each chapel which, including the door linings, frames, weather stoppers and thresholds, are all painted a light Umbrian brown.
The walls of the bumpa section are also lime washed white. The elaborate bas-relief toranas that outline each of the four main doors to the temples form major decorative elements at this level. Here, the doors and frames are painted blue. All the timberwork within the Kumbum is painted. The bracket system of the pise skillion roof is painted in alternating shades of blue and green. The upper section of the harmika wall beneath the skillion roof is treated like a cornice and decorated with a border of Sanskrit seed syllables. Above this on each of the four elevations large Nepalese style eyes with a central dot placed between the brows are painted.

The skillion roof above is supported by colourfully painted five timber bracket rafters in the Chinese style, which project beyond a painted upper border. (Each of the large carved timber petals of the double lotus located above the harmika roof are painted in blue or green and outlined in gold. The eight timber posts that support the gilded copper parasol are painted red with dark blue bases.

Internally, the structural timberwork in the upper levels of the Kumbum is also painted. The circular timber columns are painted red. The brackets to the posts are highly modelled and decorated with white scrolls outlined in red against a blue background. The timber ceilings of the lower terrace chapels were once painted too, although the original paint appears to have long since faded. The whole of the thirteen gilded wheels to the spire, the parasol and pinnacle are all gilded copper.
Figure 45 Showing internal paint work on the structural timber (M. Jean)

**Interior Decorations**

The small chapels on the four terrace levels are very dark as the small external doors are the only source of natural light. The murals are only visible by torchlight. Each chapel is dedicated to a specific deity and the associated Tantric cycle. Large sculptures of the divinities, usually flanked by associated acolytes, are placed on an altar at one end of chapel. Beautiful frescoes are painted on every wall of the chapel surrounding the altar. Bu-ston’s summae of mandalas of the Tantric cycles compiled in the *Kagyur* and *Tangyur* was used as the guide to the layout of the murals in the Kumbum.\(^2\) The entire artwork strictly conforms to Bu-ston’s classification system, including the number of divinities that make up each mandala, their precise colours,

\(^2\) Tucci 1941: 14
attributes, associated deities and heavens.\textsuperscript{73} The structure of Kumbum, which literally means 'one hundred thousand images', is the visible synthesis of this liturgy, just as the text is the verbal expression. All the work on the design, construction and layout of the murals was carried out under the guidance of Rab-btian Kun-bzang, under the doctrinal control of Rinchen Peldrub (1403-52), the abbot of Nenyung.

According to the historic guide of the Kumbum,\textsuperscript{74} there are over 27,529 images of deities painted within the murals of the Kumbum. The illustrations show the deities conceived as belonging to specific mandalas or in some cases stupas. The deities are usually framed by their various aureoles. These can be double overlapping circles, flaming aureoles, rainbow coloured haloes or trilobate arches rising either from pillars or vases.\textsuperscript{75}

There are a huge number of different thrones illustrated within the chapels. The thrones are protected by canopies of different designs, which are supported by posts of many styles. Sometimes the multi-coloured lotus thrones are domed by many stupas. Posts of elephants, lions or bulls, geese, tortoises, phoenixes or red crested cranes support other elaborate thrones. Other strange mythical creatures such as garudas and makaras are sometimes incorporated into the ensemble of throne and canopy. The architectural elements of the canopies or niches are Indian in origin and are characteristic of Newar temple architecture.\textsuperscript{76}

\textsuperscript{73} Ibid. p.15
\textsuperscript{74} Tucci 1941: 14 & 172.
\textsuperscript{75} Site survey 1998.
\textsuperscript{76} Lo Bue & Ricca 1990:31 see also F. Ricca, 'Stylistic features of the Pelkhor Chode at Gyantse,' Singer and P. Denwood 1997: 202
Figure 46 Mural of Mahavairocana found in the East Temple on the third level of the Kumbum. The chapel is devoted to the Cosmic Buddha Aksobhya. Most of the statues and murals are devoted to the Vajradhatumandala. Here Mahavairocana displays the bodhyagrimudra and is flanked by Vajrasattva and Vajradharma. The mural depicts the central mandala (Tathagata Family) of the Vajradhatumandala taken from the Vajrasekha of the Tattvasamgraha. (Ricca)
The main divinity is usually surrounded by an assembly of minor deities, often placed in elaborate architectural celestial palaces of the various heavens. These are architectural depictions of mandalas often designed as multi-storeyed Indian temples. Intricate designs of the heavens are illustrated against a background setting of landscape and buildings. Portraits of the donors of the chapels are sometimes beautifully illustrated and arranged around the major deities.\(^7\)

Figure 47 Sadbhujamarici found in Chapel 1 on the South side of the Kumbum. The chapel is devoted to Marici, the statue of Marici is within a stupa pulled by seven boars. The chapel is located on the right side of the main temple devoted to Sakyamuni Buddha at the entrance of the Kumbum on the first level. (Ricea)

\(^7\) Site survey 1998.
The entire background wall to every picture is covered with intricate details. The background motifs range from stylised cloud formations, swirling flames or tentacles of meandering fern leaves and ivy, or gardens of beautiful flowers such as daisies, peony roses and lilies. There are illustrations of lakes filled with lotus flowers and ducks set in a landscape of mountains and palaces. The degree of detail in the murals astonishes, as patterns and lustre of exquisite textiles, clothes, headdress and furniture is carefully shown.

Figure 48 Scene from the Manjusriivihara in the North Temple on the first level devoted to the Buddha of the Past, Dipankara (Ricca)
In a similar fashion to the decoration on the exterior of the Kumbum, the cornices of the interior walls of the chapels are decorated with motifs that reference the symbolism of a mandala such as the elements of Space, Fire, Water and Earth. These decorative details change as the levels of the Kumbum are ascended in similar fashion to the increasing richness of detail metaphysically representing the transition to more important locations of the mandala as for example with respect to the outer symbolic rings of the Kalacakra sand mandala. The cornice in the chapels on the lower terrace levels are decorated with a row of semi circular loops of pearl necklaces gathered up into bows and dripping with jewels, set beneath a border of Sanskrit seed-syllables. Above this lower border, the upper wall is painted with white clouds floating in a blue sky.

In contrast, on the upper floors of the Kumbum, the cornice details change to incorporate borders illustrated as offering gardens full of flowers, others show symbolic down spouts, which release rainwater from the palace roof. In other cases, cornices are painted with multi-layers of hanging garlands of white pearls in triplet form surrounded with eight auspicious signs. Then there are bands of geometric shapes symbolizing the six elements, and others where half vajras with half moons adorned by jewels are depicted.

In the lower levels of the four terrace chapels the ceilings are not lavishly decorated, being made up of exposed painted timber joists and timber lining boards. In contrast, the temples and the upper levels of the Kumbum have plastered and rendered ceilings, which are painted with a variety of mandalas.

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78 Leidy & Thurman 1997:153 and see Ricca & Lo Bue 1993:61
Figure 49 Chart of the elements in a Kalacakra sand mandala (Leidy and Thurman)

25 = the Wisdom element, 24 = Space element, 23 = Sanskrit seed syllables, 22 = Wheel of Dharma, 20-21 = the Cemetery ground representing the Fire and Wind elements, 18 = the Water element, 17 = the Earth element, 16 = Offering garden, 15 = Western Gate 13 = Half lotus petal design. 12 = Downspouts, 11 = hanging garlands of white pearls, 10 = double vajras, 9 = thirty six offering goddesses, 8 = geometric shapes representing the six elements, 7 = half vajras and half moons.

The Kumbum is an invaluable source of information to the study of both Buddhist iconography and Tibetan art. The frescoes in the chapels provide the totality of images in the Buddhist pantheon, a visual summa of the Tantric experience. Each chapel contains detailed inscriptions describing the murals and the associated religious texts. Often the inscriptions are placed near the entrance door or at mid wall height but sometimes they are found in the body of the works attached to each figure, clearly identifying the deity or yogin in the mural.

79 Lo Bue & Ricca 1990:103 and Tucci 1941:15
The translation of the entire inscriptions in each chapel is recorded in Tucci’s *Indo-Tibetica* series. The inscriptions include in many cases quotations from Bu-ston’s work, and include the names of the deities to whom the chapels are dedicated, a summary of the frescoes and tradition from which the painters were inspired. Tucci has also translated the names of donors and a list of the painters and sculptors from each chapel. The inscriptions have become an invaluable iconographic guide and important historical record. From this list of artists it has been possible for scholars to build up a picture of the styles of different schools and masters in 15th century Tibet. According to Franco Ricca, there were 29 master painters, accompanied by their disciples and assistants, who worked over fifteen years on the monument. Twelve painters came from the Lhatse region, seven from Nenyin and others from around Tsang, Nyemo and Jonang. The list of donors provides evidence of the breadth of public support for the construction of the Kumbum. It includes the king, high civil and military dignitaries and inhabitants of entire villages in the locality.

The architecture and frescoes of the Kumbum show outside influence from a variety of sources, including India, Nepal, China and Central Asia, as well as local Tibetan styles and vernacular traditions. The style of painting often relates to the source of the image in the chapels. For example the image of Vaisravana, the Guardian King of the North and his retinue of eight Masters of the Horses and four Guardian Kings, originate from Central Asia and are therefore found painted in the Chinese tradition of the Tang style. Historically and geographically the major influences are derived from the Newar and Chinese styles, which are integrated into the building design and

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80 Rinpoche Bu-ston lived between 1290-1364  
81 Tucci *op. cit* The information is all provided in the *Indo-Tibetica* series  
82 The work has been expanded by Lo Bue & Ricca and others such as Pratapadiya Pal  
83 F. Ricca, ‘Stylistic features of the Pelkhor Chode at Gyantse,’ Singer and P. Denwood 1997: 196  
84 Ibid. 1997:198
art. The presence of Chinese stylistic elements in the architectural design, construction details and decorative work, in the Kumbum is due to the close association of the Tibetan religious teachers with the Yuan and Ming court.\textsuperscript{85} The entire work still remains essentially Tibetan in inspiration and interpretation.\textsuperscript{86}

\textsuperscript{85} The phase of cultural and artistic exchange between Tibet and China occurred during the early Ming period, during the reign of the Yongle Emperor (1403-1424). This was overlaid upon a pre-Pal and Newar framework of the Tibetan artistic tradition. Ricca & Lo Bue 1993: 56.

\textsuperscript{86} Ricca suggests that in some cases it was the Tibetans who influenced the Chinese and not the other way around. Ricca & Lo Bue 1993: 56.
Figure 50 Vaisravana, one of the Guardian Kings, in the East Chapel on the first level. Tucci regards this mural as one of the finest in the Kumbum the wall inscriptions refers explicitly to the Chinese style of the painting. (Ricca)

2.5 RELIGIOUS INTERPRETATION AND SYMBOLISM.

In the *Indo-Tibetica* series, Tucci writes that the primary focus in the design of Tibetan religious buildings, including stupas, was not aesthetics but the creation of an ideal universe.\(^{88}\) The buildings make concrete 'the Infinite' in the form of a monumental three dimensional mandala, composed of numerous other mandalas in which particular systems of mysticism are expressed. As Tucci explains 'These systems teach how the universe evolves and also how it again dissolves itself into the primogenious essence'.\(^{89}\)

The inscription in the 8\(^{th}\) Chapel on the fourth floor of the Kumbum confirms Tucci's views.\(^{90}\) In the chapel devoted to the great Indian masters and Tibetan translators appears the following text:

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In the middle of the great monastery of dPal-'khor chos-sde, in the divine territory of rGyal-mkhar-rtse, which was the abode of the king dPal-khor-htsan ... the great stupa of the dharmakaya (chos-sku') of the Sugatas which releases by sight alone...\(^{91}\)
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Lo Bue believes this text sums up the twofold significance of the Kumbum. Firstly, it has a symbolic role as a physical representation of the *dharmakaya*, the essence of all Buddhas.\(^{92}\) Secondly, it has a saving role, achieved by the visual synthesis of all the practises offered by the Tantric cycles.

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\(^{88}\) Tucci 1941:10-12 regarding the correlation of the stupa with a mandala on Mt. Meru, see also Chandra in the introduction to the *Stupa*, Tucci 1932: xxii, citing Fussman.

\(^{89}\) Tucci 1941:12

\(^{90}\) Lo Bue & Ricca 1990: 97 quoting an inscription translated by Tucci

\(^{91}\) Ibid.

\(^{92}\) Lo Bue & Ricca 1990: 98
There are eight different types of Tibetan stupas. Each type represents an aspect of the different systems of mysticism. According to the *Tangyur*, each of these stupas is dedicated to one or other of the following deities: Vimalosnisa, Manjunatha, Sakyamuni, Avalokitesvara and Vajrapani. The Kumbum is associated with Manjushri or Manjunatha in the role of teaching. However it is apparent that the symbolism expressed by the design of the Kumbum is more encompassing than that commonly conferred on the eight different types of Tibetan stupas.

In studies on the development of the stupa, Mortari-Vegara and Beguin suggest that the design of the Gyantse Kumbum was based on the culmination of 200 years of evolution of the Tibetan type, known as *bKra-shis sgo-mang mchod-rten*, (multi-chapel form) of the many door stupa. The stupa is also known as the stupa of ‘Divine Wisdom.’ Essentially, this particular type of stupa celebrates ‘preaching’ representing the fundamental meaning of the *dharma*.* It is possible that the origin of the multi-chapel form of stupa dates from the introduction of new doctrinal practises in Mahayana Buddhism in the early 7th and 8th centuries.

Because the Kumbum incorporates Hinayana as well as Mahayana Buddhist doctrinal concepts with a major emphasis on Tantric Buddhism, each of these three are analysed separately in the following three sections.

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93 Tucci 1932:50 footnote (3)
94 Mortari-Vegara and Beguin 1987:310 cited by Lo Bue & Ricca 1990: 76
95 Dorjee 1996:52
96 According to Williams 1989:172. Reverence of the physical body of the Buddha in the centuries after Sakyamuni Buddha’s death was equivalent to worshipping the stupas containing his relics. With the development of Mahayana school of Buddhism, praising the *Dharma*-body of the Buddha replaced stupa worship with a new cult based on the doctrine as set out in the *Astasahasrika* (8,000 verse) *Perfection of Wisdom*, the oldest text of the *Prajnaparamita Sutras*. Emphasis was given to the interpretation of *dharma* as it represents the qualities that the Buddha doctrine sets forth and teaches. In the *Prajnaparamita*, the *dharma* is the collection of teachings, particularly the *Prajnaparamita* itself. It is also the collection of pure dharmas possessed by Buddha, especially the mental dharma cognizing emptiness. It is also emptiness itself.
Hinayana Symbolism

Hinayana Buddhist expression is found in the architectural symbolism of the stupa, in particular the throne, the four terraced steps, the bumpa, harmika and spire as set out in ancient architectural manuals on stupas. The symbolism is associated with the Abhidharma tradition, training in analytical thought and wisdom, which opens the door to direct insight. Williams described the Abhidharma as the classification and analysis of the totality of everything into the building blocks which, through different combinations, we construct our lives. ⁹⁷

According to tradition the Buddha gave lists of essential topics and key terms in order to promote the investigation of the nature of mind and experience. These lists are set out in the Abhidharma treatise, which is associated with the training of wisdom through observing, analysing, categorizing and penetrating the depths of understanding. The list of building blocks of our experience includes the functioning of the body and mind, the workings of karma and emotions, the stages of the path and obstacles along that path. ⁹⁸ An analysis of the various constituents of these lists refines intelligence for the purpose of seeing the true nature not only of body, speech and mind but also of all reality. ⁹⁹

The construction of the stupa is like a teaching aid, each element represents a particular list as defined by the Abhidharma. For example the foundation or Throne element of the Kumbum, represents the four imperturbabilities of the Buddha. ¹⁰⁰

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⁹⁷ Williams 1989:14
⁹⁸ Ways of Enlightenment 1993: 33
⁹⁹ Ibid. p.126 provides an explanation on the Abhidharma analysis, study in the training in wisdom
¹⁰⁰ Tucci 1932: 39 See also Tucci 1941:170 and Lo Bue & Ricca 1990 : 98
The first floor of the terrace corresponds to the four coefficients of full awareness relative to the body. (These are the body, sensation, mind and Buddha law).

The second floor symbolizes the four renunciations and resolutions. (These are the renunciation of sinful action already undertaken, renunciation of future sinful action, resolution to perfect good action already undertaken and resolution to apply oneself to perform good action in the future).\(^{101}\)

The third floor symbolizes the four coefficients of the miraculous powers. (These are firm aspiration, deep mediation, effort and perseverance, investigation and analysis). The fourth floor symbolizes the five faculties. (These are faith, of effort/energy, of mindfulness or awareness, of concentration and of wisdom).\(^{102}\)

The base of the bumpa or pentola symbolizes the five corresponding powers. (These are faith, of effort/energy, of mindfulness awareness, of concentration and of wisdom).\(^{103}\) The four vestibules and staircases of the four floors mark the entrance to higher levels of teaching and inner temples of the Kumbum,\(^{104}\) symbolized by murals depicting the gates of the four directions manned by guardians.

The bumpa or pentola symbolizes the seven coefficients of supreme enlightenment. (These are awareness or mindfulness, perfect examination of

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\(^{101}\) Tucci 1932: 39-41 Tucci discusses the symbolism attributed to the stupa according to the Hinayana and Mahayana Buddhists. Referencing the Tungyar vol. TII, fol. 161a (Cordier 2.358 no 129) and vol. GU. Fol. 316, 317 (Cordier 2.289 no 25 mchod-rten sgrub-pa'i cho-ga)

\(^{102}\) Ibid. Ricca &Lo Bue 1993:47-51 provide a summary of the Vajrayana symbolism of the ideal structure of the Kumbum, according to the classification of the tantras by Bu-ston (1290-1364)

\(^{103}\) Tucci 1932: 39-41

\(^{104}\) Ibid. See also Tucci 1932:18 for a discussion by Tucci on Indian architectonic literature and definition of the parts of the stupa
the doctrine, energy/effort, joy or satisfaction, serenity/pure exercise, concentration and equanimity).\textsuperscript{105}

\begin{itemize}
  \item The harmika symbolizes the Eightfold Noble Path. (These are perfect vision, perfect imagining, perfect word, perfect action, and perfect system of life, perfect activity, perfect awareness and perfect concentration).\textsuperscript{106}
  \item The spire surrounded by thirteen rings symbolizing the ten powers of the Tathagata and the supports of the absolute awareness which is symbolized by the first ten and last three rings respectively.\textsuperscript{107}
\end{itemize}

Mahayana Symbolism

The interpretation of Mahayana Buddhism as illustrated by the design of the Kumbum is more difficult to identify. This is due to the fact that the fundamental principle underlying Mahayana Buddhism is the concept of emptiness, sunyata, and the belief that all entities are conceptual existences or constructs.\textsuperscript{108} The concept of emptiness and inherent existence developed from the Abhidharma scholars and became integrated into the meditation practise of the Madhyamaka (Middling) school, the basis of the Mahayana Buddhist school of thought.

During the first millennium of the modern era, Mahayana Buddhism emerged as a viable alternative to the earliest practice of Buddhism centred on the institution of the monastery and stupa worship. Mahayana Buddhism is associated with the Prajnaparamita literature, the Perfection of Wisdom Sutras, which developed over

\textsuperscript{105} Tucci 1932: 39-41
\textsuperscript{106} Ibid.
\textsuperscript{107} Lo Bue & Ricca 1990: 98-99 and also described in Tucci 1932:39. In Stupa, Art Architectonics And Symbolism, 'mC'od rten 'e'is'a ts'a, Ind.-Tibetica 1. Tucci analyses the symbolism of the stupa in detail.
\textsuperscript{108} Referring to the Perfection of Wisdom Sutras as quoted in Paul Williams, Mahayana Buddhism (1989: 60)
more than a thousand years.\textsuperscript{109} It marks a profound doctrinal change, whereby the concept of the Bodhisattva, a saviour figure, was introduced into Buddhist philosophy. As Pal explains, the communal basis to the practice of Buddhism changed into an individualistic faith oriented system in which, in addition to mediative practises, devotion to a Bodhisattva was regarded as an equally valid way to reach nirvana.\textsuperscript{110} With the introduction of a non-dual universe, Nirvana was attainable in this world once the clouds of ignorance were overcome. The method of achieving this goal was by the perfection of the six paramitas, or disciplines,\textsuperscript{111} which were to be mastered by the Bodhisattva along the path to perfect Buddhahood. The concern of the Bodhisattva is not with full Buddhahood for himself alone, but for all sentient beings. The Bodhisattva generates infinite compassion, and all his acts are directed towards helping others.\textsuperscript{112} The \textit{Perfection of Wisdom Sutras} promote the cultivation of spiritual, magical intervention and other practices to develop various psychic abilities, which can assist the Bodhisattva to help sentient beings both materially and spiritually.

The most common way in which Mahayana thought was interpreted into architectural symbolism was by specific iconographic subject matter executed in the architectural decorative details, bas-relief sculptural form and murals of a building. The Mahayana placed emphasis on the three worlds: the earthly, heavenly and ideal.

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\textsuperscript{109} Paul Williams 1989:41 quotes Edward Conze (1960:9f;1968:11ff.) who distinguished four phases in the development of the \textit{Prajnaparamita} literature, stretching from 100BC to 1200 CE.

\textsuperscript{110} Pal 1990:35

\textsuperscript{111} Perfections or disciplines usually include, ethics, generosity, compassion, strenuous, concentration and wisdom for a detailed explanation see Geshe Kelsang Gyatso, \textit{Meaningful to Behold. A Commentary to Shantideva's Guide to the Bodhisattva's Way of Life}, Therpa pub., London, 1980, an English translation of the commentary on the \textit{Bodhisattvacharyavatara} by Shantideva (687-763), the great Indian teacher, who taught at Nalanda and Southern India.

\textsuperscript{112} Williams 1989:50
\end{flushright}
world. These were elaborately depicted with celestial palaces and a large number of heavenly beings. There was an acceptance of the existence of numerous Buddhas in this and other worlds, including the past and future. The depiction of the *Jataka* tales in which the previous lives of the Buddha are retold, was popular. The mandala of the Eight Bodhisavattas according to the *Astabhuddhaka Sutra* also became popular. Here the Eight Bodhisavattas are shown as protectors of the faithful and providers of blessings. They were linked to the Pure Lands, which were protected by the four heavenly kings who also guard the four cardinal directions. The Bodhisattva was introduced as a universal ruler, or *chakravartin*, conquering all universes.

The Mahayana symbolism in the Kumbum is evident in both the architectural arrangement of the chapels and dedication of the chapels on the lower levels to specific deities or Bodhisattvas. For example, the southern temple on the first level is devoted to the historic Buddha Sakyamuni in *dharmacakramudra*, the gesture symbolizing the turning of the wheel of the doctrine. The western temple is dedicated to Buddha Amitabha in the western paradise of Sukhavati. This is the kingdom of Infinite Light, where the doctrine is revealed to all types of gods, creatures and humans.

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113 Fisher 1993:12  
114 Leidy & Thurman 1997: 26  
115 Lo Bue & Ricca 1990:100 see also Tucci 1941 : 170 Tucci explains that as one progressively mounts from floor to floor one traverses through all the mysticism and esoteric liturgy of Mahayana in a short time.  
116 Ibid.
Figure 51 Buddha Sakyamuni, South Temple (above)

Figure 52 Buddha Amitabha, West Temple (Ricca)
The eastern temple is devoted to the Buddha of the Future, Maitreya, who sits in the Tusita heaven, where he provides teachings to overcome doubt and difficulties.\textsuperscript{117} The northern temple is devoted to the Dipankara, Buddha of the Past, who is depicted as the guide of Prince Siddharta in his previous life.

There are several examples in the Kumbum where the chapels or temples are dedicated to popular Bodhisattva figures. The temple devoted to Ratnasambhava on the third floor, is in the opinion of Tucci, one of the most beautiful in the whole of the Kumbum for the magnificence of its paintings and decorations. The temple devoted to Amoghasiddhi, with its associated cycles located on the third floor to the north, is extremely popular in Tibet. According to instructions handed down by Atisa, ceremonies dedicated to Amoghasiddhi and these associated Tantric cycles are undertaken to dispel illness, bad influences and demons as well as to gain a good rebirth in the next life.\textsuperscript{118}

All the mandalas devoted to the Prajnaparamita are concentrated in the temples of the bumpa level. The first temple is dedicated to Sakyamuni Buddha, the next temple is dedicated to the Buddha, Mahamuni, an esoteric form of the Buddha. The third temple is devoted to Vairocana, who is regarded as the cosmic or universal Buddha. The fourth temple is dedicated to Prajnaparamita, as the personification of supreme transcendental knowledge, the Great Mother of all Buddhas.

\textsuperscript{117} Ibid.
\textsuperscript{118} Tucci 1941: 233-245 and also Tucci 1941: 262-263
Lo Bue writes that, "she is also the deified hypostasis of the canonical literature bearing the same name, which is the theoretical foundation of Mahayana Buddhism and the theoretical basis for the unification of all the Tantras in Tsong-kha-pa’s compendium." 119

Figure 53 Statue of Prajnaparamita, the Great Mother of all Tathagatas with four arms; her central two arms display the dharmachakramudra, North Temple on the Bumpa level (Ricca)

119 Ricca & Lo Bue 1993: 49
Tantric Symbolism

The body of Mahayana literature became more and more complex as it spread over Asia and incorporated countless new practices and rituals. During the later stages of development of the Perfection of Wisdom literature (600-1200), Tantric influences were introduced.

Tantrism, also known as Vajrayana, the path of the thunderbolt, was based on the belief that every sentient being has the potential of Buddhahood within themselves. This realisation is obscured by ignorance, which can be removed by combining prajna, insight, with upaya, appropriate action (which is the same as karuna, compassion). Tantric Buddhism asserts that it is possible with special training for a person to become a Buddha in a lifetime. In Tantric practices the yogin visualises himself as the appropriate Buddha and the world as divine, an ideal universe. The practices while strictly esoteric, are firmly set within Mahayana Buddhist philosophy and are guided by personal initiation and teaching by a spiritual master.

The development of Buddhist doctrine and the introduction of Tantric rituals clearly meant that the symbolism long established for the construction of stupas had to adapt to incorporate new practices. Lo Bue indicates that one valid reason for the apparent proliferation of this monumental type of stupa during the 13th to 15th century in

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120 There was a tremendous diversity to be found in the development of Buddhism from the outset. See Paul Williams discussion on Buddhism-doctrinal diversity 1989:1
121 Ibid. p. 185-97 a short summary is provided on the development of Buddhism in Tibet and the influences of Chinese and Indian Buddhism.
122 Pal 1990:36 summaries the differences between Mahayana and Vajrayana Buddhism in Tibet.
123 Williams 1989:186
Central Tibet, was directly related to the complex design allowing the full visual presentation of the dārmakāya to be combined within its architectural form.  

The articulated form and many surfaces and spaces of the many door stupa provided opportunity for displaying a pictorial presentation of Tantra texts. The large number of deities and complex mandalas used to aid visualization practices based on yoga and introspection could easily be accommodated.

Lo Bue has described the nearest equivalent to the complex diagrammatic layout of the Kumbum as the great mandala of the Kalacakra cycle, ‘whose many encircling walls each with its own doors and guardians enclose various minor mandalas.’

Tucci points out that a study of the building reveals that it represents not a single mandala cycle, even taking into account the complexity of the Kalacakra, rather it represents a summa of all Tantric mandala cycles. He explains that the plan and layout of the Kumbum is in the form of the cosmic symbol of the ideal universe as depicted by Mount Meru.

The transition to Vajrayana Buddhism is manifest in the many chapels and temples that display the universe of the mandalas belonging to the various cycles of the Tantra. The priority given to the accurate plan of mandalas as set out in the Tibetan canonicals is demonstrated by observing the positions of the Five Tathāgatas, the Five Supreme Buddhas, sometimes known as the Dhyani or Cosmic

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124 Lo Bue & Ricca 1990 : 76
125 Lo Bue & Ricca 1990 : 86
126 Chandra explains in the forward to Indo-Tibetica IV 1.p.xi and Tucci 1941a:12, ‘the Kumbum is a gigantic mandala which contains, painted on the walls of its cells, infinite other mandalas in which are expressed particular systems of mysticism’, and again on page13, ‘The Kumbum is therefore a scheme of the world and a syllogism of Tantric experience’ and on page 169 ‘the building is the chos-skū/dharma kāya, the body of the law, made visible’
127 Ricca & Lo Bue 1993:34 For a very extensive survey and explanation of the symbolism of the different elements and parts of the stupa see A. Snodgrass, The Symbolism of the Stupa, 1985
128 Lo Bue & Ricca 1990 : 102
Buddhas. The pentad comprises Vairocana, a deified form of the Buddha from which emanates the other four cosmic Buddhas, Aksobhya, Ratnasambhava, Amitabha, Amoghasiddhi. Each Buddha resides over a particular direction, east, south, west and north respectively, Vairocana is in the middle, usually placed above the other Buddhas.

In the Kumbum, Vairocana is represented as the supreme pentad according to the definition of the canonical systematisation of the *Tattvasamgraha*. The latter text is regarded as the basis of all complex philosophical and ritual systems of the yogatantra class. The importance placed on the correct interpretation of the *Tattvasamgraha* in the layout of the Kumbum is demonstrated by the fact that the overall arrangement of the Cosmic Buddhas is set out according to the succession of kalpas, corresponding to the four Tantric Families of the Tathagata. These include the Vajra, followed by the Family of the Lotus/Padma and finally the Ratna/Karma Family, all as set out in the first four sections of the *Tattvasamgraha*. In this classification system, Ratnasambhava and Amoghasiddhi belong to the same Family and are accordingly given adjacent positions on the third floor of the Kumbum, west and north respectively. The temple dedicated to Amitabha is placed on the Southern side and Ratnasambhava on the west. This is a reversal of the position commonly illustrated in the mandalas of the *Tattvasamgraha*. It is within the mandalas of the *Tattvasamgraha*, which are painted on all the walls of the four temples of the bumpa, that the five Buddhas are correctly positioned according to their usual direction.

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129 Lo Bue & Ricca 1990:144-146 explain why the position of Amitabha and Ratnasambhava as found in within the mandalas of the *Tattvasamgraha* have been swapped. Tucci describes the layout of the chapels but does not pass any comments on this, see Tucci 1941:233

130 Aksobhya-East, Ratnasambhava-South, Amitabha-West, Amoghasiddhi-North. This is further proof that the Kumbum is not a presentation of a single mandala but a summae of the mandalas
From the 11th century Tibetan scholars and translators travelled throughout India and Nepal seeking teachings and collecting religious scriptures to translate into Tibetan. By the 14th and 15th century the authenticity of thousands of Tantric ritual texts, commentaries, treatises and sadhanas (often the discordant doctrines of various masters were in dispute) were tested. The approved authentic versions of Mahayana

which can be drawn from all Tantric cycles, according to well defined a canonical rule’. Lo Bue & Ricca 1990:145
and Tantric texts were all collected into a compendium or summæ, codified, and organized into a systematic digest of works. The arrangement of paintings adopted for the various Tantric cycles in the different chapels reflects this precise arrangement. The first classification of the Tibetan canons was undertaken by bSod-nams-rtse-mo (1142-1182) and later finalized by Bu-ston (1290-1364). He also made a special study of the Kalacakra, annexing the Indian and Iranian mystical astrological theories to write five volumes and commentaries. Bu-ston also collated the cycle of bDe mchog, Mahamaya, Hevajra and Samputa, Guhyasamaja and Tattvasamgraha Tantras, which are all depicted by the murals in the Kumbum.\textsuperscript{131}

The Tantras were divided into four classes: Kriyatantras, a system for those who base their practice on ritual and outer action; Caryatantras, developed for those who couple outer action with inner yoga; Yogatantras, selected for those who focus on the yoga of inner samadhi; and Anuttaratantras, for those who focus on the yoga of inner samadhi, primarily based on physio-psychological techniques of meditation.

The two earlier Tantras had largely been translated during the first diffusion of Buddhism in Tibet during the monarchical period (700-900), but the lineage of their transmission had often been lost. Bu-ston restored the two lower Tantras, establishing a correlation between the two former Tantras with Hinayana, and the two later Tantras with Mahayana practices.\textsuperscript{133} Tsong-khapa (1357-1419) in his great compendium of Buddhist Tantras, sNags-rim chen-mo, brought the whole system of

\textsuperscript{131} Lo Bue & Ricca 1990 : 102-104 describes the crucial role of Bu ston in arranging the canonicals and Tantric text collected in the bKa'-gyur and bSton-gyur
\textsuperscript{132} Ricca & Lo Bue 1993:47 a short summary of the divisions of the tantras
\textsuperscript{133} Ricca & Lo Bue 1993 : 48
Tantras back to the Mahayana by claiming that concepts of the Prasangika Madhyamika school were the philosophical base of all four Tantra divisions.\textsuperscript{134}

The Tantric aspect of the symbolism of the Kumbum relates to the physical progress of the disciple in the process of climbing step by step up the building. This physical process corresponds to the metaphysical process of ascending to more and more secret truths by passing each group of Tantric cycles set out in each of the chapels of the four levels. The whole of Mahayana and esoteric mysticism is encompassed by the initiate who starts with the Kriyatantra on the lower levels of the Kumbum and progresses towards the Anuttaratantra at the top of the building.

The main two-storey temples of the first floor reinforce the continuity of the teachings from the first conception of Buddhism to the later Vajrayana teachings. Thus it reaffirms the traditional function of the stupa by celebrating the monument of spreading the doctrine. The transition to Vajrayana Buddhism then unfolds in the successive chapels, which illustrate the universe of mandalas belonging to the various Tantric systems. These are all accurately ordered according to their canonical classification.\textsuperscript{135}

The chapels in each floor are devoted to the cycles belonging to the Kriyatantras & Caryatantras and include wrathful deities, which often reflect the assimilation of creations of Shaivism or the heritage of early cults. There is particular reference to Kurukulla, ‘She who gives Knowledge,’ and Manjusri, the deity of Wisdom, both of

\textsuperscript{134} ibid.
\textsuperscript{135} Lo Bue & Ricca 1990:104 an examination of the chapels and temples with the various Tantric cycles is described from p104-171. See also an iconographic survey in Ricca & Lo Bue 1993: 225-313
whom play an important role in the Sa-skya-pa tradition.\textsuperscript{136} Their mandalas painted in chapels 2/6 and 2/7, are taken from the Yogatantra and the Anuttaratantras. The layout of cycles of manadals and deities of these two floors set the global view as an introductory to the upper classes of Tantra in the chapels of the higher floors of the Kumbum.

The chapels of the third floor and the four chapels in the bumpa are devoted to the cycles of the Yogatantras.\textsuperscript{137} The fourth floor chapels are devoted to those Indian and Tibetan masters who spread and transmitted the different categories of the Tantra and gave a systemization to the religious history of Tibet. Symbolically placed in the center of the Kumbum, the importance and necessity of having a guru to guide the disciple is emphasized. The four vestibules and staircases of the four floors mark the entrance to higher levels of teaching and inner temples of the Kumbum.

All the mandalas devoted to the Prajnaparamita are concentrated in the bumpa.\textsuperscript{138} The mandalas in the harmika derive from the Anuttaratantras, divided into the Father Tantras (Mahayogatantras, Dakatantras, Upayatantras) and the Mother Tantras (Yoginitantras, Dakinitantras, Prajñatantras).\textsuperscript{139} The lower storey of the harmika is devoted to the Upayatantras (inseparability of means) divided into groups associated with Aksobhya, Vairocana, Amitabha, and Vajradhara.\textsuperscript{140} The mandalas on the wall

\textsuperscript{136} Lo Bue & Ricca 1990: 127
\textsuperscript{137} See Ricca & Lo Bue 1993: 49 for an expanded description of the cycles which are focused on Vairocana, a deified form of the Buddha, from which emanate the four Cosmic Buddhas, (Aksobhya-East, Ratnasambhava-South, Amitabha-West, Amoghasiddhi-North, each associated with a direction and colour in the mandala)
\textsuperscript{138} Ibid. p.49
\textsuperscript{139} Ibid. p.50
\textsuperscript{140} Ricca & Lo Bue 1993:50
can be traced to cycles of Guhyasamaja and of Vajrapani and to a second group
cycles of Vajrabhairava and Yamari.\footnote{ibid. p.51}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure55.jpg}
\caption{View of the Lower storey of the Harmika devoted to the Father Tantras of the
Anuttarayoga class (Ricca)}
\end{figure}

The upper storey of the harmika is devoted to the prajna Tantras (insight), which is
divided into groups associated with Heruka (Aksobhya) Vairocana, Vajraprabha
(Ratnasambhava) Padmanarcesvara (Amitabha), Paramasva (Amoghasiddhi) and
Vajradhara. Nearly all the mandalas can be traced to the cycles of Cakrasamvara,
Hevajra, Vajradaka, Buddhheruka, and Buddhakapala. There is also a cycle of the
Kalacakra.\footnote{ibid. 51}
Tsongkapa brought the *Kalacakra* Tantra into the fold of the Mother Tantras, (unlike Bu-ston who chose to place it in a section apart which he called ‘non-dual’). The influence of Tsongkapa’s position may have been felt both through mKhas-grub-rje’s initial intervention in the planning and through the continuous advice provided by Rinchen-grub. Rinchen-grub was the abbot of gNas-rnying, an important dGe-lugs-pa monastery, which was placed under the jurisdiction of the princes of Gyantse.\(^{143}\)

The octagonal chapel is hidden inside the spire, accessed via the upper level of the harmika. It houses the golden statue of Vajradhara. Vajradhara is conceived as Adibuddha, the primordial and timeless Buddha from which all other Buddhas and the whole universe emanate. This concept asserted itself with the spread of the cycle of the *Kalacakra*. In this chapel there is a precise evocation of the *Kalacakra* Tantra through two series of figures painted on the walls.\(^{144}\)

The first series reproduces the kings of Sambhala in terms of the tradition codified by Bu-ston. In the legend the *Kalacakra* had been initially promulgated by Sakyamuni himself at the stupa of Dhanyakataka.\(^{145}\) This series reproduces the various lineages of Rwa and of Bro. The second series seems to testify to the Indian master, Vanaratna, and also includes a number of masters of the Sadangayoga according to the *Anupamarakshita* system, which Vanaratra spread in Tibet. Vanaratna was a famous Indian Buddhist scholar. He was born in Bangladesh in 1348 and was invited

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\(^{143}\) Ricca & Lo Bue 1993: 51 See also *The Wheel of Time*, Deer Park, 1985 Geshe Lhundub Sopa et al, for a detailed background information on the complex system of the Kalacakra Tantra and its historical tradition.

\(^{144}\) Ricca & Lo Bue 1993:51

\(^{145}\) Ibid. citing Benisti 1981, pp. 140-144. See also Geshe Lhundub Sopa, *The Wheel of Time*, 1985 p.93 According to traditional the Buddha taught 12,000 verse *Kalacakra MulaTrantra* tat the request of King Suchandra of the Central Asian land of Shambhala, at the stupa of Shri Dhanyakataka, in south India.
to Gyantse in 1427. He performed extensive religious activities in Tibet and is particularly associated with the *Kalacakra* Tantra.\footnote{Lo Bue & Ricca 1990:7-8 Vanaratna belonged to the *Kalacakra* lineage, accordingly the importance of the *Kalacakra* cycle in the general composition of the Kumbum may reflect Vanaratna and Bu-ston interest in the Tantra.}

The symbolism of Tantric Buddhism is evident in the displays of mandalas painted in the chapels and temples. Evidence of Tantric architectural symbolism is more difficult to identify. Tucci wrote that despite these difficulties, he was able to shed light on the meaning of some of the introduced Tantric architectural elements of the stupa. With respect to the uppermost pinnacle of the Kumbum, he points out that the most ancient text does not mention having a pinnacle on top of the stupa. One of the earliest texts on stupas prepared by Santigharbha, instead describes the upper most pinnacle as being balanced on a mirror disc, representing the six supernatural faculties.\footnote{Tucci 1932: 46-48 Tucci writes that as soon as the Tantric schools started, the symbolism that had grown around the construction of the stupas could not be maintained intact and the interpretation of the stupa was modified according to the esoteric concepts of the new sects.}

In Tantric schools the binomial of the pinnacle symbolizes the process of cosmic manifestation and its re-absorption through mystic knowledge into Supreme Reality. The pinnacle according to Tantric schools includes the sun, moon and fire (*agni*) corresponding either to *pingala*, *ida* and *sumna*, or *prajna*, *karuna* and *bodhicitta*, depending on the rituals practiced by the yogin. This is represented by a bud-like tip on the top of the pinnacle in the Kumbum. It rests on a sun and moon disc which rises out of a vase like structure.
1.6 CHRONOLOGY OF SITE DEVELOPMENT

The following section is a brief chronological summary of the development of the Gyantse palantine monastery. The information was taken from the work of Lo Bue and Ricca and is based on the work undertaken by Tucci, particularly his work, ‘Tibetan Painted Scrolls.’ The latter work includes Tucci’s translation of the Char-'bebs, a local Tibetan historical guide, written in praise of the princes of Gyantse between 1479-1481.148

In the mid 13th century, the Mongols under Kubilai Khan (1212-94) invaded Tibet and Szechuan and within a decade the thirteen districts of South and Central Tibet were formally placed under the control of the Sa-skya-pa abbot, Phag-mo-gru-pa. The ‘patron priest relationship’ between the Chinese emperor and the Sa-skya-pa abbots was established and lasted for over a century. This system of governance became known as Yon-m Chod. As a consequence of this relationship with the Chinese emperor, the Sa-skya-pa became the most powerful religious sect in Tibet during the 13th to 15th century. Over the next century all other major religious sects began brokering similar lucrative patronage systems among the Mongol elite, while also developing close associations with the Tibetan aristocratic clans. Their efforts were rewarded by the accumulation of great wealth, the formation of powerful allegiances between individual clans and monasteries, and favourable relationships with the Chinese.

During the mid 14th century, the princes of Gyantse, from the clan of rGal-mkhar-tse (Peak of the Victory Castle), rose to prominence. This was almost entirely due to the work of

dPal-lidan bzang-po (1318-1370), who is regarded as the founder of the dynasty. He forged the initial associations with the dPyal clan, the prominent ruling clan in the Myang district of Tsang in central Tibet and also the lCe clan, who ruled over the fief of Shalu. He was particularly successful in waging important military campaigns on behalf of the Sa-skya-pa against the lHo-brag in western Bhutan.

In 1350 dPal-lidan bzang-po married into the Shalu clan. Traditionally, the Khon clan of central Tibet provided a successor and heir to the position of Sa-skya-pa abbot through a complex succession line that passed from uncle to their nephew via marriage with the Shalu clan. This meant that the princesses of Shalu traditionally married into the Khon family, who provided the abbots to the Sa-skya-pa monastery. In time, dPal-lidan bzang-po became the ruler of a vast territory, which stretched from Myang to the borders of Bhutan. His strategic alliances with several local religious groups and support for the construction of local temples earned him the right to lay the foundation of the first nucleus of the dPal-'khor bde-chen, the temple at Gyantse. He also obtained permission and support to establish the foundations of the Gyantse castle.¹⁴⁹

The princes of Gyantse were careful to retain a clear political separation of their territory from the thirteen districts of central Tibet, which were ruled by the powerful Khon family and the Sa-skya-pa abbots. This enabled them, through the intercession of prominent religious figures, such as Bu-ston rinpoche, Chos-sku-odzer and also Thugs-sras Lotsa-ba rinchen-rnam-rgyal, to negotiate directly with the imperial court of China.

¹⁴⁹ Tucci, 1941:81 and 147
In 1370, on the death of dPal-lidan bzang-po, his brother and successor, 'Phag-pa Rin-chen pa (1320-1376), completed construction of the monastery at rTse-chen, the capital of Myang. His nephew and successor was Kun-dga’ Phag-pa (1357-1412), who became in time prime minister of the Sa-skya-pa controlled region. Kun-dga’ Phag-pa later transferred the Gyantse clan capital from Tsechen to Gyantse. In Gyantse he built a palatine monastery in the castle, which had previously been erected by his father in 1365. It was his son and successor, Rab-brtan Kun-bzang Phags-pa (1389-1442), who created the dPal 'khor chos-sde (Palkor Chode) as we know it today. The main temple (also known as Palkor Chode or gTsug-lag khang) was enlarged and the Kumbum was constructed under the direction of Chos SKU 'od-zer.

The increasing independence of the princes of Gyantse was due to their aggressive military campaigns waged against the Phag-mo gru-pa, a religious sect. Military success in 1406 and 1435 led to the establishment of a totally independent sovereign state of the Myang district, enabling peace and prosperity for a sustained period of time. It was during this time that the rulers began to associate themselves more directly with the lineage of the great religious kings of ancient Tibet. They also sought links to a continuous line of spiritual teachers, such as Santarakṣita and Padmasambhava and other Kashmiri scholars, who had introduced translations of the Prajñāparamita, and the root text of the Kalacakra into Tibet.

Even after the fall of the Chinese Yuan dynasty (the descendants of Kubilai Khan) led to the consequential decline of the Sa-skya-pa power, the princes of Gyantse continued to maintain close relations with China. This is evidenced in the preparations made by the Prince of Gyantse, when the opportunity arose in 1413, to receive a large delegation from the Chinese imperial court. The Chinese delegation was en route to India to convey the Ming Emperor’s invitation to Sakyasri Sariputra, abbot of Bodhgaya, to visit China.
Chinese Ming Emperors were lavish in their generous donations to religious centres and kept close ties with the Sa-skya-pa and bKa’-brgyud-pa orders. Chinese dignitaries were received at Gyantse in 1412, 1417 and 1419. About the same time, the Emperor Chengzu (Yongle, 1403-1424) provided for the erection of a golden pinnacle at Tshur phu and the white-washing of the stupa at Svayambhu in the Nepal valley, recently restored by Shariputra.

Rab-brtan Kun-bzang Phags-pa (r 1412-42), who had succeeded his father in 1412, initiated a large infrastructure program in Gyantse to celebrate the arrival of Shariputra, the abbot of Bodhgaya, who passed through the area in 1413/4 on his way to the Ming court. Rab-brtan Kun-bzang Phags-pa was responsible for the creation of the architectural splendour of Gyantse. It is recorded by Lo Bue that work proceeded with the co-operation of the Chinese emperors, Taizu (r 1368-99) and Yong Le (r 1403-24), who both had close religious contacts with Buddhist centres in India and Nepal. In 1414 a six arched bridge with a central stupa was built across the river Myang, near Gyantse. Various political titles were granted to Rab-brtan Kun-bzang Phags-pa in celebration of his success. For example in 1418 it is recorded that he received the titles of prime minister and ‘thu-gon’ from the Sa-skya-pa. Wealth and tribune always accompanied the conferring of political titles, which enabled the princes of Gyantse to carry out their building programs.

Rab-brtan Kun-bzang Phags-pa began construction on the Palkhor Chode, the palatine monastery at Gyantse. The buildings were built under the close spiritual supervision of Gedrub Je (1385-1438), who was regarded as one of the greatest dGe-lugs-pa experts on Tantric literature. He was one of Tsong Khapas best disciples and became abbot of

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151 Ricca & Lo Bue 1993:19
Changra. At the centre of the main temple (also known as Palkor Chode or gTseg-lag khang) a giant statue of the Buddha was constructed out of gold and copper. In 1419 Rab-brtan Kun-bzang Phags-pa commissioned the manufacture of an enormous silk appliqué thangkas to hang on the walls outside the monastery.

Many painters and craftsmen from the gNas-rye monastery (Nenying) were commissioned to work on the Gyantse Palkor Chode. In 1422 the decoration of the Vajradhatu temple in the gTseg-lag khang and the circumambulation corridor were begun. The following year, the temple dedicated to Bodhisattva Avalokitesvara was decorated with mural paintings. In 1424 Rab-brtan Kun-bzang Phags-pa took control of lHartse, an important artistic centre from where many painters were recruited. By 1425 the main temple was consecrated and construction started on the massive fortress walls around the monastery, although the boundary walls and many lookout towers were not completed before 1440. Other buildings erected during this time were the three religious colleges of the Sa-skya-pa, Shalu-pa and the dGe-lugs-pa sects.

In 1427 building work began on the Gyantse Kumbum. Lo Bue notes that the Chinese Emperor, Xuande (r 1426-35), who was interested in Tibetan Buddhism and instigated many delegations both to and from Tibet, took an interest in the construction works at Gyantse. The decorative paintings within the chapels were carried out in three styles between 1427-31 and 1472-73. Sometime during 1435-36, the Bengali teacher, Vanaratna, a famous scholar of the Kalacakra Tantra who had first visited Gyantse in 1426 prior to the construction of the Kumbum, passed through the town. He had established his residence at Swayambu in the Nepal valley and is believed to have played an important part in the iconographic layout of the Kumbum. In 1439 Ba-ston 's entire collection of the four great
classics of the Tantras was re-printed, possibly as a meritorious act. Rab-brtan Kun-bzang Phags-pa died in 1442 and was succeeded by his stepbrother, who was very quickly succeeded by his son, bKra-sis-rab-brtan-dpal-bzan-po, in 1447. bKra-sis-rab-brtan-dpal-bzan-po is the last of the Gyantse princes to have undertaken major building activity at the monastery as recorded in the Char-bebs. This included the placement of the finial ornaments on the religious buildings in Gyantse. After the end of the 15th century, no major buildings or renovations were made to the religious complex.

In 1435 the ruler of the Rin-spuns clan, whose fief was near Gyantse in central Tibet, was made prime minister of the Phagmo-gru-pa religious sect. Soon afterwards, the Rin-spuns eclipsed the political prestige and power of the princes of Gyantse by challenging the authority of the Phagmo-gru-pa and allying themselves with the Kar-ma-pa religious sect, based at Tsurphu monastery, north west of Lhasa. At the same time, they relocated their capital to Shigatse, where they established secular monarchy rule for the next four generations. By 1612 Gyantse district had come under their control. The Rin-spuns princes and the Karma-pa led a challenge against the growing power of the dGe-lugs-pa. But from 1642 the 5th Dalai Lama with the help of the Gushri Khan and his Mongolian army defeated Karma bSTan-skyon-dban-po and the last prince of Tsang, enforcing dGe-lugs-pa rule over the whole of Tibet.152 By the end of the 17th century the Gyantse dynasty was no longer extant.153 However, the monastery at Gyantse continued to play an important religious role as there were seven dGe-lugs-pa colleges, four Sa-skya-pa colleges and Dus-khor-pa colleges (the school of the Kalacakra) and one Zhala-pa college (the school of Bu-ston at Zwalu) and a combined college of both the dGe-lugs-pa and Sa-skya-pa. After the Cultural

152 Lo Bue & Rica 1990:74 Rica & Lo Bue 1993:61-75
153 Lo Bue & Rica 1990:74 For a background to the different Tibetan religious schools see Tucci, The Great Religions of Tibet, University of California Press, 1988, first published as Die Religionen Tibets und der Mongolei by Giuseppe Tucci and Walter Heissig, Kohlhammer GmbH, 1970
Revolution of the 1960s only a dGe-lugs-pa college, a Sa-skya-pa college and one Zhalu-pa college remains.  

**Associative Contemporary Structures**  

![Map of Central Tibet showing location of early temples (drawn by Vitali)](image)

During the 12th to 15th century a number of multi chapel stupas were built in Tibet. Other early stepped stupas are found in Ladakh, Bhutan and Nepal. One of the earliest examples of the Tibetan form of the multi-chapel stupa is the four storeyed stupa at the Tshal Gung-thang monastery, near the sKyid-chu river. The construction of the stupa was begun by Bla-ma Zhang-brtson-grags in 1187 and completed by his successor Dar-ma-grags. The Tshal principality was ruled at the time by dGal’-bde-mgon-po, who had very close relations with the Mongol court in China and was

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154 Lo Bue & Ricca 1990:75
involved in the construction of many stupas as well as being a donor to the *Jo-khang* in Lhasa.\textsuperscript{155}

One of the earliest, most noteworthy examples of the multi-chapel stupa is the Kumbum of Khro-phu built along the road linking Jo-nang to Shigatse.\textsuperscript{156} This stupa was built along the road between Jo-nang and Shigatse in the early 12\textsuperscript{th} century by Tshul-khrims shes-rab (1173-1225). Tshul-khrims shes-rab invited Sakyasri-bhadra to Tibet in 1204 and acted as his interpreter for ten years during his stay in Tibet, prior to his return to his homeland in Kashmir.\textsuperscript{157} Sakyasri-bhadra was a Kasmiri teacher and translator, who was the last serving abbot of Vikramasila, before it was destroyed by the Muslim army. He first sought refuge from the invading armies in the monastic university of Jagaddala in Bangladesh, founded by the Pala King Ramapala (r.1084 to 1130). When the Muslim armies attacked Jagaddala, Sakyasri-bhadra and his two disciples left for Nepal and Tibet and returned to Kashmir about ten years later. Taranatha restored the Kho-pu stupa in the 17\textsuperscript{th} century.

A similar Kumbum type of stupa was built by Dol-po-pa, (Ses-rab-rgyal-mtshan), the founder of the *Jo-nang-pa* religious school. This Kumbum was situated in a gorge above Phun tshog gling, located in the upper part of the monastery compound of dGa-'ldan-phun-tshog-glin, or Jo-nang. Completed by about 1361, the stupa is also very similar to the Kumbum at Gyantse except that all the chapels are single storey, allowing every level of the terraces to have the same number of chapels.\textsuperscript{158} The bumpa is on a more massive scale than that at Gyantse and includes an internal

\textsuperscript{155} Lo Bue & Ricca 1990: 51 also citing Ferrari 1958:106n 105.
\textsuperscript{156} Lo Bue & Ricca 1990:76
\textsuperscript{157} Ibid. p.77
\textsuperscript{158} Vitali 1990:126
corridor with traces of early Newar style murals. The bumpa roof has large overhanging eaves, which are supported by a series of encircling posts. The stupa was radically restored twice by Taranatha in the 17th century and almost totally destroyed by the Red Guards in the late 1960s. It has subsequently been partially rebuilt.

![Figure 57: Jonang stupa (1940 IsMEO) destroyed](image)

Another multi chapel storten (Kumbum style stupa) is the rGyang Bumo-che built near Lhartse in the middle of a fertile plain to the north of the monastery of rGyan, in an area which was administered by the princes of Gyantse since 1360. The stupa is similar to the Jo-nang-pa Kumbum and was built by the Sa-skya-pa Slob-dpon-chen bSod-nam bkra-shis (1352-1417), who was assisted by the famous master bridge builder, Than-stong rGyal-po (1385-1464), in the late 14th or early 15th century.

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159 The paintings are described in detail by Tucci 1949:190-196 cited in Lo Bue & Ricca 1990: 77
160 Lo Bue & Ricca 1990:77 & 26
161 Ibid. p.26 citing Dowman 1988:278
A Comparative Analysis Of The Kumbum, Gyantse, Tibet And Borobudur In Java, Indonesia

choerten was decorated with Sa-skyā-pa styled mandalas. The rGyang stupa was a particularly monumental structure with a massive circular bumpa, which contained an internal corridor. It preceded the construction of the Kumbum at Gyantse by several decades. Nevertheless, it had two storey chapels on the lower terrace levels in a similar fashion to the Gyantse Kumbum. Although many painters and sculptures from the area were commissioned to work at Gyantse, the murals at rGyang were slightly differently laid out, being enclosed in a framework of panels.¹⁶² The monument now lies in ruins. The rGyal rtse Kumbum is another similar multi chapel chorten, which also lies in ruins.

![Figure 58 rGyang stupa (1940 IsMEO) destroyed](image)

¹⁶² Lo Bue & Ricca 1990:26
Another Kumbum was built in the monastery grounds of sNar-thang, a great centre of the Kadampa religious sect based on the lineage of Atisa, which was established in 1153. The structure was built by sNang-grags bzan-po-dpal and was contemporary to the Kumbum at Gyantse. Unfortunately, it was destroyed during the Cultural Revolution. Although the stupa had only two storeys like that at Gyantse, it was not architecturally imposing, but it had outstanding murals, which were contemporary with Kumbum of Gyantse. Several of the painters who worked at sNar-thang in the Newar style also worked at Gyantse. However, Tucci claims that it was only at Gyantse that the Tibetan style of painting reached its full maturity. He describes the Tibetan style as 'The synthesis and meeting point of several styles which before that time had long coexisted on Tibetan soil without attaining unification.'

Than-stong rGyal-po built another Kumbum, the Chung Riwoche, between about 1449-56. The stupa is twenty sided with nine storeys and contains a huge perimeter processional path with an entrance to the north. There are no chapels on the ground floor of the first terrace, which is very wide and is exclusively used for processional purposes. There are five chapels to each of the remaining three terrace levels, which are accessed from the inside. All the chapels are single storeyed and are of different sizes. The very large bumpa has two floors, each containing an encircling internal corridor. In each of the floors are four niches placed in each of the cardinal directions. The harmika is also five sided and contains four chapels. There is a

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163 Lo Bue & Ricca 1990:78
164 Ibid p. 27 quoting Tucci 1949:175-186. Tucci declared that it was in the first quarter of the 15th century that the first manifestations of a truly Tibetan painting school appeared. See Tucci 1941:23
165 Vitali 1990:125
topmost chapel situated beneath the spire. The stupa was not destroyed during the Cultural Revolution and has been repaired recently.\textsuperscript{166}

Figure 59  Ri bo che (Riwoche) stupa on the north bank of the Tsangpo river c. 1449-1456 (Vitali)

In 1472 the foundation was laid for the Jampaling Kumbum in the Dranang valley, near Dranang Xian, founded by Jampalingpa, Thonmi Lhundrub Tashi and Lochen Sonam Gyaltsen. The site is interesting as there was a boundary wall of 13 towers, similar to that of the Gyantse monastery. The murals were painted by Khentse chemo, a Sa-skya-pa lama, who founded the Kyenri style of painting. Nearby, a Sa-skya-pa monastery was also constructed. The centre became an important Nepalese and Bhutanese trading town.\textsuperscript{167}

\textsuperscript{166} Ibid. 125 for further survey of Chung Riwoche see Victor Chan, Tibet Handbook, Moon Publications 1994 p.451-455
\textsuperscript{167} Lo Bue & Ricea 1993:39
Figure 60 Photo of the Dranang Jampaling Kumbum found in the ruins of the monastery, destroyed during the Chinese Cultural Revolution. See below. (Wassman)

Figure 61 Dranang Jampaling Kumbum destroyed during the Chinese Cultural Revolution. (Wassman)
There are several smaller surviving examples of multiple auspicious doors stupas found in Nepal, Ladakh and Bhutan. At Chanspa, south west of Leh a stupa of multiple auspicious doors is surrounded by 108 small stupas. In similar fashion to the Kumbum it has 16 and 20 niches to each terrace level and a total of 72 chapels.

Figure 62 a para chorten temple, the Dungtse Lhakhang, Bhutan, founded by Thangtong Gyalpo in the early 15\textsuperscript{th} century (Pommaret)

As Lo Bue writes, among all these recorded stupas, the great Kumbum of Gyantse may be regarded as the highest product of that fervent building and artistic activity.\textsuperscript{168}

\textsuperscript{168} Ibid.
Figure 63 A typical Multiple Auspicious Door type of multi-chapel stupa at Changspa, Leh (Dorjee)

Figure 64 Ruins of a Multiple Auspicious Door type of stupa found at Shey (Wassman)
Figure 65 A typical Multiple Auspicious Door type of stupa found at Shey Tang with an inscription of ‘Ye dharma’ formula written in Ranjana characters that is datable to the 9th and 10th century.
CHAPTER TWO
BOROBUDUR TEMPLE COMPOUNDS

2.1 LAYOUT OF THE SITE, SETTING AND ASSOCIATED STRUCTURES

2.2 ARCHITECTURAL PLAN AND LAYOUT

2.3 STRUCTURE AND CONSTRUCTION TECHNIQUES

2.4 DECORATIVE STYLES, SCULPTURE, ART WORKS AND ARCHITECTURAL DETAILS

2.5 CHRONOLOGY OF SITE DEVELOPMENT

2.6 RELIGIOUS INTERPRETATION AND SYMBOLISM

2.1 LAYOUT OF THE SITE, SETTING AND ASSOCIATED STRUCTURES

Borobudur is located in central Java, which is one of the major islands of the Indonesian archipelago. The monument is sited to the northwest of the modern provincial capital, Yogyakarta, near the mouth of the Opak river, and due west of the site of the former 8th century Sailendra settlement, centered around Prambanan, on the middle reaches of the Opak river. King Samaratunga of the Sailendra dynasty, (r.792-833), known as the ‘Lords of the Mountains’,\(^{169}\) is accredited with building Borobudur.\(^ {170}\)

\(^{169}\) Miksic 1990:47
\(^{170}\) Dumarcay 1978:3-4
Borobudur rises about 30 to 34.5 metres above the summit of a terraced hill, which is made up of volcanic debris, a mixture of volcanic tuff and yellow clay of variable thickness (See Figure 1-2). The top of the hill was leveled and imported brown clay used to batter the sides of the slopes to form a base for the structure. The structure was designed as a sterobate stepped pyramid supporting a giant stupa constructed out of andesite rock, a local volcanic stone. The complex is near Tidar, a small hill regarded as an auspicious site, commonly referred to as the Nail of Java.\textsuperscript{171} Both hills have an elevation of about 15 metres rising above the surrounding flat fertile Kedu plains and are clearly visible from a great distance. Built near the junction of two rivers, Prago and Elo, Borobudur is encircled by large volcanic mountain ranges, Mount Sumbing and Mount Sindoro to the northwest and Mount Merbabu and Mount Merapi to the northeast, while to the south lies the Mendoreh mountain range.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{map.jpg}
\caption{Map of central Java (Dumarcay)}
\end{figure}

\textsuperscript{171} Frederic 1994:16
Archaeological Evidence of Architectural Setting

The massive scale and impressive design of Borobudur suggests that the resources and manpower required to complete the monument could have only been undertaken by a powerful ruler and prosperous nation. Yet nothing remains of the detailed architectural setting of the original site layout. Neither is there much historical information about the Sailendra dynasty, who are associated with the construction of Borobudur. Researchers have tried to build up a picture of the original setting and landscape features of the site based on findings from surveys and archaeological digs carried out during the 20th century.\textsuperscript{172} Analysis carried out on the nearby Candi Pawon and Candi Mendut, when both temples were restored at the beginning of the 20th century, has confirmed their affinity with Borobudur in artistic style and craftsmanship.\textsuperscript{173} Their location, beside the river Prago, is in perfect alignment to the main eastern entrance axis of Borobudur. This evidence possibly indicates that they all belong to the same compound, which could have been designed on a massive scale\textsuperscript{174} (See Figure 66).

Dumaracay suggests that the recent findings by Professor Soekmono show that Borobudur was originally surrounded by a huge enclosure, the corners of which were marked by temples. However, only one archaeological site of a temple, Candi Waringen Putih, has been discovered and this temple is located diagonally with respect to Borobudur. Archaeological research has revealed that a large number of villages were located within the immediate vicinity of the monument, demonstrating

\textsuperscript{172} Excavations were carried out by van Erp in 1907-1911 and again by Professor R. Soekmono, head of the Indonesian Archaeological Service during 1970 and 1974.

\textsuperscript{173} Soekmono/Dumaracay/de Casparis from, 'Borobudur a prayer in stone,' 1990:15-17

that the area supported a large population.\textsuperscript{175} This is confirmed by an analysis of Old Javanese inscriptions and royal edicts dating to the 8\textsuperscript{th} to 9\textsuperscript{th} century, which record the names of numerous villages in the area. The total population of central Java during the 8\textsuperscript{th} century has been estimated to be in the millions.\textsuperscript{176}

\textbf{Figure 67 Site Plan and Section through Borobudur (Miksic)}

\textsuperscript{175} Miksic 1990: 25

\textsuperscript{176} Soekmono/ Dumarcay/ de Casparis 1990: p.14 based on the analysis of a large number of Old Javanese Inscriptions of the 9\textsuperscript{th}–10\textsuperscript{th} centuries, de Casparis writes that 'it was quite likely that the population of Central Java in the Middle Ages should be counted in the millions rather than in the thousands.'
Other archaeological digs\textsuperscript{177} carried out in 1974 and 1983 have uncovered the largest quantity of potsherds excavated from any site of this period in Java. About three percent of the sherds found were Chinese ceramics, some dating from the Tang and Song dynasty (7\textsuperscript{th} – 13\textsuperscript{th} century). This could suggest that pilgrims continued to visit the site several hundred years after the decline of the Central Javanese kingdom in the 10\textsuperscript{th} century. Hundreds of votive tablets and thousands of stupikas or tsha-tsha, clay amulets in the shape of various stupa designs have been found around the site.

Their manufacture was an important activity in Buddhist monasteries. These artefacts and other archaeological finds support the theory that a monastery was located to the south west of Borobudur at the base of the hill\textsuperscript{178} While on the northwest summit, adjacent Borobudur, archaeologists have revealed the remains of a number of timber pavilions built with brick foundations.\textsuperscript{179} A further thirty ancient archaeological sites have been found within a five kilometre radius of the site. Investigations to date indicate these ruins belonged to Hindu religious sites and may not be associated with Borobudur compound.\textsuperscript{180} There is still considerable uncertainty about the original layout of the compound although the most likely scenario is that it was on a massive scale.

\textsuperscript{177} Miksic 1990: 34
\textsuperscript{178} Soekmono/ Dumarcay / de Casparis, Borobudur. A Prayer in Stone, 1990: p122-33 See also Soekmono, Chandi Borobudur: A Monument of Mankind, Paris UNESCO Press 1976 which outlines the archaeological recordings completed under the direction of Professor Soekmono. Professor Soekmono was Indonesia's leading archaeologist and a renowned expert on Borobudur. He conducted extensive excavations around the site in the mid 1970s and led the campaign, which eventually resulted in the UNESCO sponsored restoration.
\textsuperscript{179} Ibid.
\textsuperscript{180} Miksic 1990:35
Hindu Influence on the Setting

Research studies show that the design of Borobudur went through several different phases of design and construction. A number of scholars believe that the first phase of Borobudur began in about 775 with the construction of a Hindu temple. The temple was possibly commissioned by the rulers, Panongkaran or Panunggalan of the Sanjaya dynasty. It is also possible that the structure could have been initiated by one of the Sailendra princes prior to their conversion to Buddhism in the mid 8th century.

Figure 68 Axonometric perspective of Borobudur. The black section corresponds to the First Stage of works. The lightly hatched section corresponds to the Second Stage of works. The medium hatching corresponds to the Third Stage of works. The Fourth Stage corresponds to open hatching on the lower steps. (Dumarcay 1983 Paris: EFE0 taken from Prayer in Stone)

181 The Dutch army engineer, Thoedor van Erp was the first to record the different periods of construction of Borobudur during his restoration work of the building in the early 20th century.
182 Dumarcay 1978:2-4
183 Dumarcay 1998:52-55
The association of the early construction phrase of Borobudur with Hinduism is drawn from several hypotheses put forward by Dumarcay.\(^{184}\) Firstly, he draws the associational link between the close proximity of the Prago and Elo rivers and the Hindu belief in the sanctity of the Ganges and Yamuna rivers.

The suggested aim of the builders was possibly to divert the nearby rivers in order to create a religious bathing sanctuary.\(^{185}\) This proposition perhaps falsely presupposes the notion that Buddhist rulers were neither interested in carrying out irrigation works for their subjects nor were they concerned with the art of geomancy, where the close proximity of water was considered of vital importance.\(^{186}\)

Attention is also drawn to the fact that the site of Prambanan, the great Shaivite temple, built in 856 near the banks of the Opak river, was formerly the site of the capital of the Buddhist Sailendra rulers. Remains indicate that extensive ancient irrigation systems exist in the area and the Buddhist temple dedicated to the goddess Tara, Candi Kalasan, were built beside the Opak river, contemporary with the first construction phase of Borobudur.\(^{187}\)

\(^{184}\) Dumarcay 1978:21-22 cites Stutterheim who pointed out that the location of Borobudur suggests a desire to recreate a setting similar to the holy places in India. Dumarcay stated that this desire for an ideal Buddhist geographical site was not confined to Java. He provided the example of temple layout of Neak Pean at Angkor. The temple, built by Jayavarman VII in the late 12\(^{th}\) century, is located in the center of a baray, constructed with four adjoining side pools, interlinked by pipes, each representing the great rivers of the earth, Dumarcay 1995:102-104 and Freeman & Jacques 1999:178-180

\(^{185}\) Dumarcay 1998:52-55

\(^{186}\) See description of the art of geomancy in the building of Tibetan, Chinese and Nepalese structures. The continuing importance of geomancy in the construction of Tibetan religious structures was explained to me by Alop Riposte, a bKa`-gru-abs-pa teacher, from the Kham area of Tibet. A description of the rituals involved in the layout and construction of Riwoche stupas can be found in Vitali, 1990:123, also see Dorjee 1996:23-48. Dumarcay describes the similarities in the organization of space in South East Asia in spite of important cultural and technical differences, Dumarcay 1995:117. For Chinese examples see Liu 1989:27-39

Further evidence to support Dumarcay's claim of an early Hindu planning layout of the compound is due to the architectural similarity of the first period of construction of Borobudur with Hindu temples in the area.\footnote{Dumarcay 1986: 19, the first stage of Borobudur, started about 775, used perspective effects in the design to visually enlarge the building. This Dumarcay states is found nowhere else in Java among Buddhist monuments. Dumarcay 1978: 12-15 and also see p.22-23 for a description of the first period of construction. Dumarcay states that the outline of 9th century Hindu temples is on the whole similar to Buddhist architecture, but the techniques and the plan are not the same. He points out that N. J. Krom (Archeological Description of Barabudur, The Hague, 1927) drew the conclusion that Buddhism in Indonesia was rather an aristocratic religion whereas Hinduism was the religion of the people. But from 830 A.D. the Indian model, which is markedly different from the model of previous Hindu temples in Indonesia, became the norm, p.52-53} For example, attention is drawn to the strong similarity of the base and foundation design of Borobudur with contemporary Shaivite temples, such as Candi Arjuna, a temple in the Dieng plateau group, constructed in the late 7\textsuperscript{th} to mid 8\textsuperscript{th} century. Dumarcay regards the temple Gedong Songo Group VI, built in the mid 8\textsuperscript{th} century, as the model Hindu Javanese
temple with respect to its iconography and architectural elements. However there are also strong similarities between these Hindu temples and the later design details of Borobudur and other Buddhist temples in the area as well. See Figure 68 the first construction phase is coloured in solid black and shows the first Hindu design stage of the monument.

![Diagram of the temple](image)

Figure 70 Gedong Songo Temple Group VI main temple showing typical Javanese temple design (Drawn by Dumarcay)

189 Dumarcay 1986:16-19 states that it was the Gedong Songo temple where the model of the Javanese Hindu temple was established, with its particular iconography as well as architecture, and that these elements were to continue to the 13th century.
The most convincing evidence for the early Hindu origin of Borobudur is based on information translated from an early inscription found near the site of Borobudur, dated 732. It cites that the Sanjaya kingdom ruled over central Java when Brahministic rites were widespread.¹⁹⁰

The nearby Dieng plateau group and the Gedong Songo group of temples seem to have been in use during this time. Towards the end of the 8th century, when the new Sailendra dynasty came to dominate the region, there appears to have been a shift in power, marked by the relocation of their capital to the east of the island.

Dumarcay observed that the rise of Buddhism in Central Java in the last quarter of the eighth century led immediately to the construction of a large number of Buddhist monuments, Borobudur, is the most outstanding of these.¹⁹¹ The design and site layout of Borobudur was profoundly altered.

Dumarcay states that a former Hindu temple on the site was dismantled to make way for the construction of a huge Buddhist stupa, which was encircled by a complex matrix of associated structures and shrines, including the Buddhist temples of Candi Mendut and Candi Pawon.¹⁹²

¹⁹⁰ Miilsie 1990: 24 from a study of epigraphic information, de Casparis believes that in the mid 8th century the Sailendras, probably a local family from the southern Kedu plains, possibly from around Borobudur area, carved a kingdom for themselves and compelled the Sanjayas descendants to acknowledge their supremacy, to the extent that the Sanjayas had to contribute to the Buddhist monument built by the Sailendras. From about 762 to 830 the major part of central Java was ruled by the Sailendras and most of that time by one king, Samaratunga c. 792-824. The descendants of the Sanjaya controlled the north coast and the mountainous regions, but under the Sailendra supremacy (Soekmono et al 1990: 14), see also Dumarcay 1978:2-3 and Dumarcay 1986:6
¹⁹¹ Dumarcay 1986:19-20 Dumarcay states that the number of religious buildings constructed for the cult of Siva in the 8th century was small and that possibly a large temple was projected, i.e. the first stages of Borobudur, but with the increasing importance of Buddhism it was stopped
¹⁹² Dumarcay 1998:52-55
The impact of Buddhist ritual on design of the setting.

Figure 71 Candi Mendut (M. Jean)

Figure 72 Candi Kalasan (M. Jean)
The Impact Of Buddhist Ritual On Design Of The Setting

Although Visnu (Dharmatunga) and Indra (Sangramadhanomyaya) ruled the Sailendra dynasty from about 775 to possibly 792, it was noted in an inscription by King Balitung, dated 907 that Borobudur was built at the time of the tenth in the line of the Sailendra dynasty. This means that the builder was King Samaratunga (c. 792-824), although he may not have been king when construction started. Another inscription, dated 824, states that King Samaratunga had built a religious edifice. As Samaratunga is recorded as being a Buddhist ruler it could be extrapolated from this evidence that when he took over the construction of Borobudur it was remodelled and developed as a Buddhist complex.

The picture of Borobudur compound described by Professor Soekmono suggests comparison with contemporary Indian Buddhist mahaviharas. The earliest and most prestigious mahavihara is associated with the massive religious center of Nalanda, established and supported by the Gupta kings of Indian during the 4th-6th centuries. Some of the most famous Buddhist teachers, such as Nagarjuna, Asanga, Vasubandhu, Candrakirti, Dharmapala, Santideva, Santarakshita and their disciples are associated with Nalanda. The libraries of Nalanda became the central repository of Mahayana texts, Tantra collections and their famed Abhidharma collections. The excellence of the centre resulted in the growth of a large teaching monastery, a huge complex of hundreds of buildings, temples, stupas, shrines, naga

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193 Soekmono/Dumarcay/de Casparis 1990:14
194 Dumarcay 1978:4 and Miksic, 1990:23
195 Mahaviharas are regarded as international centres of learning or universities.
196 Holy Places of the Buddha 1994:157 the history of Nalanda is provided by Taranatha and descriptions of the place recorded by Chinese pilgrims such as I-ting (arrived at Nalanda via Java in 673) and Hsuan-tsang (arrived at Nalanda via the Silk Road in 635). Archaeological excavations carried out in 1915-1916 and 1982-1983 have revealed a gigantic complex of structures.
197 Ibid p. 161
pools, scholars, pilgrims and translators visited the centre from all over Asia. During the reigns of the Pala kings (Gopala, Dharmapala and Devapala) during the 8th to 9th century, Nalanda reached the height of its splendor, becoming one of the most celebrated centres of learning, renowned throughout the Buddhist world. The establishment of new mahaviharas based on Nalanda is typical of the Pala period (8th-early 13th century). The most well known examples of these new Pala mahaviharas are the centers of Uddantapuri and Vikramasila in Madhyadesa, India and the monastic universities of Somapuri and Jagaddala in Bangladesh.

Figure 73 Ruins of Vikramasila Mahavihara at Patharghata Hill, Bhagalpur district (Holy Places of the Buddha)

198 Nalanda was located near the Ganges, known for its many lotus filled ponds. One suggested origin of its name is from the naga king, Nanda, said to inhabit a pool in the area. Ibid. p. 158.
199 Holy Places of the Buddha 1994:171
200 Founded during the middle of the 8th century by King Gopala (c 750-775), the Tibetan first monastery, Sam-yas was constructed on the model of Uddantipura in c 749. Ibid. p. 180
201 Built by Dharmapala (c 775-812), the inspiration of the design accredited to Haribhadra, disciple of Santarakshita. The place became a center of Tantric Buddhism. Ibid. p. 186.
202 Built by Dharmapala (c 775-812) in 8th century completely renovated and dedicated to Tara in 10-11th century under Mahipala (ca 992-1042). Ibid. pp. 419-420.
203 Ibid. p. 425 Founded by King Ramapala (c 1087-1141)
The architectural concepts and layout of the new mahaviharas were highly influential in the design of the modifications to Borobudur. The systematic remodeling of the shape and layout of Borobudur as well as nearby Buddhist temples include changes to the door designs, new treatment of stairways, the introduction of new levels and the addition of statues. All these changes can be linked to similar architectural activities in the Pala viharas.204

For example, many scholars have drawn attention to similarities of the design of Borobudur with the construction of a three dimensional ideal world or Sumeru.205 Professor Soekmono specially points out similarities in the architectural setting of Borobudur with the layout of the Pala mahaviharas, Uddantapuri, built near Nalanda, during the reign of King Gopala.

The layout of this latter complex was based on the ideal design of the cosmos. It has a lofty shrine, representing Mt. Meru located at the centre of the complex surrounded by buildings in each of the cardinal directions, representing the four continents.206 Although only the archaeological site of Uddantapuri remains, the Tibetan monastery of bSam-yas, (Samye monastery) constructed in 749, which was built on the model of Uddantapuri, is substantially intact. The complex can therefore illustrate how the layout of a Pala monastery was designed according to the mandala of Mt Meru.

204 Dumarcay 1986:29
205 See comparisons provided by Soekmono, Dumarcay and Tucci
At bSam-yas the main temple is symmetrically placed, symbolizing Mt Meru, the palace of Buddha. It is surrounded by four major temples, symbolizing the major continents, and four minor temples as satellite islands, which are placed on either side of the major temples. Two additional structures, symbolizing the sun and moon, revolve around the sacred mountain. A large oval wall topped with 1,008 small stupas once enclosed the complex. These artifacts symbolize the ring of mountains that are said to surround the universe. There were four great gates, each of a different colour, topped by a series of stupas, located on the diagonal axis with the main temple. Their primary function was to suppress demons and prevent calamities in a similar manner to symbolic motifs found in the design of mandalas.\(^{207}\)

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\(^{207}\) Site visit in 1998 and from Chan 1994:299
It is difficult to extrapolate from this example whether the larger compound of Borobudur was originally designed like Mt. Meru. It appears from current archaeological surveys that not all contemporary Pala mahavihara reflected the design of the cosmos. Some temples may have been designed to represent as specific mandalas. The central temple of the mahavihara of Vikramasila, which, according to Taranatha, was located on the top of a small hill overlooking the Ganges, was encircled by fifty three smaller temples and is dedicated to the Guhya Tantra. There were a further fifty four ordinary temples surrounding the main temple courtyard, which altogether, formed a complex of 108 temples surrounded by an outer boundary wall.\textsuperscript{208}

In similar fashion, about the time of the first revision to the design of Borobudur, (790-800) the Buddhist temple, Candi Sewu, in the Prambana Plain, was dramatically transformed into a major compound, and was described in a stone inscription dated to 792.\textsuperscript{209} Two hundred and forty smaller temples were built in four concentric squares outside the main sanctuary walls of the temple. Eight larger temples were constructed between the second and third squares, all enclosed by a second outer boundary wall. At some distance from the site, four more temples were built on the four main axis, Candi Asu, Candi Lor, Candi Kolan and Candi Buhran.\textsuperscript{210}

\textsuperscript{208} Holy Places of the Buddha 1994:184-185 quoting Taranatha. The inspiration for the building design is attributed to the Haribhadra, disciple of the 8th century scholar, Santarakṣita, who was abbot of Uddantipura and assisted with the design of bSam-yas monastery in Tibet.

\textsuperscript{209} Dumarcay 1986: 21

\textsuperscript{210} ibid. pp21-25 also quoted in Bosch 1961:124. Bosch shows that the mandala was used to establish the plan of the central sanctuary at Candi Sewu and that the numerous changes to the place served no other purpose than to adapt the old design to the new needs.
The site of Candi Plaosan, located about two kilometres east of Candi Sewu, consists of twin double sanctuaries and is surrounded by 174 other religious shrines and stupas, arranged in three concentric rows. Each shrine was donated by an official of the kingdom. The whole complex is similarly surrounded by an outer boundary wall.\textsuperscript{211}

The design is attributed to the Hindu Sanjaya ruler, who built Prambanan and is regarded as one of the first attempts of syncretism of Buddhism with Hinduism in central Java. From this it therefore appears possible that the larger compound of Borobudur could have been designed as a mandala depicting Mt. Meru or a number of other mandalas dedicated to Tantric practice. It could even have evolved with a mixture of both Hindu and Buddhist references.

\textsuperscript{211} Dumarcay 1978: 45-46
There were further modifications to Borobudur and the site in 810 with additional changes in about 835-856. At the same time modifications also occurred to the related temples Candi Mendut and Candi Pawon and other Buddhist temples such as Candi Kalasan, Candi Sewu and Candi Plaosar, when the levels, entrances and approaches as well as doorways were all modified. The hill on which Borobudur is sited was also terraced with the incorporation of an extensive system of drainage channels.

These changes may be associated with developments occurring in the design and construction of shrines in the Pala viharas. Archaeological surveys carried out in the 1960s on Vikramasilâ\textsuperscript{212} have revealed that the monastery was built around a central cruciform temple (Figure 66). The inner courtyard also contained a multi-storied stupa complex about 15 metres high, which was surrounded by two terraced,

\textsuperscript{212} Holy Places of the Buddha 1994: 187-188
circumambulation paths connected by stairs. Vikramasila is associated with the lineage of several great Tantric masters, resident during the 9th century, who held the lineages of Kriya, Carya and Yogas Tantra teachings.\(^{213}\) Another major teaching monastery, the mahavihara of Somapuri, was constructed during the 8th century by the Pala kings. The archaeological site, excavated in 1936, has revealed that the compound was one of the biggest monasteries ever built in India, measuring 919 by 922 feet. A high boundary wall containing over 77 rooms enclosed a spacious courtyard where the main temple was located. The temple was constructed in the form of a visvavajra, having twenty sides and was built on three raised terraces. According to the archaeologist report a temple with recessed corners and reintrant angles had never before been seen in India.\(^{214}\)

Abhayadatta, chronicler of India's great siddhas, notes that two famous masters from Somapuri were initiated into the Tantric practice of Hevajra. This provides evidence that Somapuri was a centre for Tantric studies and accordingly its architecture may well have been based on an expression of these practices.\(^{215}\) The plan of the main temple at Somapuri vihara completed at the end of the 8th century is comparable but not identical to Candi Kalasan and Candi Sewu after their last transformation.

\(^{213}\) Atisa Dipankarasrijana (982-1054) was one of the head abbots of Vikramasila after spending 12 years in Sumatra, later he assisted with the re-introduction of Buddhism into Tibet. The invading Muslim army destroyed Vikramasila in the 12th century.

\(^{214}\) Archaeological team from the Calcutta University and Varendra Research Society, quoted in Holy Places of the Buddha 1994:422-424

\(^{215}\) Holy Places of the Buddha 1994: 420
In spite of the construction of contemporary teaching monasteries within the South East Asian region with strong associational links to the Pala mahaviharas, the probable connection of these sites with Borobudur is difficult to conclusively prove.
As Dumarcay notes, the successive transformation of Borobudur has given the monument a duality which has intrigued scholars over the past hundred years.\textsuperscript{216}

Figure 80 Borobudur drawn by Wilsen in 1849 (Dumarcay)

Borobudur and its surrounding sanctuary were gradually abandoned over the following five centuries. A series of great climatic events, war, destruction of irrigation schemes, lack of maintenance and major earthquakes that were recorded in the area in 1006 and 1545, may have contributed to its demise. By the 18\textsuperscript{th} and 19\textsuperscript{th} century the monumental structure of sculptured stone became hidden under a forest of trees and thick undergrowth. Since it was first surveyed by the British engineer, Cornelius in 1814, it took a further 170 years of various attempts to repair the damage before Borobudur was finally restored. In 1982 the site was re-opened to the public by the Indonesian government. Borobudur is now surrounded by parkland and visited by over a million visitors each year.

\textsuperscript{216} Dumarcay 1998:55
2.2 ARCHITECTURAL PLAN AND LAYOUT

Borobudur is a huge bell shaped Buddhist stupa, supported by four terraces which rests on a large plinth. The stupa is orientated on the east-west axis with the entrance facing east. The monument plan is in the form of a quadrilateral with twenty staggered sides. There are five stepped facades to each elevation. The base of the structure originally included several earthen terraces that were cut into the hill on which Borobudur stands. But much of the terrace work has since collapsed. The outer dimensions of the whole complex including some of the earth terraces measure about 177.5 metres by 167 metres with a height of approximately 65 metres above the surrounding plains. The dimensions of the pyramidal stone stupa are 123 metres along the north-south axis and 117 metres along the east-west axis.

Figure 81 Plan of Borobudur (Dumarcay)
The height of the central stupa rises 45.5 metres above the summit of the hill. The majority of the structure was constructed out of dry stone masonry walls, with later masonry modifications using a lime mortar. Due to the high porosity of the stone, the whole structure was originally covered with two layers of stucco. The second layer was highly malleable and was probably sculptured over the bas-relief carvings forming the final finish to the decorative panels that cover almost the entire structure.

The following description of the architectural layout of Borobudur is based on a site survey carried out in 1998 by the author. The architecture is first explained with references to the elements of a traditional Buddhist stupa. Following this the main elements of the structure are compared to the layout, iconography and architectural features of a typical Javanese temple. The reason for this approach is because the site survey confirms studies by many scholars, including Dumarcay among others, that suggest that the design of Borobudur was profoundly influenced by the architectural form of central Javanese temples. Scholars claim that Borobudur was built both as a stupa and as a temple.

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217 Dumarcay 1978:xvii the porosity of the andesite stone varies from 11 to 46 percent.
218 Ibid. p 29
219 The description of a typical central Javanese temple is drawn from the research work of Dumarcay. Descriptions of the traditional Buddhist stupa are taken from ancient architectural manuals that have been translated from the Tibetan Kagyur and Tangyur
220 Dumarcay 1986:16
221 Ibid. Dumarcay has suggested that the form, detailing and structure of the temples in the Gedong Songo group formed the model for most major religious buildings in central Java until the 13th century
222 Soekmono/Dumarcay/de Casparis 1990:32 Soekmono refers to the special significance of the stepped type of stupa as symbolizing in particular the abode of the ancestors in the mountains
Influence Of Traditional Stupa Design Rules On The Design Of Borobudur

All the elements of traditional stupas prescribed in ancient Indian architectural treatises can be identified in the design of Bodorbudur.223 These elements include the two elements of the Lion Throne (the three steps to the base and the base or foundation); the six components of the Intermediate Section of the stupa (the plinth, the four terraces, the steps to the bumpa and the bumpa, steps to the harmika and the harmika); and the three components of the Upper Section (the lotus supporting umbrella, the spire and the spherical pinnacles).

The Lion Throne consists of three low steps to the base course, which in the case of Borobudur were built as a later addition during the third stage of construction. During this phase, the present design of the upper three large circular steps and central stupa was finalised. Prior to these modifications, the base was significantly different. There were four stairways, one on each central axis, accessing a very high plinth that previously supported a Hindu temple built by the Sanjaya king in about 775.224 During the fourth and final construction stage of Borobudur, when the foundation plinth was again modified, the three steps to the base course were retained, but in a slightly different form. All these elements are equivalent to the Lion Throne of a traditional stupa layout.

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223 Dorjee 1996:8-19 The structural elements are identified in the Vinaya Ksudrakavastu as set out in the Tibetan Kagyu as well as treatises based on the commentaries of the Vimalosnisa, both of which are included in the Tangyur. These properties include the following elements: The Lion Throne consisting of three steps to the throne and the throne, which is the foundation plinth. The Intermediate Section consisting of six elements comprising, the base, the four stepped terraces, the three steps to the bumpa, the bumpa, the three steps to the harmika and the harmika. The Upper Section consisting of the Lotus supporting Umbrella and the Spherical Pinnacles

224 Dumarcay 1978: 22-25 this is regarded as the first phase of construction. During the second phase of construction the former Hindu structure was modified and attempts were made to build a gigantic stupa on the former base. Following partial collapse of the structure the third phase of construction took place which resulted in the current layout of the structure

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The terraces and the plinth comprise the first two elements of the Intermediate Section of the Stupa design, which is made up of six elements. The first element is the solid base course which forms the foundation to the four terraces, which it supports above. Each of the four terraces gradually recedes in size, allowing the external facades to similarly recede back to the central core of the structure.

On the fifth level of the structure, three concentric rows of deep steps support rows of small stupas that encircle a giant bell shaped central stupa. The three steps are regarded as the third element of the Intermediate Section of the traditional Stupa. The central stupa can be regarded as the traditional bumpa or anda, the fourth element of the traditional Stupa. The central stupa likewise has a number of concentric cornices forming a double lotus plinth to the anda (bumpa) level.

The fifth element of the traditional stupa equates to three stepped cornices on the lower section of the harmika and is at present missing in Borobudur. However, as much of the original stone was replaced during the 1970s restoration of Borobudur, it is not possible to verify whether there were originally three steps or cornices to the base of the harmika. The harmika is the sixth element of the traditional stupa.

From a study of other Buddhist temples in the region such as the many temple-like shrines in the Candi Sewu complex, the stepped design of the lower section of the harmika is quite clearly visible. Likewise in Candi Pawon, regarded as part of the Borobudur compound, the three stepped design to the base of the harmika is also visible.

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225 Dumarcay 1986:24 see diagram of Candi Sewu
This would suggest that Borobudur too had a stepped design to the base of the harmika. A study of early photographs taken by A. C. Beau of Borobudur demonstrates the existence of faint demarcation lines on the harmika prior to restoration work in the 1970s. According to the conservation philosophy guiding restoration of Borobudur, deteriorated or very badly damaged original stonework was replaced with similar but undecorated stone blocks, with the consequential loss of decorative detail. Confirming this, historic etchings by Jans Poortenaar\textsuperscript{226} of Borobudur completed during the 19\textsuperscript{th} century show that the harmika was square in shape, decorated and supported an octagonal base to the remnant stone spire.

Speculation by scholars about the final design of the octagonal spire has concluded that it most likely terminated in a lotus bulb supporting a pinnacle.\textsuperscript{227} The latter three elements comprise the Upper Section of a traditional stupa.

Figure 82 Diagram showing the design of the central stupa of Borobudur (Miksie)

\textsuperscript{226} Soekmono/Dumarcy/De Casparis 1990:48-49

\textsuperscript{227} Miksic 1990: 50 the conclusion, here, is drawn from an examination of drawings from the second edition (1830) of Raffles's 'The History of Java', which include the exterior, and cross section of the central stupa. However the drawings show several inaccuracies, for example the central stupa contains two hollow spaces and not one as drawn. Frederic points out that while many authors have believed that the spire originally bore a symbolic parasol (eg van Erp) it seems more likely that the central stupa ended with a rounded stone. Frederic1994:111
In summary, it can be argued that the architectural design of Borobudur comprises all the elements of a structure that are required in order for it to be classified as a stupa in accordance with the rules as set out in ancient architectural manuals. Dumarcay points out that there was an earlier attempt to build a gigantic stupa on the fifth level of Borobudur. The perimeter of the base of the bumpa section of the former stupa is still insitu beneath the outer ring of the first step. It was discovered during recent restoration work that during the second stage of construction there was a partial collapse of the structure. This led Daigoro Chihara to suggest that the inherent weaknesses in the structure may have led to the abandonment of the plan to construct an enormous stupa to crown the terraces.

It seems that the original design of the central stupa area was modified during the third construction phase when the three concentric steps of small satellite stupas encircling the more modest central stupa were erected. Despite these changes, the design belongs to a special type of stupa. As Soekmono writes 'to accept the assumption that the monument is primarily a big stupa would mean that the extraordinary and impressive supporting mass is of secondary importance only. And this is inconceivable.'

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228 Dumarcay 1978:24-25
229 Frederic 1994: 24 cites that Van Erp discovered the covered remains of a large molded circular base on the fifth level. Early theories put forward by Henri Parmentier and Alfred Fouche, both of whom believed that original design was the construction of a single huge stupa, were rejected by Paul Mus in the 1930s. Later work during the 1970s restoration has confirmed that weakness in the foundations resulted from earlier plans for a massive central stupa. Frederic suggests the original design would have been similar to the Shwe Dagon pagoda in Burma, Myanmar.

230 ibid.25
231 Soekmono quoted in Soekmono/Dumarcay/De Casparis 1990: 31
Typical Central Javanese Temple Design

The earliest temples in central Java are found in the Dieng plateau and at Gegong Songo, built sometime between 730 and 780. These temples seem to have become architectural models for others built in the following centuries.\(^{232}\)

The whole composition of a Hindu or Buddhist temple was carefully proportioned, creating an aesthetic harmony between both vertical and horizontal elements. The typical central Javanese temple can be divided into three main sections. The first section includes a base plinth and a stairway leading to an entrance portico on the second level.

The second section comprises the main body of the building, which was decorated on either side of the entrance portico by guardian statues placed in niches. Similar

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\(^{232}\) See Dumarcay 1986: 9-19 for a description of Javanese Hindu temples in the 9th century
niches decorated with pilasters and statues are also found on the other three
elevations of the structure. The third section is the roof, which is made up of three
false storeys that reduce in size as the structure increases in height. Each level is
decorated with a series of stupas that encircle the central terminating stupa and spire
on the third level. The base plinth is often decorated in bas-relief panels, which
illustrate the stories from the scriptures.

Figure 84 Showing similarities between a typical Javanese Hindu temple design at Gedong
Songo Group VI and a Buddhist stupa shrine at Candi Sewu (Dumarcay and M. Jean)
During the late 8th century and early 9th century a number of modifications were introduced to Javanese Buddhist temples. These changes included a redesign of the simple square plan of the temple that was changed into a cruciform layout, creating twenty sided structures.

Modifications also occurred to the design of niches and doorways to allow for the introduction of new iconographic details. Flaring toranas now decorated openings.

These motifs were made up of foliated scrolls flowing from the gaping mouths of large makara heads which were placed at the apex of niches or porticos.233

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233 Dumarcay 1986:29
The approaches to religious shrines were changed and stairways modified to allow for solid balustrades decorated with symbolic sea monster carvings. The outer areas of compounds where carefully laid out with encircling shrines and boundary walls. Dumarcay states that as Buddhist temples in Java were specifically designed to allow the devotees to practise their religious rituals these changes most likely resulted from changes to those rituals.\textsuperscript{234}
Javanese Temple Design Employed At Borobudur

The design of Borobudur consists of a repetition of certain standard architectural elements that form the building blocks of a Javenese temple. These elements are built on a micro scale but duplicated in their hundreds are placed in a series of continuous rows around the structure and seem to perform the same function as the hundreds of shrines that encircle Candi Sewu.

Wall Design

The main terrace walls and parapets of Borobudur are designed like a series of mini temples. On all four terraces, the outer balustrade wall extends high above the base of the terrace below, terminating in an elaborate cornice and parapet wall. This creates an enclosed but unroofed gallery of about 2m in width and over 3m to 4m high. The outer surface of the parapet wall or cornice to each of the four terraces is divided up into a series of deep arched niches in which a large statue of one of the four Cosmic Buddhas sits on a double lotus throne in meditation pose. Each niche is designed like the main wall of a temple with pilasters on either side, which contain either guardians or other ritual symbols. The upper section of the parapet above the arched niche is stepped and designed like the three false roofs of a temple. Each stepped level of the parapet is decorated with a stupa.

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235 *Penguin Dictionary of Architecture* by J. Fleming, H. Honour and N. Pevsner, 1966. In Classical Western architecture the term ‘aedicule’ is used for similar types of openings such as windows or doors that are framed by an architectural arrangement resembling a classical temple.
At regular intervals along the lower base plinth level of the parapet, or edges of the roof, a series of cartouches in the form of stylised miniature amakalas are...
systematically arranged. These small pediment-like blocks divide the upper parapet wall from the main body of the terrace wall.\footnote{Ibid. Cartouche is an ornamental panel in the form of a scroll with curling edges, sometimes ornamentally framed. Sometimes the cartouche can be in the form of a blind window, a pointed arch (kuchi) or niche seen on the stepped roof of Javanese temples, perhaps an architectural motif dating to the early Indian barrel vault or Indian cave temple construction}
mouth, is carved out of the stone. On the second to fifth levels of the terrace flaming serpent-like bodies spring out of the mouth of the kala-makaras, terminating in a makara head which is supported at the impost level by strange bulbous pillars with capitals designed as guardians, or lokapalas.

In contrast, on the outer balustrade of the first terrace and for all stair arches, the dragon like bodies eschewing out of the kala-makaras sweep down to the base of the niche ending in dragon heads in which seats a small lion. The motif is outlined with a flaming aureole while on the inner side of the doorway, the kala holds bunches of flowers in his upper mouth (the lower jawline is missing) from which dangle strings of pearls. Wise men support the arrangement of pearls in the act of showering the visitor with blossoms. Above the niches containing the statue of Samantabhadra the dragon face holds a single full blossom of a lotus flower. The strings of pearl in the relief on the lower terrace levels staircase portals support kinnaras.

Makaras sited on the diagonal corners of each level are also used as gargoyle waterspouts designed to remove rainwater that collects in large gutters at the base of the first level from where it drains to the perimeter of the site.238

237 Kala symbolizes the Elixir of Immortality shown by the jewels and pearls held in the mouth. Makaras are mythical beasts with an elephant’s trunk, parrots beak and fish tail, a water symbol. They are artist motifs found in both Hindu and Buddhist temples in India and Java. They are found on either side of the bottom of stairs, sometimes with lions, parrots, warriors or garlands in their mouths.
238 Dumarcay 1978:32
Fig 89 Showing the makara rainwater head and detail at the base of the stone torana (M. Jean)

**Roof Design**

Each of the three sections that make up the basic architectural elements of a central Javanese temple are repeated throughout the structure of Borobudur. The three domed stupas, which are supported on double lotus thrones and elaborately, modelled square pedestals, form classical Javanese temple roofs over the arched niches on the upper gallery walls. The architectural modelling of the square throne and pedestal of each stupa is a replica of the divisions found on the inner face of the lower gallery walls of the terraces and also relates to the many horizontal divisions between the various false roofs of many Javanese temples.

The highly modelled plinth consists of a dado forming the main surface of the pedestal. The moulding of the upper cornice is similar to the base, but terminates in a large round bull nosed capping that is decorated with a number of small pediment blocks or cartouches. The pedestal forms the plinth foundation of the bell shaped
anda of the stupa. The anda in turn supports a square harmika and axis pole extending above.

There are on average between four to six groups of miniature temple-like architectural elements to each face of the elevations of Borobudur. For example the central face of each elevation, including the first to fourth levels, has respectively nine, five, three, one and then finally nine groups of these miniature temple-like elements spaced evenly across the upper balustrade. This amounts in total to 1,472 domed stupas. There are also 432 niches in which statues of seated Buddhas are framed by a series of three stepped stupas on all five balustrade levels of the monument. There are 104 Buddhas on the first level, 104 on the second level, 88 on the third level, 72 on the fourth level, totalling 368 Buddhas in all on the first four terrace levels of Borobudur. Including the 64 niches containing the Bodhisattva Samantabhadra on the fifth level, there are 432 statues of seated Buddhas on the terraced levels. On the whole structure, inclusive of the Buddhas contained in the stupas, there are a total of 504 life size statues.

It is interesting to note that on the whole circumference of the outer balustrade of first gallery there is space for 120 niches but only 104 were constructed. This is because a total 108 statues of Buddhas on the five levels of Borobudur were required for each elevation. Throughout the Indian civilization the number 108 constantly recurs in Hindu numerology, and is regarded as sacred in the Buddhist context, symbolizing victory. In between each niche on the lower section of the parapet wall are bas-relief panels depicting the consort to the respective Cosmic (Jina) Buddhas, surrounded by incense jars, jewels, strings of pearls and lotus blossoms. This
elaborate design and layout of the parapet wall creates the characteristic jagged silhouette of Borobudur and is similar to many contemporary temples in Central Java.

![Figure 90 Showing the jagged silhouette to Borobudur (M. Jean)](image)

**Javanese Temple Proportions Employed In The Design Of Borobudur**

An explanation of the significance that was placed on the scale and proportion of the many temples in central Java is provided by Dumarcay. He draws attention to the fact that the construction of a Buddhist or Hindu temple was an important political act. He points out that the scale of architectural construction reflected the particular status of the sponsor in the hierarchy of the local society. Likewise, the level at which epigraphic inscriptions are found on religious buildings reflects the level of authority of the official sponsor’s title. Inscriptions referencing those in

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239 Dumarcay 1986:1-5 Dumarcay also states that the architectural design of these temples, whether Hindu or Buddhist, had to fulfill religious requirements. These included accommodating ceremonies, providing protection of the sanctuaries and demonstrating particular religious symbolism

240 Ibid. p. 3 the wealth and size of the buildings varied according to the importance of the people commissioning the construction
places of high authority are found at a higher level on buildings in comparison with those referencing sponsors who come from a more humble background. In similar fashion, Dumarcay suggests that the scale of a building was influenced by ancient Indian architectural treatises that set out specific proportions between each module of the building. The size of the module was fixed in value prior to construction. The variation in value was in direct ratio to the importance of the person commissioning the structure.\(^{241}\)

Major temples were constructed as houses for the king, in his divine form as a *cakravartin*, on Mt Meru. They also symbolised his place in the centre of his realm, the outer shrines of the compound becoming refined scale models of his kingdom.\(^{242}\)

The size of Borobudur indicates that not only was it built for a King but most possibly represented the King as a *cakravartin* in his divine form on Mt. Meru.

Professor Soekmono expanded on this theory by explaining that Borobudur like all Javanese temples, symbolised the ideal world of Mt. Meru, the dwelling place of the gods. He states that the design of Borobudur belongs to a unique category of structures, which specifically aims to re-create more realistically a ‘temple mountain’.\(^{243}\)

\(^{241}\) Ibid. p. 4 Dumarcay notes that the architectural treatises not only standardized and fixed specific proportions of different elements in relation to each other, but also included architectural perspective effects. This allowed the buildings to appear bigger than they actually were, thereby assisting with the recreation of Mount Meru.

\(^{242}\) Dumarcay 1986: 4 and 89-92 the Javanese Hindu temple is the dwelling where the gods reside on Mount Meru. The exaltation of the god (or gods), whether Siva, Vishnu, Buddha or a Bodhisattva, was also for the local king or ruler. The gods were a reflection of the divinity with which the king would merge after his death, or in the Buddhist context, the king as a Bodhisattva, a future Buddha.

\(^{243}\) Dumarcay 1986:2 cites de Casparis, *Prasati Indonesia II*. Bandung, 1956:323 translates the inscription dated 856 commemorating the consecration of Prambanan temple as ‘a beautiful dwelling for the gods’. Similarly ‘Dieng’, the site of a group of 7th century temples means ‘the place of the gods’.
The horizontal and vertical elements are also strongly controlled for visual and aesthetic reasons. The horizontal elements of Borobudur are emphasised in the architectural design in a similar manner to Javanese temple design. Walls are divided into repetitive layer upon layer of cornices, dado, stringer courses and parapets. Each of these elements is again subdivided into numerous horizontal stringer courses creating highly articulated vertical surfaces.

For example the division between the upper parapet wall and the lower inner face of the gallery walls and balustrade section are all clearly delineated by strongly modelled cornices. These are made up of a several rows of stepped and rebated stringer courses - three stone courses on the lower level and three courses on the upper cornice, which is partially hidden behind the small projecting acroteria.

These decorative elements are similar to stylised miniature amakalas or miniature kirttimukha (the Face of Glory) with face, hair and gaping mouth clutching strings of pearls or dragon like flames that enclose a small flame or in some cases candrasala (a moon chambers containing jewels). Their function appears to be similar to an acroteria and antifixa in classical Western architecture. They stand on the projecting central course of the cornice at a height of about 2.5 to 3m above the floor of each gallery as a continuous series of free standing small stone blocks, forming small pediments.

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244 Snodgrass 1985:311
245 In the Penguin Dictionary of Architecture authored by J. Fleming, H. Honour and N. Pevsner, 1966, these terms are used for ornamental blocks on the edge of a roof used to conceal the ends of the tiles or gutter trays. They can also be statues or ornaments that stand on plinths.
The motif is repeated on each level on the inner and outer surfaces of the terrace walls. They appear again on each of the triple stupas, which surmount the niches. Beneath the deep cornice supporting the pediment blocks, a deeply rebated stone course is lightly decorated with loops of many pearls interspersed with full lotus blossoms. On the lowest terrace levels the decorative motif is composed of a continuous row of cakras or wheels in bas-relief.

There are four centrally placed access stairways to each of the four elevations. The east stairway is the main entry point and the north stairway appears to have been
used for departure.246 Originally the upper parapet cornice extended across the
stairways without interruption, currently many sections are missing. Although the
elaborate cornices over the stairways are different from those across the galleries,
from a distance they form a solid external balustrade to the walkway. If the elements
were all intact, the balustrade would completely encircle and enclose the five levels,
providing nearly 5 kilometres of circumambulation passage around the structure for
the devotee.

Javanese Temple As A Model For Ritual Use In The Design Of Borobudur

Archaeological surveys carried out on Pala mahaviharas247 have revealed that
monasteries were built around an inner courtyard that contained a central cruciform
temple and a multi-storied stupa complex. The stupa was surrounded by terraced
circumambulation paths. It seems that the design of Borobudur is very similar. The
terraces were designed for the specific function of enabling the devotee while
ascending to the summit of the structure, to pass by illustrated panels that depict
scenes from the major Buddhist scriptures of the time.

Central Javanese temples were built on elevated base plinths decorated with bas-
relief panels that illustrate the stories from the scriptures. Similarly, there are over
1,300 famed panels of bas-relief scenes illustrating the various sacred stories from
the Buddhist scriptures on the terraced base to the central stupa of Borobudur.248

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246 Dumarcay 1978: 30-31, Dumarcay suggests that all stairways could have been used for descent,
although the west was possibly used more frequently as it led to the monastery
247 See pages 127-136 of this thesis for a description of Pala Mahaviharas
248 Soekmono/Dumarcay/de Casparis 1990: 110 descriptions written by Professor Soekmono of the
panels. See also Frederic 1994: 215-331 for a complete photographic reproduction of the bas-relief
panels taken from the five-volume study by van Erp and N.J. Krom published in The Hague between
The inner face of the fifth upper level has no decorative relief panels on the outer balustrade walls. There is however some bas-relief decorative detail to each central section of the plinths of the each stupa placed along the outer parapet wall. There is also a series of decorative cartouche-like pediments lining the upper cornice level just below the stupas on the balustrade walls that is again repeated at the upper level of the parapet wall.

Figure 92 Showing a typical gallery design (M. Jean)

1919-1931, under the title, Beschrijving van Borobudur A full analysis of the decorative details of the panels is provided in Section 3.5 of this study.
The fifth level has three concentric circular steps, the diameter of which is 52m on the north-south axis and 55m on the east-west axis. The first two circular steps unlike the last circular step and the large centrally placed stupa, are not perfect circles. Perforated latticework stupas, which contain the seated figure of the Buddha Vairocana, are arranged around each of the three steps that encircle the central stupa. There are 32 stupas on the first circular step, 24 on the next step and 16 on the last step, making a total of 72 stupas, which encircle the central large stupa.

Figure 93 View of the circular terraces, fifth level, and the central latticework stupas (M. Jean)
The stupas on the circular steps of the fifth level are designed with a square cut circular plinth on which rests a double lotus cornice, which supports a bell shaped anda and square harmika. Out of this, rises an octagonal solid stone axis shaft. On the highest circular step the stupas have harmikas, which are octagonal in shape. The perforated latticework of stones encasing the bumpa is diamond shaped on the first two levels and square on the last level. The strong modelling of the double lotus base to each stupa creates the impression of a series of floating lotus flowers, supporting
stupas that encircle the central stupa. The stupas are between 3.4m and 3.8m in diameter rising to 3.5 and 3.75m in height.

Attention should be drawn to the fact that the central stupa on the summit of many Javanese temples are surrounded by a series of smaller stupas in a similar way to those surrounding the central stupa of Borobudur. For example, several of the minor temples surrounding Candi Sewu have 16 miniature stupas that encircle the large dome-like central stupa on the upper third false roof level. The archaeological sites around Borobudur, have revealed that a little more than a half of the votive stupas have complex designs showing elongated stupas, which are surrounded by eight smaller stupas.\(^{249}\) Therefore it is conceivable that the present arrangement at the summit of Borobudur was a deliberate act and not the result of amended plans.

![Figure 94 Showing the arrangements of stupas encircling the temple roof of Candi Mendut (M. Jean)](image)

During the course of the 1970s restoration the large central stupa was almost completely reconstructed with new stone. The design and shape is similar to those on

\(^{249}\) Miksic 1990: 35
the circular terraces with a square harmika and octagonal spire, although the scale is larger, measuring 16 metres in diameter. The outer stone structure is solid, but the inner space contains a two level chamber, which was found to be empty in the 1840s when clearing began at the site. It is possible that an unfinished statue of the Buddha discovered in an excavation dug by earlier treasure hunters, may once have been placed in the chamber of the central stupa. Early photographs of the central stupa show that the lower section of the anda was carved with bas-relief decorative details.

Figure 95 Showing the central stupa in the mid 19th century, a small teahouse was constructed atop the central stupa in 1844, (Miksic)

250 Dumarcay 1978:36
2.3 STRUCTURE AND CONSTRUCTION TECHNIQUES

Borobudur is built on a volcanic outcrop composed of rhyolite, an unevenly surfaced volcanic rock mixed and overlaid with clay. The top of the original hill was 19m above the surrounding plateau before it was levelled to form the base for the monument. The initial construction began in 775AD and lasted for about 75 years, during which changes in stone masonry techniques are noticeable and can be used to date different elements and sections of the monument. Two main masonry techniques were used.\textsuperscript{251} The earliest sections are identifiable by their dry stone walling methods. The stone blocks were laid dry both on the horizontal and vertical with interlocking right angles.\textsuperscript{252}

A system of tenons and mortices was also employed during the second construction period. Other changes at this time included the practise of double sided dovetail tenons with stone clamps. But this method proved unsuccessful because of the weakness and uneven characteristics of the andesite stone.\textsuperscript{253} The size of blocks also varied. And later on a good quality mortar was introduced to cement the layers of stone together. The sculptured panels were carved insitu and were covered with two layers of stucco, possibly lime washed or painted for protection as well. This was a common practise in the region.\textsuperscript{254}

\textsuperscript{251} Dumarcay 1978: 28
\textsuperscript{252} Ibid. This was an imported technique from Sri Lanka during the mid 8\textsuperscript{th} century
\textsuperscript{253} Ibid. 29
\textsuperscript{254} Ibid. 29 see also the axonometric diagram of the different methods of stone construction Soekmono/Dumarcay/de Casparis 1990:166-168
Throughout the history of the structure, the drainage of rainwater as it percolated between the impervious irregular volcanic rocky outcrop and man-made clay embankments has had a tendency to cause slippage. This has fuelled speculation as to whether changes in the structure where due to structural or religious reasons.

**First Stage Of Construction**

The first stage of construction began between about 775 – 780 and comprised the preparation of the site by flattening the hill and setting out the building. This was followed by the initial construction of a wide base for a very high, foundation plinth or pedestal with a short terrace. A flight of ten steep steps was built above the base of the main structure to a short landing on the first terrace level. This was followed by four more steps leading to a level that had not been constructed before the plan was abandoned. This platform could have been for the main level of a temple in a similar design to the Shaivite Candi Arjuna or Candi Puntadeve at Dieng, which were built sometime between the end of the 7th century and 780.\(^{255}\)

![Figure 96 First stage of construction (Dumarcay)](image)

\(^{255}\) For a description of these two temples see Dumarcay 1986:14 Dumarcay states that Candi Arjuna and Semar, which form a pair are very similar to the Pallava temples of the 7th century. Evidence of its Hindu origin is demonstrated by the manipulation of proportion, a characteristic design feature of Hindu temples, seen by the variation in each level and flight of stairs designed to emphasize the height and perspective of the structure.
The first stage of Borobudur was built out of andesite, a porphyric rock, collected from the nearby riverbed and cut into rectangular blocks. Evidence indicates that during the early phases construction methods involved the cutting of small dovetail incisions into the blocks, which were fixed together by small stone clamps. The high foundation pedestal was made up of square plinth, fascia and astragal, large projecting cyma recta, cavetto, a very narrow dado section, stepped astragal, square fascia and large projecting cyma reversa or torus finished with fascias and astragals. This design seems to have been typical of the Candis constructed at Dieng. The hill was also terraced at during the first phase of construction.

Dumarcay demonstrates by an analysis of the occurrence of subsidence that the original building stood for less than 25 years, prior to the next stage of development. Subsidence occurred on the northern side, a large layer of stone debris was found to have slipped down the hill before the complete remodelling of the building. It is highly probable that a temple or Candi had been erected on the original platform, the third level. This is corroborated by the fact that under the foot of the big northern stairway constructed during the second phase of development to stabilise the structure, a large number of carved architectural elements, such as cornices, pinnacles, which do not belong to the present building, were discovered during the 20th century restoration work.

256 Dumarcay 1978: 28
257 Terms used are from classical western architecture
258 Dumarcay 1978: 23
259 Ibid.
Second Stage Of Construction

The second stage of construction began in about 792 when the structure appears to have been completely reconstructed. The elaborate earlier plinth base was strengthened by massive footings and projecting stairways. The stairs extended to the full length of the original paved base level that surrounded the structure. The construction methods were altered as smaller cut stone blocks, which interlocked at right angles, were now used for added stability, counteracting the tendency of the structure to fall outwards. The paving around the monument was built up and extended on the eastern side. In addition, the sides of the hill were terraced. This included five levels of compressed imported earth covering the layers of debris and building material that resulted from either demolition, construction or subsidence from the first development period.260

![Diagram of Stage two of the construction of Borobudur](image)

Figure 97 Stage two of the construction of Borobudur (Dumarcay)

260 Dumarcay 1978:24
The two former levels of the structure were extended to form four stepped terraces and a fifth level, which contained a circular shaped terrace with three plinth steps leading to an upright rim near the summit of the hill. Dumarcay claims that this last upright rim was to be the structural base of a large stupa, which may have been abandoned due to the danger of its excessive weight causing serious collapse of the whole structure.  

The original stair ways were modified by extending the second flight of steps, constructed in stage one, to a third level, with a stairway of ten steps giving access to the fourth level, followed by steep fight of seven steps to the fifth level. The outer and inner gallery walls on the second to fourth terraces were constructed and bas-relief work commenced.

Third Stage Of Construction

It seems likely that whatever structure was under construction at the summit of the hill the program was modified in about 800-810. This resulted in the present arrangement on the fifth level, which consists of three circular shaped open platforms with latticework stupas encircling a giant central stupa constructed at the summit of the hill. The outer wall and upper parapet of the first terrace level were constructed with niches to add to the number of statues of the Jina Buddhas.

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261 Ibid.
Gateway arches across the first and second terraces were constructed in a similar style to those that had previously been built on the third and fourth levels. Although small details changed such as the placement of kinnaras (mythical celestial creatures half bird half human associated with music) on the three lower terraces while on the upper terraces these were decorated with rṣis or wise men (ascetics or hermits).

It seems that for structural reasons the ground level paving was partially covered, when approximately 12,750 cubic metres of stone block were used to reinforce the base of the first terrace level. This resulted in the covering of bas-relief scenes around the bottom outer face of the first terrace, which depicts the Law of Karma.

Additional structural rectification included the installation of large drainage ditches in the earth platform around the monument.
Fourth Stage Of Construction

Additional work around the base of the structure occurred in 832. The stonework was strengthened by the introduction of a new technique of double face masonry work using good quality mortar instead of dry stone walling, to create a strong stepped buttress to the outer base of the monument. This technique was also used in the portals of the first gallery and reliefs attached under the cornice in the outside balustrade of the first and second galleries.

The intermediary spaces between the series of niches on the outer balustrade were infilled and a new series of reliefs were added to the upper cornice of the first gallery. These were associated with the new doorways modified about 792-800.  

262 Dumarcay 1978: 25
Although several scholars, including early researchers such as Henri Parmentier and even Dumarcay, all consider the four terraces were the base for one gigantic stupa. They believe that the dome was never constructed due to subsidence of the central structure, leaving one to speculate that the existing design was a compromise.\(^{263}\)

However Dumarcay and Frederic also caution attributing all changes in the evolution of Borobudur to structural imperatives. They cite radical change to a number of other Candis in central Java being entirely due to the introduction of new Buddhist doctrine. Furthermore they highlight the fact that it was common for sites in the region built for Brahministic rites in the mid to third quarter of the 8th century to have changed into Buddhist monuments by 800, only to then revert to Hindu or Shaivite sanctuaries again by 834.\(^{264}\)

The main building activity on Borobudur corresponds to the Buddhist expansion period of the Sailendra kingdom. It seems probable that the builders were influenced

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\(^{263}\) Frederic 1994:23-27 for a discussion on several different theories about the construction of Borobudur proposed by scholars

\(^{264}\) Dumarcay 1996:6 there was considerable tolerance by the Hindu Sanjaya kings with regards to Buddhism
in their religion by the Srivijaya dynasty of Palembang in Sumatra and the Malay Peninsular, who had been Buddhists for some time and had close contact with the major Buddhist centres in the Indian Pala kingdoms, the homeland of Buddhism. These centres included Nalanada, Uddandapuri and Vikramasila as well as the monastery centres in Bengal, Somapuri and Jaggaddala. These places hosted some of the most famous Buddhist teachers at a time when Tantric Buddhism rose to prominence and spread abroad quickly. Tucci observed that at the time of Borobudur's construction there were major changes in the practise of Buddhism and these were very quickly translated into renovations of Buddhist sites to reflect new ritual or ceremonial practices.\(^{265}\)

Dumarcay argues that while Shaivite temples, which required a cruciform shape, hardly changed from the 8th to the 13th century, this was not the case with Buddhist monuments.\(^{266}\) He provides a chronology of construction for 8-9th century Buddhist Candis in central Java, such as Candi Kalasan and Candi Sewu, several of which were built at the time of Borobudur's initial construction in about 775. Dumarcay demonstrates that major contemporary Buddhist Javanese Temples all show evolving changes in their structure, which he believes was a deliberate act on behalf of their custodians.\(^{267}\)

By about 790-800, contemporary with the first revision to the design of Borobudur, Candi Kalasan and Candi Mendut and possibly Candi Pawon were also altered, and two new temples, Candi Lumbung and Candi Sajiwan, were built. Two years later in 792 Candi Sewu was dramatically transformed into a major site with the construction

\(^{265}\) Tucci, *Indo-Tibetica I*, 1932: 46

\(^{266}\) Dumarcay 1986:20

\(^{267}\) Ibid.
of 240 smaller temples arranged in four concentric squares outside the sanctuary walls. Eight more temples were constructed between the second and third squares and enclosed by a second wall. On the four main axes some several hundred metres distance four more temples were built. Huge guardian statues knelt at the gateways along the main axis. Other temples like Candi Plaosan and Candi Sari may also have been re-designed as two storey mandalas at this time.  

Ritual changes were most marked at Candi Kalasan, which, in a similar fashion to Borobudur, was changed to serve the cult of the five Jinas by the addition of a porch and three other cellae giving it its cruciform plan. By about 810 many of the religious monuments had again changed. These included Borobudur, Candi Kalasan, Candi Sewu, Candi Lumbung and Candi Sajiwan. The changes were specifically focused on the entry approaches. This period represented the height of Buddhist building activity in central Java.

With the completion of the third alteration to Borobudur in 830, and during the initial construction period of Prambanan in 835, Buddhism appears to have waned as the new Hindu Sanjaya dynasty began to reunify central Java. The new dynasty initiates extensive building programs resulting in the construction of a series of smaller Shaivite temples, including Candi Perot, Candi Banon, Candi Pringapus, Candi Kuning.

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268 Dumarcay 1978:50 for a description of the two temples see also Dumarcay 1986:49-50
Figure 101 Showing the massive guardian figures at Candi Sewu (Wassman)

2.4 DECORATIVE STYLES, SCULPTURE, ART WORKS AND ARCHITECTURAL DETAILS

The entire Mahayana Buddhist pantheon is depicted in the scenes of the bas-relief panels on the four terraces of Borobudur. Each of the twenty sides of the lower gallery walls of the terraces are set out on both sides with approximately 1,300 framed relief panels. The bas-relief panels vary in size from the smallest panel of 1000mm by 620mm to the largest of 2600mm by 650mm. The panels are made up of a number of bas-relief illustrations carved insitu into the main body of the walls. Many of the bas-relief panels have deteriorated. During the 1970s restoration plain stone blocks replaced others considered too badly damaged or missing.

Despite this, as each panel is individually set into a decorative framework, the whole impression of the continuous rows of panels is like reading the pages of a book. The decorative patterns outlining each bas-relief panel range from scrolling vegetal matter, double vajras, vases of flowers, incense, and wish-fulfilling jewels to elaborate columns. Each of these columns consists of a pedestal base and capital, draped in flowers and strings of pearls and echoes both architectural elements from the scenes within the panels and those from the structure of Borobudur.

[269] Fisher 1993:11 Fisher writes that ‘the content of Buddhist art was shaped by fundamental changes occurring within the faith’. The bas-relief of Borobudur incorporates both the images made popular by Theravada Buddhist school (images of the historical Buddha, Sakayamuni, and of his former lives, the Jatakas) as well as those favoured by the Mahayana school (transcendent images of the Buddha and Bodhisattvas). At the beginning of the 20th century, each bas-relief panel was numbered and photographed by T van Erp and J.J. de Vink between 1907-1911 and the ‘hidden base’ was photographed by K. Cephas. The photographs were included in the five-volume study by van Erp and N.I. Krom, published in The Hague between 1919-1931, entitled, Beschrijving van Borobudur. They have been reproduced in their entirety in Borobudur, text by L. Frederic. 1994, Imprimerie Nationale Editions, Paris, English translation 1996, Abbeyville Press, New York.
Figure 102 Showing the layout of the bas-relief panels on the gallery walls of Borobudur (M. Jean)

On the first terrace level, the inner wall is decorated with two rows of 120 panels. The upper row illustrates stories taken from the *Lalitavistara* and the lower rows depict episodes from the *Manohara* and *Avadanas*. The inner face of the outer balustrade wall is decorated with two rows of scenes recounting the previous lives of the Buddha, taken from the *Jatakamala* and other *Jataka* tales. The inner and outer walls of the second gallery are illustrated by one row of tales from the *Gandavyuha Sutra*, while the outer walls illustrate scenes from the *Jatakas* and *Avadanas*. The third and fourth galleries are exclusively devoted to the *Gandavyuha Sutra*. There are also narrative relief panels on the hidden base plinth of the first terrace from the

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270 Leidy & Thurman, 1997:32 the *Lalitavistara* is the version of Sakyamuni’s biography associated with the Sarvastivadins sect that flourished in northwest India at the turn of the first millennium. These are an anonymous compilation of ancient tales and legends, one of the canonical texts of Buddhism collected into the *Tripitaka* (Three Baskets) translated into the Chinese at the beginning of the 4th century. The *Avadana* are moral fables and legendary tales performed in the name of the Buddha, written before the 5th century.

271 Frederic 1994: 124-126 the *Jatakas* are 547 tales relating to the birth stories of the Buddha during his previous lives, written in Pali and then in Sanskrit. Leidy & Thurman 1998:32 The *Gandavyuha* is an important part of the *Avatamsaka Sutra* regarded as one of the most important group of influential texts written between 200BCE and 200CE that played a formative role in Buddhist thought. The *Gandavyuha* was translated into Chinese by Buddhabhadra and several other monks circa 420 under the title *Defangguang Fo Huayan Jing*. The last chapter of the text is called the *Bhadrocari*.
Mahakarmavibhangga Sutra (Classification of Actions). Images also replicate contemporary life, daily activities and the construction of buildings, clearly showing different forms of architectural design.

In this chapter the various influences on the decorative styles of Borobudur are described under the following headings; firstly, Indian, Chinese and Central Asian influences, and secondly, contemporary Javanese style.

Indian Influences

An important factor in the architectural and iconographic style of Borobudur is the restricted but repetitive use of a few details. As described earlier in the section on the architecture of Borobudur, the most common of these details are those components that make up the arched niche. These consist of a stone torana adorned with triple stupas surrounding an arched niche containing either a statue of the Buddha, vase or small stupa. Many of these architectural elements are also found within the scenes of the bas-relief panels. For example, the replica of the architectural elements that make up the arched niches of Borobudur are found in many scenes carved into the panels. Most illustrations of temples show similar decorative detailing. Another common repetitive detail is the stupa. There are 27 images of various kinds of stupas, some of which are very similar to the individual stupas found on Borobudur. These images consists of a lotus throne, three steps to the base of a bell shaped anda, a square harmika out of which rises a tall pinnacle, surmounted with disc and flame.

\(^{272}\text{Miksie 1990:43 and Frederic 1994: 124 the Mahakarmavibhangga Sutra (Classification of Actions) is a set of Sanskrit texts, which was translated into Chinese about 582 under the title Lishi'qiptamun from Central Asia (Kushan) texts. It was possibly written by Paramartha, an Indian Buddhist monk, (c500-569)\)
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These decorative elements show influences derived from earlier architectural and iconographic details that are found in the cave temples in western India and the buildings of the great mahaviharas of the Gupta and Pala periods. For example in the cave temples at Ajanta, Ellora and Nasik, the Buddha image is either placed on the stupa or engraved onto the stupa. Sometimes they are found in small arched recesses built into the external surface of the stupa. Examples are found at Kanheri Cave IV and Ajanta Cave 19, carved during the 5th century.273

![Figure 103 Façade of Ajanta’s cave 19 carved during the 5th century. Façade of a vihara cave at Ellora constructed circa 7-8th century (Holy Places Of The Buddha)](image)

A major source of architectural inspiration throughout the Buddha world has been the Mahabodhi temple at Bodh Gaya, the site of the Buddha’s enlightenment under the Bodhi Tree near the banks of the Nairanjana River in India. The place is also

273 Holy Places of the Buddha 1994:287 and for a survey of Buddhist caves temples at Ellora see also Malandra 1993. Buddhist building activity at Ellora took place between 600-730 and at Ajanta between the 5-6th centuries and at Nasik about 2nd century BCE.
known as the Seat of Enlightenment, the Diamond Throne and has been revered ever since Siddhartha became a Buddha (the Buddha Sakyamuni Gautama). During the 4th-7th century the temple built on the site underwent major renovations during the Gupta period. Again during the Pala period (8th-12th century) Bodh Gaya became an important centre of learning and is associated with many Buddhist masters, including Atisa who resided there prior to becoming the main abbot of Vikamasila.²⁷⁴

Figure 104 The Mahabodhi temple at Bodh Gaya showing the arched niches, cartouches and general layout with platform and central stupa that could have become a model for Borobudur (Holy Places of the Buddha.)

²⁷⁴ Holy Places of the Buddha 1994:50
Chinese And Central Asian Influences

While the hundreds of niches of Borobudur may have derived from these early Indian sources, it is more likely that the connection is indirect, tempered by Chinese influence. It is argued in this thesis that the repetitive use of arched niches at Borobudur has a strong associational link with the multiple Buddhas seated in arched niches found in early Buddhist cave temples of Central Asia and China such as those found at Dunhuang in Gansu, Yungang in Shanxi, and Longmen in Henan Province due their association with the cosmic Buddhas.275 These cave temples were

275 Fischer 1993:92-93. The cave temples of Yungang and Longmen are contemporary with those of Ajanta and Ellora, yet there is a big difference in the iconography between the two locations. The Chinese cave temples contain colossal statues of Vairocana, reference the cosmic Buddhas and are decorated with repetitive images of miniature Buddhist figures. In contrast, reference to the Cosmic
constructed during the 5-8th centuries. The repetitive use of miniature Buddhas is often associated with statues of the colossal Buddha, a symbol of the cosmos as found in Cave 18 at Yungang. Here, the statue of Vairocana is depicted at the centre of the five Buddha families, each represented by five transcendent Buddhas, Vairocana, Ratnasambhava, Amitabha, Amoghasiddi and Akshobya. They mark the first known depiction of this concept in the visual arts.

There is some conjecture about the huge statue of the Buddha, but generally scholars suggest that the statue represents Sakyamuni in the form of Vairocana, who wears a robe filled with images of smaller Buddhas seated in meditation. This is a role specifically associated with Sakyamuni in the Avatamsaka Sutra. The Buddha of the Avatamsaka Sutra is not the historical Sakyamuni but is Vairocana or Mahavairocana, the Great Illumination Buddha. The universe is called 'Dharmadhatu.' This is a universe of radiant luminosity representing the fully enlightened Buddha, or the Dharma, the essence of the teaching. These images from Cave 18 at Yungang are regarded as the earliest known portrayals of the Avatamsaka Sutra.

Buddhas, the five Tathagata Buddhas or Jina Buddhas, are absent from the Ellora and Ajanta caves. See Malandra 1993:29 "at Ellora, the changing mudras o; the shrine images, specially in the later Buddhist caves, implies that some version of a multi-Tathagatas system did have at least limited influence". Also L. Chandra, "Borobudur as a Monument of Esoteric Buddhism," The South East Asian Review, Vol. V., No. 1 (1980), pp.26-29 points out that there was not an "immutable fixed standard" in describing the Cosmic Buddhas but, instead, there is considerable textual variation, so that each set of the five Tathagatas may represent a system among many.  

Ibid. p.23 the cave was built between 460-452 and is attributed to the influence of the monk, Tanyao, who was a student of the Kashmiri teacher, Shixian, and to the revival of Buddhism after the period of persecution from 446-452.

Ibid. p.23 the text was possibly compiled in the 2-3th century in India and first translated into Chinese by Buddhaghosha between 408 and 410. The Su. ra became influential in the late 6-7th century in China under the influence of the monks, Fashun (557-640) and Zhiyen (602-640)
It is suggested in this thesis that representations of the *Avatamsaka Sutra* and the Buddha Vairocana were fundamental to the conceptual design and architectural layout of Borobudur.\footnote{Ibid. p.22 and pp. 31-32} It is also suggested that in common with China and the early cave temples associated with the central Asian Silk Road, Borobudur shares similar decorative details which reference to the *Avatamsaka Sutra*. 
The use of gigantic scales is common in both places. The massive scale used at Borobudur can be compared with the colossal statues of the Vairocana in Central Asia and the huge cave temples in China and may originate from commonly shared values. As Williams writes, another way of depicting the cosmic nature of Vairocana was through sheer size. He also notes that from the 5th century there was a political tendency to identify Vairocana with the emperor in China and Japan, who were regarded as universal monarchs and ruled according to the *Avatamsaka Sutra*.280

Figure 107 Colossal Buddha c. 5th century in the verandah of Cave 3, Kanheri, India, however there are no references to the five Cosmic Buddhas.

280 Williams 1989:137
The massive scale and repetition of hundreds of arched niches containing Buddhas are central to the iconographic layout of Borobudur. For example, there are 108 statues of the Buddha Aksobhya seated in meditation holding the mudra known as bhumi-sparsamudra, ‘calling the earth to witness’ within the niches on all four levels of the east elevation. On the south elevation are another 108 niches containing the statue of the Buddha Ratnasambhava in the varadamudra, which symbolises ‘charity’. On the west elevation are a further 108 niches of the figure Buddha Amitabha in the dhyanamudra, ‘mudra of meditation’. While on the north elevation 108 statues of the Buddha Amoghasiddhi in the abhayamudra, ‘mudra of dispelling fear’ are contained in arched niches. On the outer balustrade of the fifth

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281 For an explanation of the symbolism of the Dhyanas (Jina) or Tathagata Buddhas, referred to also as the Cosmic Buddhas see Govinda 1960:83-86
282 Ibid.
283 Govinda 1960: 86
level, there are 72 figures of Bodhisattva Samantabhadra seated in arched niches. He holds the mudra *vītarkamudra*, called the gesture of deliberation or discussion.

Similarly there are 72 figures of the Buddha Vairocana contained within the perforated stupas on three circular steps. The Vairocana holds the *dharma*<i>cakra</i> *mudra*, symbolising ‘the turning of the wheel of the law’ which is associated with the first sermon at Benares and the Four Noble Truths.\(^{284}\)

In later Mahayana Buddhism, contemporary with the symbolic worship of stupas and the Bodhisattva or the Buddhas image, was also reverence for the Sutras. Immense merit could be obtained from studying, memorising, reciting the scriptures and even worshiping the texts. Magical properties were often conferred upon the Sutras. For example in China, Buddhist texts were specifically written and translated as a talisman to ward off attacks by the Tibetans and the Turks.\(^{285}\) Reversals of fortune on the battlefields were followed by renewed vigour in translating new texts and building programs. This is particularly evident with adoption of the *Hua-yen* tradition in South East and Eastern Asia, which is based on the *Avatamsaka Sutra*. Fa-tsong, one of the five patriarch and major proponents of *Hua-yen* tradition in China was appointed the royal abbot by the Tang Empress Wu Tse-t'ìn, (625-705). Under his tutelage she made Buddhism the state religion in China and portrayed herself as a *cakravartin*. It was reputed that she was attracted to the *Tathagata* teachings, as it did not distinguish between the sexes.\(^{286}\) It was during Empress Wu Tse-t’ìn’s reign that the massive 15 metre statue of Vairocana was carved at Lung-
men during 672-675. The statue has hundreds of small Buddhas radiating from Vairocana’s halo.\footnote{287}

In Japan, the Emperor Shomu (724-48), also see: out to rule on the basis of Hua-\textit{yen} and to that end he sponsored the building of the Todaiji monastery, which contained a 16 metre statue of Vairocana. This is still the seat of Kegon (\textit{Hua-\textit{yen}}) teaching in Japan. In Central Java it seems clear from the evidence of Borobudur that the Sailendra dynasty held the \textit{Avatamsaka} and the \textit{Gandavyuha Sutras} in high esteem.\footnote{288}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{image.png}
\caption{Figure 109 Showing the massive statue of Vairocana on the left, c. 675 at the Fengxian cave, Longmen, China (Fischer)}
\end{figure}

\footnote{287} Ib. p.137 possibly a reference to Vairocana, the Great illumination Buddha of the \textit{Avatamsaka Sutra}
\footnote{288} Williams: 1989:136-138
Contemporary Javanese Style

During the 8th century the Sailendra kings formed cultural ties with not only China and Southeast Asia but with the Pala kings of Bihar in northern India, the Candra dynasty of Bengal and the kings of Sri Lanka. The art schools of Pala India had considerable iconographic influence on Javanese art during the 8-9th century. The architectural and bas-relief details on Borobudur demonstrates the shared iconographic depictions of Vairocana, the cosmic Buddhas, the Bodhisattvas and other universal symbolic motifs such as the scrolling vegetal decorations, the eight auspicious signs, the candrasalas, the stupas and other such details.

Yet the style of the iconographic details of Borobudur is quite unique to central Java. This is particularly noticeable in the scenes illustrating the *Jataka* tales. These narrative scenes are full of everyday scenes and activities. Although there are several regional variations of the *Jataka* tales in no other place were such vivid everyday life scenes as those found at Borobudur used.

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289 Soekmono/Dumarcay/de Casparis 1990:14 the close ties with Nalanda in Bihar, India, can be demonstrated by the fact that Balaputradeva, the new king of the Srivijaya and son of the former Sailendra king, founded a monastery in Bihar c. 860AD
290 For a discussion on Pala and Bengalese influences on Central Javanese art and architecture see Huntington 1990:208-209
291 *Jataka* tales are the birth stories and the stories of the historical Buddha’s previous lives. Each tale is a morality lesson, designed to communicate the aspects of proper behaviour that will help in accumulating good karma, to lead to a favourable rebirth (Fisher 1993:212) Images of the *Jataka* tales were often reduced to codified symbols, such as the Bodhi tree (represents the Enlightenment) and the wheel (represents the first sermon of the Law), a riderless horse (represents the departure of the Buddha-to-be from his father’s palace). The Theravadas favoured solitary images, several different episodes of the *Jataka* tales could be portrayed in a single sculpture or painting. They viewed the Buddha more as Sakayamuni, in his human role, whereas the Mahayana school placed more emphasis on the three worlds, earthly, heavenly and ultimate. The difference in images between the two schools became more noticeable as the Mahayana school presented the Buddha closer to the heavenly sphere. Settings were elaborated with celestial palaces and numerous attendants, in contrast to the human world, where the everyday activity was recorded (Fisher 1993:12). *Holy Places of the Buddha* 1994:146. Also Ray, 1994:145-146 the *Jataka* scenes are frequently represented both in the Mathura and Andhra schools (e.g. the Great Stupa at Sanchi c.3rd BC-early 1st c. AD) and on the stupa at Amaravati (150AD) even when the same story is depicted there are regional variations. The Mathura school is distinctive due to the numerous bacchanalian scenes and absence of everyday life scenes, while those found in the Deccan Buddhist caves are quite austere. By comparison the Amaravati
The significance of the iconographic details of the *Jataka* tales of Borobudur relates to the way in which they show how Buddhism developed during a period of growing trade networks between central Java and its geographical region during the 9th century. The importance of merchants in their role as missionaries has been traditionally emphasized in Buddhist scriptures. According to the *Anguttara* commentary the Buddha Sakyamuni gave handfuls of his hair to two merchants, Trapusa and Bhallika, and with his staff, napkin and begging bowl instructed them how to erect the first stupas to the Buddha.

The role of merchants as Buddhist missionaries is given prominence in the bas-relief panels of the first gallery at Borobudur. The narrative scenes show a complex mechanism of trade with commercial transactions conducted at different levels, governed by the nature of the commodity handled. This includes the sale of medicinal herbs, clothing, perfume, oil for lamps, garlands, and the specialist export of horses, elephants, perfumes, gems, gold, ornaments and precious cloth, ivory and flowers. Illustrations provide references to the fact that the king or prince determined the price of horses. As Ray states, this suggests that the revenue collected at urban centres and ports were a major source of wealth for the ruling elite. This would have been particularly important for the Sailendra kings who controlled the Straits of Malacca and traded with China.

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The importance of Buddhism in the expansion of the trading networks is associated with the accumulation and reinvestment of wealth in trading ventures by the lay devotees. Donations to the Buddhist monasteries provided status to traders and other occupational groups. For example, the Buddhist Srivijaya, King Maraviyajuttangavarman built a Buddhist monastery for merchants at Nagapattinam in south India in 1006 and coerced the Hindu Cola king to grant revenues for the continued support of the establishment.  

Figure 110 Bas-relief panel depicting the storey of the merchant Maitrakanyaka who is greeted by nymphs each time he sails to a new city (Miksic)

296 Huntington 1996:550 it is interesting to note that the expanding trade links of the Srivijaya dynasty with China appear to be linked with the spread of Chinese Buddhist texts and religious monuments in Indonesia. Also see Ray 1994:121-161 for a description of the interactive support system that evolved between the spread of Buddhism and long distance trade between 300BC and AD300. In contrast, Strachan suggests that the demise of Buddhism in Java can be attributed to local revolts and increased commercialism, and the growing maritime power of the Cola dynasty. He suggests that the spread of Mahayana Buddhism by the 11 and 12th centuries was due to the retreat of Mahayanists, who had become refugees rather than missionaries. Strachan 1989:10. Similarly, Malandra 1983:14 suggests that the decline in Buddhist patronage at Ajanta during the last quarter of the fifth century resulted in an migration of Buddhist mones, artisans and patrons from the coast, towards the inland sites of Maharashtra, under the pressure from Calukya conquests along the west coast. This resulted in traditions of the western Deccan Buddhist rock-cut architecture transferred to Maharashtra.
Another important source of donations came from the trade guilds of craftsmen, who lived in special villages of their own or on the outskirts of the city. Frederic suggests that it is highly probable that the relief panels on Borobudur could have been commissioned by the wealthy bankers and by merchants who may have influenced what stories and scenes were to be sculpted.\(^\text{297}\) This may explain the breaks in the sequence of the relief stories.

A list of recommended dana, or offerings to monks, is illustrated in the *Jataka* tales carved on the stone panels on Borobudur. Donations could also extend to the construction of viharas and stupas. The construction of a stupa for ritual worship was one of the fundamental tenets of the rites of practicing the faith. It also became a status symbol, a cultural marker used by the rulers for a number of reasons. These could include promoting their merits as secular cakravartins, universal monarchs. Alternatively it could be used as an offering on behalf of their subjects to the Buddhas in order to gain merit, enlightenment, and peace or to ward off adversity.

The developments in later Mahayana Buddhism introduced a change in the practice and concept of dana, the giving of offerings. This is demonstrated by the popularity of Avalokitesvara, the Bodhisattva of compassion and the goddess Tara, who was born from a lotus that grew in Avalokitesvara’s tears of pity. Avalokitesvara is regarded as saviour of the seafarers and travellers in distress. While the goddess Tara, is the Mother of all Buddhas. She is also called the Saviouress, the protector against the great eight fears, making her popular with merchants, who in their travels

\(^\text{297}\) Frederic 1994:167
were often exposed to these dangers.298 Both images are found in the upper terraces of Borobudur. An example of the protection afforded by the Bodhisattva Avalokitesvara is often depicted in the Jataka stories about the master mariner, Suparaga, hired by merchants to navigate across the sea and is found in the bas-relief panels of Borobudur.299

It has been argued that the liberal approach of Indian Buddhist monks towards travel and transoceanic voyages, in comparison with the restrictions placed on travel by the Brahman society, played a crucial part in expansion of Buddhism along the inland trade routes, centres and ports over seas.300 In the bas-relief panels of Borobudur the interrelationship between Buddhism and maritime trade is illustrated extensively. For example, there are scenes showing Sudhana, the pilgrim, visiting a ship captain, Vairadasa, who is Sudhana’s twenty fourth master. He receives teachings from him prior to travelling by sea.

Ray suggests that the monasteries may have supplied essential provisions to trade caravans at a profit, and also provided much needed capital at interest.301 The use of Buddhist expressions or formulae and use of auspicious symbols for seals and inscribed pottery for trading was common.302 In consequence some scholars suggest that in the early historic period the Buddhist Sangha contributed to the spread of

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298 Wilson 1986:13 the carvings in the caves of West India, at Ajanta, Aurangabad, Nasik, Kanberi and Ellora show the evolution of the symbolism of Tara. From the reign of king Kaniska (r. circa AD 78-144) to the end of the 6th century the cult of the Bodhisattva Avalokitesvara is frequently referenced in literature, although the first sculptural representations can be dated no earlier than the 5th c. AD (Ray 1994:148) but by the 7th century and more particularly the 8th century, the goddess, Tara, becomes popular in the role of saviouress
299 Ray 1994: 124
300 Ibid.
301 For a description of the location of Buddhist monastic sites along important trade routes in India see Ray 1994:136-143
302 Ibid. pp131-151

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reading and writing. The importance of the Sutras is illustrated in the bas-relief panels in Borobudur. On the upper gallery walls an illustration shows the text of a Sutra resting on a cushion in a stupa and surrounded by worshippers.

2.5 CHRONOLOGY OF SITE DEVELOPMENT

Principal sources of historical information for central Java in the 8th to 9th century are derived from Old Javanese inscriptions and royal edicts engraved on stone or copper plates. These usually record matters concerning grants of land, immunities and exemptions from taxes connected with land ownership, granting special privileges in respect of the exercise of crafts and trades. Royal charters were accurately dated from AD 878 and contain names of the dignitaries, officials and local authorities that carried out royal orders revealing systems of government and administration. 303

Records relating to Borobudur are scarce. Inscriptions have been found around the relief of the hidden base, carved in Kawi, (ancient Javanese characters) and appear to refer to instructions for sculptors. 304 There have been differences of opinion between scholars about the exact date of the construction. Hendrik Kern dates the inscriptions to the first half of the 9th century, while Krom dates them to towards the end of the 8th century. After an analysis of the text, Bosch concludes that the monument was built between 732-770. Ananda Coomaraswamy however suggests a construction date of between 760-847. 305 And according to an analysis by Jacques Dumarcay, Borobudur was built between 780-833. He suggests that the parapet on the first

303 Soekmono/Dumarcay/de Casparis 1990: 15
304 Ibid. p. 13 and Frederic 1996:46
305 Frederic 1994:46
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terraces was only added after 832 but before 856. This would imply that the artistic style of Borobudur dates to the Central Javanese classical period, when central Java was a major centre of power in the South East Asian region.

Major building activity at Borobudur corresponds to the Buddhist expansion period of the Sailendra kingdom, a Mahayana Buddhist kingdom that encompassed the Thai-Malay peninsular as well as Sumatra and Java. Along with the Srivijaya, Sanyaja and Mataram kingdoms, they dominated the region between the 7th and 10th centuries. The Srivijaya empire, based in the capital Palembang in Sumatra, is recorded from the middle of the 7th century and lasted until the end of the 13th century. Around 683-686 an inscription records that the Srivijaya, a Mahayana kingdom was preparing a military expedition against Java.  

There appears to have been close relations between the Srivijaya, Sanjaya and Sailendra dynasties. A Sanskrit inscription dated 732, found near Borobudur, describes the island of Java as rich in gold and grain. It notes that King Sanjaya had control over Sumatra and Cambodia, and his successors had become Buddhist and were known as the Sailendra kings. Another inscription found at Ligor in 775, records that the king of Srivijaya had established a foothold on the Malay peninsular.

Detailed information about the Sanjaya and Sailendra kingdoms is obscure and confusing. There seems to have been much intermarriage between the dynasties as well as there being open hostilities. Scholars maintain that the Sailendras were from

106 Ibid. p. 46 and Dumarcay 1978:4-5  
107 Huntington 1996:549  
108 Frederic 1994:207  
109 Ibid. p. 207 the stele records that the sovereign, Panorgkaran (Panatara), 'the scourge to his enemies, bears the title of Mahanaja, belonging as he does to the Sailendra line'
a local Javanese family. It seems probable that the Sailendra dynasty was influenced in their religion by the Srivijaya, rulers of Palembang in Sumatra and the Malay Peninsular, who had been Buddhists since the 7th century. During the mid 8th century Mahayana Buddhism exerted a strong influence in South East Asia. It seems probable that the Sailendras converted to Mahayana Buddhism during the reign of the Sailendra or possibly Sanjaya king, Panongkaran, prior to the construction of Candi Kalasan, dedicated to the goddess Tara, in 778. According to the foundation inscription, this temple was built during the reign of the Sailendra king, which could be Visnu, otherwise known as Dharmatunga, (775-782) or as Soekmono states it could be Panongkaran (c. 760-778). Another Candi dedicated to Manjusri was constructed by the Sailendra king, Indra, in 782. The inscription at Kelurak refers to Panongkaran, as Indra and also as Dharanindra or Dharmatunga. According to the inscription by King Balitung, dated in 907, Borobudur was constructed by the tenth Sailendra ruler, King Samaratunga (r. 792-832.). He married Princess Tara of Srivijaya in 824.

At the end of the 8th century, King Samaratunga of the Sailendra dynasty dominated central Java. This event was marked by the construction of many Buddhist structures and the re-modelling of Hindu sites of which, Borobudur, is an outstanding

310 For an outline history of the Srivijaya, Sailendra and Sanjaya see Huntington 1996:549-551
311 Dumarcay 1978:2 provides a table for the succession of the Sanyaja and Sailendra dynasties based on work undertaken by de Casparis in 1950. de Casparis concluded that from the end of the 8th century to the beginning of the 9th century the two dynasties shared power in central Java. He states that Panongkaran (from the Sanyaja dynasty) was in control between 760-778 or 780 and that Visnu otherwise known as Dharmatunga (from the Sailendra dynasty) reigned from 775-782
312 Dumarcay states that Candi Kalasan was certainly constructed by a Sanjaya, but one who confirms his dependence on the Sailendras (King Panongkaran is cited in the Kalasan inscription of 778) Dumarcay 1978:2. 4 Soekmono states that the foundation is explicitly ascribed to the Sailendra dynasty, and that King Panongkaran may have claimed descendency from the Sailendra dynasty, Soekmono, Chandi Borobudur, UNESCO 1976: 10
313 Soekmono/Dumarcay/de Casparis 1990:14
example.\textsuperscript{314} For the major part of King Samaratunga's reign, (r. 800-812 to 832) there seems to have been a period of relative peace in central Java, enabling the king to organise massive building programs for the construction of religious sanctuaries. It is probable that the final design and layout of Borobudur, which was one of several religious sites under construction was completed at this time. Rough estimates suggest that the monument was built over a thirty year period by a work force of several hundred working more or less continuously.\textsuperscript{315} An analysis of inscriptions reveals that the population were obliged to work for the state during a fixed number of days per year. Rice cultivation and irrigation of fields led to the division of the year into two periods of intense work and light work, thereby freeing manpower for periods of time which could be used elsewhere such as for public building work. The king granted land or certain rights such as freedom from specific taxes or the rights to undertake craftwork and trade, by reduction in tolls and levies payable. These levies were payable either to religious institutions or to high officials and dignitaries, who enjoyed the king's favour as a reward for services rendered and in order to promote the growth of religion. The religious institutions also held authority in the public interest according to the religious laws. In return for his right to exact taxes the king was expected to protect against external danger and calamity.\textsuperscript{316}

The weakening of the Sanjaya dynasty caused by the dominance of the Sailendra in central Java may have allowed a Khmer prince to shake off Sanjaya suzerainty over the ancient kingdom of Cambodia. In 802, when Jayavarman II came to power, the

\textsuperscript{314} Soekmono 1976: 10 'religion was never a source of any serious conflict in Indonesia; it was possible for a Hindu king to patronize the establishment of a Buddhist foundation, or for a Buddhist king to do likewise. Even a change in the official religion could take place without affecting the continuity of the dynasty or cultural life'

\textsuperscript{315} Milksic 1990: 26.

\textsuperscript{316} Soekmono/Dumarcay/de Casparis 1990:15-17
inspiration of Borobudur possibly led to the first stage in the layout of Bakong at Roulus, which has a similar design. The period is marked by expansion of the Srivijaya kingdom with the control of the Malucca and Sunda straits, ruling over the Malay peninsular and Sumatra with continuing interests in Java.

In 832, at the time of the death of the Sailendra king, Samaratunga, the youth of his successor, Balaputra, may have encouraged the Sanjaya dynasty to take control of central Java. The Sailendra princess, Sri Kahulunan, was married to the Sanjaya ruler, Rakai Pikatan, who was connected to the old Mataram dynasty. Pikatan thus annexed the Sailendra kingdom through marriage. According to inscriptions found at Nalanda monastery, dated 856, the last Sailendra prince, Prince Balaputra, the son of the deceased Sailendra king of Java, fled to Sumatra where he eventually became ruler of Srivijaya. Shortly after coming to power, the Hindu Sanjaya king, Pikatan, commenced appropriating major Buddhist building sites, including Borobudur. Ruling over a Buddhist majority, he took the first steps towards syncretism of Buddhism and Hinduism. Work had begun in 832 on the Shaivite complex Prambanan, dedicated to the cult of Siva. This was a major building program in association with diversion of the Opak river and construction of major irrigation scheme and was completed in 856. Building works included the enlargement of the Buddhist Candi Plaosan and additional changes to Borobudur including the construction of the nearby triple Hindu sanctuary of Candi Banon, which has not survived.

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317 Dumarcay 1998: 55
318 Hall, *History of South-East Asia*, p.58 quoted in Huntington 1990:208
319 Nalanda inscription AD 851, Huntington 1990:550
320 Ibid. p. 208
321 Dumarcay 1986: 6 and 42
322 Ibid. p. 42.
At the beginning of the 10th century, the Sanjaya King, Sindok, relocated his capital to the east of Prambanan, although the exact site has not been found. The relocation may indicate volcanic activity in the area or the destruction of the dam and irrigation scheme on the Opak river. It might also have been due to the weakening of the royal authority. There is evidence that the Srivijaya rulers, under the protection of the Chinese, commenced aggressive assaults on the Sanjaya/Mataram in 922. By 1002 they had overthrown the Sanjaya-Mataram dynasty, becoming one of the most powerful maritime powers in Southeast Asia. Their rule lasted until the 13th century, and was rivalled only by the Cola dynasty of southern India. During this period Srivijaya became a centre of Buddhist learning and pilgrimage. In 1013 to 1025 the Bengali pundita, Atisa, spent twelve years in Srivijaya, where he studied with Dharmakirti, a renowned Buddhist scholar. Following the devastating raid in 1025 on the Srivijaya capital by the southern Indian Cola, the Srivijaya empire was seriously weakened. Chinese records show it took over hundred and fifty years for the Srivijaya with the help of the East Javanese empires to recover and become the third wealthiest foreign power in the region. In 1225 the Chinese record, Zhufan, notes that the Srivijaya had fifteen vassal states in Java and the Malay peninsular. But by the end of the 13th century the Buddhist Srivijaya kingdom had declined and was no longer mentioned by Chinese historians and the place became known as ‘Malayu’.

Despite a major earth quake recorded in the area in 1003, it seems highly probable that the great temples of central Java and in particular Borobudur continued to be the

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323 Huntington 1990:211
focus for pilgrims and religious activity for several centuries after the decline of the central Javanese court during the 11th century. It is most likely Borobudur was used until the end of the 13th or 14th century. After this time it appears to have been pillaged, or perhaps due to the decline of the Buddhist Srivijaya kingdom, the lack of support and regular maintenance of the site, the monument fell into disrepair.  

Borobudur gradually deteriorated, soil and vegetation filled the galleries, but it was never totally abandoned by locals of all faith, who continued to respect the place. When the British took over the administration of the island in 1811, the Governor General of India, T.S. Raffles, ordered the surveyor, Cornelius, to inspect the monument. Cornelius made drawings of the monument and started excavating the soil from around the structure in 1814. Soon afterwards the Dutch took over the control of the island.

In 1849 the Dutch government appointed a scholar, J.F. Brumund, and an illustrator, F. C. Wilsen, to make a detailed description of the monument, but Northing came of the project. In 1867 there was another major earthquake on the island and shortly afterwards, in 1872, the Batavian Society commissioned J. van Kinsbergen to carry out a complete photographic record of the place. In the 1870s the subsidence of the first and second galleries were noted for the first time and initial attempts at repair to discharge the surface rainwater from the galleries began. A Dutch archaeologist, W. P. Groenevelt, was appointed to undertake a new study but efforts of conservation were abandoned as he reported the monument was in no danger of collapse.

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324 Miksic, 1990:24, and Dumarçay 1986:6-8
325 Frederic 1994: 35
326 Dumarçay 1978:xiv
Gradually over the next fifty years the condition of the physical structure and the many historical changes to Borobudur were revealed. In 1886 the Dutch archaeologist and art historian, J.L.A. Brandes discovered the hidden relief, previously partially excavated by J. W. Ijzerman in the 1885-90s, who had photographed the entire series of reliefs that had been hidden by the base.

Unfortunately the removal of soil that had protected the galleries, only served to worsen the structural problems and deterioration increased rapidly.\textsuperscript{328} In 1900 the restoration committee was once again reformed to investigate measures to preserve Borobudur. The committee included J.L.A. Brandes and Theodore van Erp, an officer of the army of engineers and van de Kramer, a civil engineer. It was Theodore van Erp who, with the assistance of the Javanese, was appointed to undertake repairs to all the balustrades, lower stairs and reconstruction of all 72 stupas on the circular terraces. His work, which included pouring a layer of concrete over the gallery floor, was not very successful. But he was able to provided evidence that the plan of Borobudur had altered over the course of its construction. The whole monument was photographed at the completion of the work.\textsuperscript{329}

The monument continued to shift, sag, erode and deteriorate and various elements such as the balustrades on the north side were dismantled to avoid major collapse. Within 15 years the rate of deterioration was significant with 40 of the 120 relief panels depicting the life of the Buddha seriously damaged. Between 1920-30 N. J.

\textsuperscript{328} Miksic 1990:29
\textsuperscript{329} Frederic 1994:35 and Miksic 1990:30-31
Krom and T. van Erp published a vast multi-tome volume monograph in which they
analysed the complex and tried to interpret the reliefs.\(^{330}\)

In 1929 the Dutch colonial government set up another commission to identify the
causes of the deterioration and propose a course of action. After careful studies and
recommendations for restoration funds were unavailable to carry out the work.
Although interest and speculation about the origins and structure of Borobudur
continued to intensify, it was not until 1931 that a law was passed to protect historic
monuments in Indonesia. In 1937 there was another devastating earthquake in the
region, which caused extreme economic hardship in Indonesia. It was the Indonesian
government, shortly after they gained independence in 1950, conducted further
assessment reports and approached UNESCO for funding assistance for the complete
restoration of the monument. In 1955 a Belgian archaeologist was sent out to carry
out further analysis and a grant was made available for staff of the Indonesian
Archaeological Department to train in Belgium. A plan was developed to dismantle
and rebuild the square terraces of Borobudur in order to install an adequate drainage
system behind the walls and under the floors.\(^{331}\)

An appeal was made in 1967 at the XXVIth International Congress of Orientalists in
Ann Arbor, Michigan, USA for UNESCO's technical and financial assistance for the
restoration of Borobudur. From 1968 experts started carrying out site surveys and
analysis. Under the Suharto government and the direction of Dr. R. Soekmono, a

\(^{330}\) Frederic 1994:35

\(^{331}\) Ibid. A similar story of the involvement of UNESCO (United Nations Educational, Scientific and
Cultural Organization) can be found with the restoration of Angkor, Cambodia from 1991 when they
established a regional office and assisted the new Royal Cambodian government in seeking
major restoration program was established in 1971. The eventual cost of the project was $25 million, of which $6.5 million was provided by foreign assistance.

The Indonesian government and UNESCO signed a formal agreement in Paris in January 1973 and in August that year the project was formally started. The restoration project was incorporated into Indonesia's five year Repelita development plan. Many different types of specialists were engaged to assist with the restoration project: meteorologists, soil analysts, petrologists, microbiologists, hydrologist, seismologists, chemists and archaeologists all worked together. In 1975 the work began on the northern side of the monument. This included the dismantling of the entire section of square terraces 170,000 stone blocks so that a complex drainage system could be installed. This consisted of laying lead sheets and the application of a tar membrane to the layers of stone as flashing and damp proof membrane combined with the installation of internal drainage pipes in new reinforced concrete foundations to support each storey of the structure. Work extended to the cleaning and conservation of each single demounted piece of stone, consisting of nearly 170,000 pieces. Dirt and microorganisms, such as moss, fungi, lichen and algae that had covered the stones were carefully removed and then the stones were reinstated in their original setting.\textsuperscript{332}

The project lasted over ten years and over six hundred labourers and technicians worked on the project. It was completed in October 1982, and Borobudur was opened again to the public.

\textsuperscript{332} Dumarcay 1978: xv-xix, Miksic1990: 29 and 31
2.6 RELIGIOUS INTERPRETATION AND SYMBOLISM

Introduction

The monument of Borobudur and the wider context of Buddhist stupas, temples and mandala diagrams have been researched extensively.\(^ {333}\) Dumarcay drew attention to the fact that by 1980 there had been over five hundred academic books published on Borobudur.\(^ {334}\) Research has covered the construction techniques employed in the building of the monument, translation of the relief panels and related ancient Javanese texts and stone inscriptions. Studies have covered the greater archaeological site surrounding Borobudur and other archaeological sites in Java, including related archaeological relics, statues and steles. This work has included analysis and investigation of the symbolism and cross-cultural influences of the iconography of Borobudur. These studies have explored the traditional belief systems of Indonesia, numerology and astrology, and the historical rise of Buddhism and Hinduism.

Other scholars have looked at the development of contemporaneous Buddhist doctrines, analysis of visits by Chinese Buddhist pilgrims, and carried out comparative surveys on the early and later expansion of kingdoms in the region. Scholars have also examined the development of the syncretisation of Buddhism with Shaivism in Java and Bali.

\(^{333}\) Major scholars that have focused their research work on Borobudur include Theodor van Erp, N. J. Krom, Alfred Fouche, Henri Parmentier, A. J. Bernet-Kerpes, Professor Soekmono, Jacque Dumarcay, Paul Mus, J.J. Boeles, J. G. De Casparis, J. Footein, Luis O. Gomez and Hiram Woodward, A. Hoening, Daigoro Chihara, Louis Frederic, F. Stutterheim, A. T Daud and John Mikes

\(^{334}\) Dumarcay 1978:38 Dumarcay noted that Bosch, Mus and other scholars, have said that Borobudur provokes discord
The following section outlines a range of different interpretations on the meaning of Borobudur expounded by scholars. The next section outlines a number of conclusions drawn by some scholars about the relationship between the development of Buddhism and the architectural expression of Borobudur.

The Meaning Of Borobudur

Despite all the scholarly work focusing on Borobudur, the experts differ in their conclusions on the meaning and symbolism of Borobudur. In the 1980s Soekmono pointed out that many hypotheses and theories have been put forward during the 20th century, some more plausible than others, some very convincing, but no single explanation enjoys universal acceptance.\textsuperscript{335} It is interesting to note that even the etymologies for the name, ‘Borobudur’ have for one reason or another proven unacceptable to many researchers. For example after three decades of studying Javanese inscriptions, de Casparis pointed out that all stones inscriptions dating to 842 AD that reference Borobudur, such as the stone inscription, ‘Kawulan i Bhumi Sambhara’ or ‘Bhumisambharabhudhara’ translates as ‘mountains of the accumulation of virtues in the ten stages’ (of the Bodhisattva’s progress towards enlightenment).\textsuperscript{336} Another scholar quoted by Soekmono, Poerbatjara suggests that the word ‘boro’ comes from the Javanese word ‘biara’ meaning monastery.\textsuperscript{337} Professor Soekmono, observes that this explanation of Borobudur is justified by the discovery of archaeological remains of a monastery unearthed in 1952 near the

\textsuperscript{335} Throughout the 20\textsuperscript{th} century many scholars proposed various theories about the meaning and symbolism of Borobudur. For a survey of some of these theories see Miksic 1990:39-55, Dumarcay 1978:38-42, Soekmono 1976:38-41 and Frederic 22-27

\textsuperscript{336} Dumarcay 1978:39 cites that the two most common theories about the meaning of Borobudur are firstly, the structure was designed as a mandala, a symbol of the universe, while the second theory emphasizes the theological symbolism of the monument, such as the division of the monument into the three Buddhist spheres of desire, form and formlessness. See Soekmono/Dumarcay/de Casparis1990:28-29

\textsuperscript{337} Soekmono 1976:13-14
courtyard to the west of the site. On the other hand, Moens suggests that
‘bhurabuddha’ followed by the suffix ‘ur’ in Tamil denotes a city. This would give
the meaning of Borobudur as the ‘City of the upholders of Buddha’. According to
the ancient Javanese poem, Nagarakttagama, the term ‘Budur’ refers to the name of
a Tantric sect of the Vajradhara. 338 339

Since its rediscovery in the middle of the last century, Indonesians always refer to
Borobudur as ‘Candi Borobudur.’ Soekmono points out that ‘Candi Borobudur like
all Candis symbolise the Cosmic Mountains, which in turn are symbols par
excellence of the Universe’. 340 In Java the architectural layout of all Candis are
divided into three spheres of the gods on Mt Meru. The temples were usually erected
in honour of a sovereign, who had been deified by reason of his special virtues.

According to both Hindu and Buddhist views, the universe consists of an infinite
number of worlds represented by discs. Each universe has its own Buddha and
planets, and is divided into the three levels of consciousness. The lowest is where
humans live with demons of hell below. While thirty three gods live on the slopes of
Mt Meru, the highest realm. Mount Meru is believed to be a magnificent mountain,
built out of gold and gems and shaped like the seed vessel of a lotus. It forms the
centre of the world, around which all the planets revolve. Each of the four faces of
the mountain are profusely decorated. Each side has a central stairway and a regent.

338 Written in 1365 by Prapanca, a Buddhist monk, during the reign of Hayam Wuruk (1350-1389)
Soekmono 1976: 13 and Frederic 1996:42 Frederic notes that it is difficult to tell whether the poem is
referring to Borobudur or not
339 Dumarcay 1978: 39 states that Krom underlined in the 1920s the importance of Mahayana
Buddhism at the end of the 8th century and that a special cult existed for the Bodhisattvas and the
goddess Tara and he assumed that the Buddhism practiced at Borobudur was tinged with Tantrism
At the summit is the heaven of Brahma, the meeting place of the gods.\textsuperscript{341} At the top of Mt. Meru is a three storeyed palace or pavilion resting on the canopy of a lotus stem. Within the palace are stupas of the varieties known as ‘victorious’ and ‘illumination’ or ‘radiant’. The pavilion contains a mandala where the main deity sits in the centre surrounded by others deities that belong to the same mandala.\textsuperscript{342}

Western scholars have repeatedly drawn attention to the links between Mt. Meru and the design of Borobudur. In his monumental study of Borobudur published in 1935, Paul Mus persuasively concludes that the design of Borobudur was both a stupa and a stepped pyramid symbolising just such an ideal world. He asserted that Mt Meru is contained beneath the central stupa, located on the summit of Borobudur, below which are descending realms of heaven.\textsuperscript{343} The German architect, A Hoenig, who studied the monument during the 1920s, held the view that Borobudur was intended as a temple built on top of a nine storey pyramidal platform.\textsuperscript{344} Archaeological sites of similar structure exist in Sri Lanka examples include the Vatadage of Medirigiriya built in the 7th century, which is composed of a stepped circular platform rising to a small stupa. The stupa is enclosed by two concentric rows of stone pillars supporting a domed roof structure derived from the Indian caityagarbas.

\textsuperscript{341} Matsunga, A., 1969, \textit{The Buddhist Philosophy of Assimilation}, pp 38-39 quoted by L. Chandra in the introduction to \textit{Stupa}, English translation of \textit{Indo-Tibetica I}, G. Tucci, 1932. xvii. Strachan 1989: 13-14 writes that the most fundamental architectural form of the stupa, though conceptually Buddhist in origin, was designed according to Brahmanic cosmological thought associated with the five-peaked Mt. Meru. The terraces of the stupa reflect the tiered slopes of the cosmic mountain, Mt Meru, a Brahmanic concept that had been absorbed into Theravada Buddhism.

\textsuperscript{342} Lessing, F., and A. Wayman 1968 translation of the original Tibetan text, \textit{Mkhas-grub-rje’s, Fundamentals of Buddhist Tantras}, p. 175, quoted by L. Chandra in the introduction to \textit{Stupa}, English translation of \textit{Indo-Tibetica I}, G. Tucci, 1932:xxii

\textsuperscript{343} Mus quoted by Frederic 1994:39

\textsuperscript{344} Frederic 1994:24
Daud said that the closed physical world created by the galleries indicated that Borobudur was built to recreate a cosmic mountain, the abode of the gods, such as the sacred Mt Meru situated at the centre of the cosmos. He suggests that to interpret the site it is necessary to include the slopes of the hill on which Borobudur stands as it was originally terraced and finished without the addition of the final construction of the buttress like base. The base of the monument would have risen up to a height of 7 metres, emphasizing the height of the place. He speculates that the pinnacle of the stupa was also originally crowned by a roof structure supported by tall octagonal pillars and surmounted by a 13 tiered parasol. This would have greatly elongated the perspective of the site.  

However, the existing layout and design Borobudur does not precisely reflect the numerology described in the diagrams illustrating Mt Sumeru. Nevertheless Dumarcay affirms that the site was above all a dwelling of the gods. To prove his point he draws our attention to epigraphic inscriptions. He describes the 856 stone inscription translated by de Casparis, which commemorated the consecration of Prambanan as "a beautiful dwelling for the gods". This is similar to Khmer epigraphy where buildings were sometimes referred to as 'golden mountains' or 'king of the mountains'. Mountain sites were important religious places in Java and elsewhere. The sites of many early temple complexes were built in mountainous locations, such as the Gunung, Wukir, Dieng, and Gedung Songo groups.

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345 ibid.
346 Dumarcay 1978:55 see also Miksic 1990:47 'an inscription from Ratu Boko Plateau south of Prambanan, dated AD 792, written in the form of a prayer to the Sumeru of the perfect Buddhas a clear indication that the Javanese equated mountains with powerful spiritual forces'
347 Miksic 1990: 24 Borobudur was erected by a family of kings known as the Sailendra, 'Lords of the Mountain' and the Buddhist ruler who started work on the monument was named Indra, after the god who lives on atop Mt Sumeru
To further support the argument that Borobudur was designed as a sacred mountain, Hoenig in his book 'Das form problem des Borobudur,' speculates that the original form of Borobudur had four gates and nine floors. This would have been similar to the temples found in Cambodia. He states that one of the Sailendra kings, who worked on the site, was named Indra, after the Hindu god who lives on top of Mt Sumeru. A stone inscription found at Ratu Boko plateau, south of Prambanan, dated 792AD, is written in a form of a prayer to "Sumeru of the perfect Buddhas". Hoenig maintains that the monument above all symbolises the royal prestige of the Sailendra rulers as 'cakravartin'. The Sailendra dynasty was also known as "Lords of the Mountains." Frederic draws attention to the fact that this title in which the ruling royal dynasty is identified with mountains, was also used in India and Funnan (ancient Cambodia). He maintains that it was based on ancestral religious customs of the area.

Other scholars emphasize the royal connection with Borobudur. Stutterheim concludes his analysis by claiming that the stupa of Borobudur was of Indian origin. The design was a combination of the ziggurat stepped pyramid terraces of middle Asian origin associated with royal burial tombs. He lends support to his hypothesis by referring to the existence of this type of structure in ancient Javanese literature. Other scholars, like Alfred Foucher, theorized that Borobudur had been deliberately designed as neither a temple nor a sacred mountain. Instead he suggests it belongs to a specific type of structure, which had evolved from earlier pyramidal-like stupas found in the north west of India.

348 Frederic 1994: 25 Hoenig considered that Borobudur prefigured the temple-mountains of the Khmers.
349 Frederic 1994: 43
350 For a discussion on the Indonesian cult of the ancestors see Frederic 1994: 79-86
351 See for description of Stutterheim's thesis of 1929 see Dumarcay 1978:40
It was not a stupa in the form of a dome, in the ancient Indian style, nor was it a terraced pyramid stupa of the type found in the NW India and described in the writings of the Chinese pilgrims, but it was much more highly wrought, interest with a series of horizontal walkways and itself crowned with a second cupola.

Soekmono summarises the various positions held by so many scholars.

All researchers acknowledge that Borobudur is a monument of exceptional symbolic richness; and that our knowledge of Borobudur has increased greatly over the century, the actual meaning of the monument, and the purpose for which it was built, remains obscure.

He suggests that the predominant architectural design of Borobudur was meant to be neither solely as a stupa nor stepped pyramid, but combined a stepped pyramid with a stupa on top.

Later Mahayana Buddhism and the Development of Borobudur.

The origins of Mahayana Buddhism is obscure, but appears to have developed out of doctrinal changes most noticeable in changes to the iconographic and architectural details of religious sanctuaries. The Buddha now became a spiritual king, relating to and caring for the world rather than a being who, after his death had completely gone beyond this world. Williams writes that the changing attitude to the Buddha corresponds to attention given towards his previous lives as a Bodhisattva. This is illustrated by the prominence given to the Jatakas and Avadana tales in the bas-relief panels of Borobudur. The narratives of the Jatakas depict scenes from the Buddha’s

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352 Frederic 1994: 25
353 Soekmono/Durmacay/de Casparis 1990:31-33
354 ibid. p.22
355 Williams 1989: 25 states that doctrinal widening or innovation in Buddhism was linked to the changing status of the Buddha
356 Ibid.
previous incarnation, while the *Avadana* tell stories of the heroic deeds of ancient times which were adapted in order to reflect Buddhist concepts.

Soekmono cites the layout of Borobudur fits with traditional pilgrim rites. The pilgrim circumambulates the monument and as he climbs towards the summit, his journey is mirrored in the text, which is carved into the bas-relief on the sides of the gallery walls.  

> Ancient Javanese came to Borobudur as pilgrims to climb this holy man-made mountain and attain spiritual merit. Borobudur provided a place where Buddhists could physically and spiritually pass through the ten stages of development that would transform them into enlightened bodhisattvas. This transformation was the monument’s main purpose....

John Miksic supported Soekmono theories on the meaning of Borobudur. He states that Borobudur was a place of spiritual pilgrimage. He draws attention to the reference in ancient stone inscriptions that Javanese temples are called ‘prasada’, places of processional worship. Most temples were revered as an icon in themselves, intended for devotional practices. The laity circumambulates the place, placing offerings on the stone base around the temples. Miksic argues that the difference between Borobudur and other temples is that Borobudur was where pilgrims went to be instructed into the practices leading towards attaining Bodhisattvahood. The main purpose of the monument, depicted both in its design layout and bas relief stories, is as a place where Buddhist pilgrims could both physically and spiritually pass through

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357 Soekmono divided the structure into the following symbolic spaces. *Kamadhatu* representing the Realm of Desire on the hidden base walls. *Rupadhatus* representing the Realm of Form, inhabited by hungry ghosts, animals, titans and humans depicted in Jataka reliefs; and relief from the four galleries. *Arupadhatus*, the Realm of Formlessness is represented on the circular platforms on the top of the hill. The design of the pathway to the top was the embodiment of a training program, existing to aid the pilgrim-devotee in his search for the ultimate salvation.

358 Miksic 1990:39

359 See Soekmono/Dumarcay/de Casparis 1990:32
the ten stages of development and transform into enlightened Bodhisattvas. He argues that the meaning of the monument lies within the religious texts illustrated in the bas-relief panels. Soekmono points to the significance of the exquisitely carved panels which are executed with such skill and planning that they could mistakenly overshadow other meanings of the monument.  

Locations of the Borobudur Reliefs

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Figure 111 Locations of the Reliefs on Borobudur (Miksic)

An examination of the bas-relief panels shows that they correspond to the teachings along the path to enlightenment. For example, Krom points out that the Lalitavistara text as set out in 120 panels on Borobudur, provide the life story of the historic Buddha up to the preaching of the first sermon at Benares, when the Sakyamuni Buddha gave his teachings on the Four Noble Truths. This is regarded as the First Turning of the Wheel of Dharma. The Second Turning of the Wheel of Dharma was

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360 Ibid.
delivered by the Buddha on Vultures Peak near Rajgrha, Bihar. According to Buddhist tradition these teachings were on the Perfection of Wisdom, the *Prajnaparamita*. The Sutras of the Second Turning include the *Avatamsaka*, the *Lankavatara*, the *Ramakuta*, *The Samdhinirmocana* and the *Tathagatagarbha* Sutras. The *Prajnaparamita Sutras* are closely connected with the development of Mahayana Buddhism. They primarily are concerned with the ultimate nature of reality.\(^{361}\) There was a Third Turning of the Wheel of Dharma at Visashi, near Bodh Gaya in north east India. Traditionally this was delivered by the Buddha Maitreya, who set forth the teachings of the *Tathagatagarbha Sutra*, which emphasizes the Bodhisattva ideal and the principal that Buddhahood was attainable by all. The Third Turning Teachings incorporates the philosophical position of the interdependent nature of all things. All elements of existence are found to be utterly pure.\(^{362}\)

The upper terraces depict extracts from the *Gandavyuda* text, the last chapters of the *Avatamsaka Sutra*, the *Flower Garland Sutra*. The *Gandavyuha Sutra* is about the pilgrim, Sudhana, who on the advice of the Bodhisattva Manjusri, travels throughout India gradually advancing in spiritual growth as he is learns from successive teachers. Eventually, Sudhana meets Bodhisattva Maitreya, who shows him the Tower of Vairocana. This is a representation of the *dharmadhatu*, the universe itself. Here Sudhana sees Samantabhadra, a Bodhisattva and Buddha, who is used by the sutra as a model for progressing along the path or attainment of the goal. The *Gandavyuha Sutra*’s Prayer of Samantabhadra is the famous set of Bodhisattva vows.

\(^{361}\) Williams 1989: 45-47
\(^{362}\) *Ways of Enlightenment* 1993: 27
and devotional hymn beginning with the Seven Limb Prayer, \(^{363}\) which is used still 
used throughout the Buddhist world.

Leidy and other Buddhist scholars have pointed out that the *Avatamsaka Sutra*
played a formative role in Buddhist thought. \(^{364}\) The early teachings of the Buddha 
were written in the Pali script and represent the first phase of development. The 
second phase occurred in China during the Chinese Tang dynasty, when the highest 
development of Chinese Buddhist thought was developed by the philosophical 
synthesis of the *Avatamsaka Sutra* or the *Flower Garland Sutra*, the central text of 
the semi esoteric *Hua-yen* order. \(^{365}\) The sect is known as Kegon in Japan. \(^{366}\)

The *Avatamsaka Sutra* sets out to portray the cosmos as it is seen by a Buddha or a 
very advanced Bodhisattva. The *Gandavyuha Sutra* is not a philosophical sutra; Luis 
Gomez writes it is one of 'speculative mysticism'. \(^{367}\) Beyer describes the world of 
the *Gandavyuha Sutra* as one of magic, miracles and visionary. \(^{368}\) It is argued in 
the sutra that since all things lack inherent existence, a Bodhisattvas' mind can by the 
process of meditation pervade or enter into all things and can therefore 'move 
unimpeded in the world. \(^{369}\) Again the sutra claims that 'the Buddha constantly emits 
great beams of light. In each light beam are innumerable Buddhas. All virtuous

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\(^{364}\) Leidy 1997: 32

\(^{365}\) Ibid. p.23 For a historical description of the 'Hua-yen – the Flower Garland tradition' see Williams 1989: 116-138

\(^{366}\) Bodhichakra made a comprehensive translation into Chinese of the *Avatamsaka Sutra* culminating in the *Gandavyuha Sutra* in 418-20. Siksana made a further translation at the end of the 6th century.


\(^{368}\) Beyer 1977 cited in Williams 1996: 121

\(^{369}\) From the *Gandavyuha* translated by Gomez 1967: xxxi cited in Williams 1996: 121
activities in the world come from the Buddha’s Light. Likewise it asserts that ‘in all atoms of all lands Buddha enters, each and every one.’

It is possible that the concept expressed in the Sutra is demonstrated architecturally by the perforated construction of the stupas on the three concentric rings, which contain seated statues of the figure of Vairocana. The motive for Bodhisattvas and Buddhas activities is great compassion. The Buddha of the *Avatamsaka Sutra* is Vairocana, or Mahavairocana, the Great Illumination Buddha. He does not teach in the sutra but approves of teaching given by his retinue of advanced Bodhisattvas. The universe of the *Avatamsaka Sutra* is the *dharmadhatu* or Dharma realm, a universe of radiance, luminosity that has no shadows. This universe is the Buddha, the universe of truth. In this meditational state the devotee can perceive correctly. One’s mind can penetrate all things and the Buddha is this all-penetrating, all transforming awareness.

Figure 112 Vairocana Buddha with hands in the *dharma-cakra* mudra pose, one of 72 statues contained within the latticework stupas on the bumbera level of Borobudur (Miksic)

370 From the *Gandavyuha* trans. Cleary 1984/6: 1 Bk1 cited in Williams 1996: 122
371 From the *Gandavyuha* trans Cleary 1983, 1 Bk4 cited in Williams 1996: 122
A Comparative Analysis Of The Kumbum, Gyantse, Tibet And Borobudur In Java, Indonesia

The earliest artistic creations depicting the features associated with the Avatamsaka Sutra have been found in Central Asia. The Sutra is illustrated by the Buddha Vairocana as a cosmic Buddha, a Buddha containing within himself all the other Buddhas and all features of the universe.\textsuperscript{372} A famous example of such a scene was found in a 6th to 7th century cave painting at Kyzyl (Kizil). The painting illustrates a standing Buddha with right hand raised and five Buddhas painted across his chest with further figures down his legs and other figures radiating from his nimbus. Kizil is on the northern Silk Route near Kucha. The caves are among the earliest and finest of all Buddhist cave temples, dating from the 3rd century.\textsuperscript{373}

It is argued in this thesis that the source for the Laiitavistara and Avatamsaka Sutra depicted in the bas-relief panels on Borobudur is via China, the Central Asian Silk Routes from north-western India. The capture of the Silk Routes and Kucha, Khotan, Kashgar and Karashar in 670 by the Tibetan eventually forced the Chinese Tang dynasty to expand the south-eastern maritime trade routes via Indonesia. This led to the transfer of Chinese Buddhist teachings to Java by the many Chinese pilgrims en route to India. It is also argued in the thesis that the later changes to Borobudur such, as the entrances to the doorways, was a direct result of innovative changes in religious practises from Pala India.

It has been suggested that association of the Avatamsaka Sutra with Borobudur may indicate that the structure is an example of the stupa of Great Illumination or Descend from Heaven. Commonly depicted as a stupa resting on a double lotus

\textsuperscript{372} Ibid, p 136
\textsuperscript{373} Ibid p. 137 for commentary and illustrations see Gaulier et al 1976 Part 1. The Kizil caves provided the style and iconography for some of the earliest Dunhuang caves, the Caves of the Thousand Buddhas, c. 366-c.1300.
A Comparative Analysis Of The Kumbum, Gyantse, Tibet And Borobudur In Java, Indonesia

throne. A series of small star shaped stupas with four directional stairways resting on double lotus bases dating to the 8th century and similar to the general form of Borobudur, have been found at Tapa Sardar, in Ghazri, Afghanistan. These monuments have a central stupa, which is encircled by large directional Buddha statues seated in arched niches. The stupa is surrounded by a myriad of small clay plaque images of Buddha, which symbolise the cosmic Vairocana, irradiating into the universe from the domed sphere.

As early as the 1930s Borobudur has also been referred to as a lotus blossom by the artist and scholar, W. O. J. Nieuwenkamp. He was inspired by the picture of Borobudur as a gigantic lotus flower, its blossom open, floating in a lake.\(^{374}\)

Geological experts have suggested that at one time the land around the site was once low lying and could have been inundated by a large lake. At the very least it was suggested by Soekmono, that an artificial lake could have been excavated between the monument and the nearby village, known as Sabrangrawa, meaning 'the side of the swamp'. However Dumarcay had samples of soil scientifically analysed, and found no evidence of aquatic plant material in the region.\(^{375}\)

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\(^{374}\) Frederic 1994: 21

Paul Mus refers instead to the lotus symbol of Borobudur as being associated with the Saddharmapundarika or the Lotus Sutra, which was translated in China in 255 AD. Mus interprets the monument as representing the Lotus Sutra itself as the Sutra describes a seven jewel stupa with a thousand grotto like rooms, bedecked and bejewelled with incenses, flowers, music, garlands and banners.

Alternatively, Mus suggests that Borobudur may depict Grdhrakuta, the Mount of Eagles where Sakyamuni explained the three different types of teachings. The Lotus Sutra is protected by the Bodhisattva Samantabhadra, who promises to appear before anyone who reads the scripture. The appearance of Bodhisattva Samantabhadra on the upper balustrades is evidence to support this theory. However the Buddhas in the enclosed stupas are shown in the mudra Dharmacakra mudra that denotes the first sermon rather than in the mudra, Vitarkamudra, which depicts general teaching associated with the teachings on the Mount of Eagles.

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376 Mirksic 1990:53
Soekmono explains that the use of both the mudras *vitarkamudra* and *dharmacakrayudra* may symbolise Vairocana, in his manifestation of Vajradhara and Vajrasattva. The twinning of Vajradhara and Vajrasattva is particular to the Vajrayana sect of Mahayana Buddhism. It may also represent Vimalosnisa or Mahamuni, an esoteric form of the Buddha Sakyamuni. Here the Buddha is usually depicted with four heads, eight arms and four legs sitting on a double lotus throne, with his two central hands in *dharmacakrayudra* and all other hands in *vitarkamudra*. He is surrounded by four Bodhisattvas who are associated with Vairocana and the four cosmic Buddhas. This mandala is part of the Tantric cycle of Vimalosnisa, a Kriyatantra belonging to the Tantras of the Usnisa of the Tathagata family.

Frederic questioned the supposition that Borobudur depicts a particular mandala or yantra. But which mandala could it represent? At the time of the construction of Borobudur about 3,500 mandalas were recorded. Some indication is given by the different statues of the Buddha found on Borobudur. Many scholars suggest the symbolism of these statues shows the development of Vajrayana Buddhism, built on the basis of the Mahayana Buddhism. This is evidenced by figures of the Cosmic Buddhas, which are arranged around the four terraces and are placed in accordance with the cardinal directions.

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377 Frederic 1994: 69-72 he argued that if Borobudur was a mandala then there was no valid explanation for the Buddhas in the perforated stupas on the round galleries nor the presence of the Jina Buddhas on the square terraces (P. 70).

378 Milksie 1990:50-51 the Buddhist' teachers who visited Java in the 8th century taught the use of two mandalas called the *Dharmadhatus* ("Matrix World") and *Vajradhatus* ("Diamond World") both of which became very popular.

379 The portrayal of Vajrayana Buddhism in art and architecture appeared between the 6th and 12th century, built on the basis of the Mahayana doctrines, it introduced Tantric texts, which are regarded as revealed by a Buddha. This form of Buddhism is characterized by the systematic employment of the symbolism of the mandala (See Ricca & Lo Bue 1993: 47). See Milksie 1990:53 for a commentary about the different Buddha statues and their symbolic meaning within the Matrix World and Diamond World mandalas.
The importance of the Diamond World mandala in contemporary esoteric Buddhism has led many scholars to associate this tradition with Borobudur. The mandalas of the Diamond Matrix World and the Womb Matrix World are early examples of mandalas and are said to have been brought to China and Japan by Kukai (774-835).

380 Williams 1989:122-3 'The Avatamsaka Sutra’s Buddha is Vairocana or Mahavairocana, the Great Illuminating Buddha. He does not teach in the Sutra, but approves the teaching given by a vast retinue of Bodhisattvas. The universe of the Avatamsaka Sutra is called the dharmadhatu or the Dharma-realm. This universe is the Buddha. The Gandavyuha Sutra, which is illustrated on the upper terraces of Borobudur, is the climax of the story of a Pilgrim’s progress. Samantabhadra is the last and greatest Bodhisattva teacher according to the Avatamsaka Sutra.' It is the statue of the Bodhisattva Samantabhadra displaying the vitarka mudra that is arranged around the fifth level of the square terrace of Borobudur.
Womb Matrix World mandala is based on the *Mahavairocana Sutras* translated into Chinese in the 8th century. It symbolises the possibility of Buddhahood in the phenomenal world. The Diamond World mandala is based on the *Sarvatathagatatattvasamgraha Sutra* translated by Amoghavajra (705-774). The mandala is a guide to spiritual practise that leads to enlightenment. Amoghavajra, together with Vajrabodhi (669-741), are regarded as founders of the Esoteric Buddhism in China.

![Mandala of the Womb, Japan, Kamakura period 13th–14th century, The Brooklyn Museum of Art, (Leidy & Thurman, Mandala)](image)

Nevertheless, Leidy and Thurman explain that it is not possible to define Borobudur completely in terms of the Diamond World tradition as it is preserved today. For

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381. Leidy & Thurman 1997:29
382. Ibid.
example the *Vajrasekhara Sutra* or the Diamond Summit Scriptures gives directions for drawing the Diamond World mandala.\(^{383}\) The mandala consists of nine separate mandalas. The central one is sometimes said to symbolise the jewel tower on Mt Sumeru where Vairocana described the Diamond world mandala. This depicts Vairocana in the centre surrounded by 4 Buddhas and 32 Bodhisattvas. The outer edge of the square surrounding the inner circle is surrounded by 1,000 Buddhas and 24 boundary guards.\(^{384}\) Although the mandala may underlie the representation of Borobudur, which could be a particular Javanese variant of that mandala.

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\(^{383}\) Miksic 1990:51 only part of the document survives in Japanese translated from Chinese during the Song dynasty based on a Sri Lankan document dating from 742AD.

\(^{384}\) Ibid
As Krom wrote, the grandeur of Borobudur is something immense, sphinx-like, incomprehensible and yet so fascinating. It overpowers us with a sense of our incapacity to give an adequate description of it, its erigmas are too many and too great for us to solve. Bernet-Kempers summed up his research analysis in the 1950s with the comment, that Borobudur is a complicated structure with a character of its own. It is not possible to take any of the systems described up to this point as the basis for full interpretation. It is unique.

Fig 117 Mandala of the Womb World, south wall, cave 3, Yulin, Gansu Province, China Xixia period (1032-1227) showing the inter-relationship between several mandalas, murals and statues in a cave. Here a Womb World mandala, an image of Sukhavati with the sixteen meditations and a mandala dedicated to Avalokitesvara are all painted on the south wall. A Diamond World mandala, scene from the Devata Sutra and a five Buddha mandala are painted on the north wall (Leidy & Thurman, Mandala)

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385 Frederic 1994: 11
CHAPTER THREE: COMPARATIVE ANALYSIS

Introduction
In this chapter, following a discussion on the similarities between Borobudur and the Kumbum, some reasons for their differences are suggested.

A comparative analysis of Borobudur and the Kumbum reveals that despite several differences in site layout and architectural design, both places seem to belong to a series of monumental Buddhist sites found throughout Asia. These sites all have similar developmental themes, architectural and site characteristics. They also share a commonality of religious symbolism as expressed in iconographic form. It was suggested earlier in the thesis that standardised architectural form and iconographic details were linked to the development of Buddhist pilgrim sites and monastic teaching universities, which were supported by royal patronage.

For example by the 8th century the tradition of constructing stupas had evolved from commemorating the death of a monarch and enshrining the relics of the Buddha Sakyamuni to include marking the eight historic events of the Buddha’s life and celebrating the teaching of the Dharma as a representation of the ideal cosmos. Stupas were built at Indian holy sites, which were visited by pilgrims as far a field as Sri Lanka, Central Asia, China, Burma, Indonesia and Tibet. This led to the development of a series of international monastery centres, which in turn contributed to the universal acceptance of certain symbolism in Buddhist art and architecture. Scholars refer to this phenomenon as the creation of a Buddhist language of architecture and art. The standardization of structures and iconography was further cemented by the production of religious building manuals. These texts deal with
matters of symbolism, ornament, proportion, numerology, scale and location of religious structures.

It is argued in this thesis that this group of sites, which share certain common universal qualities, form a series of Buddhist monuments that can be found along the world's ancient cultural routes. The patterns of trade, contemporary economic and political climates were powerful forces in spreading Buddhist images and common architectural building types around Asia. For example the location of Buddhist stupas in many parts of Asia define a continuous circuitous thread of routes that winds a gigantic loop across India and Afghanistan, along the Silk Road of Central Asia, Tibet and China and across the southern seas of South East Asia. Conversely, monuments found in these areas have become major identification markers of ancient cultural itineraries, often the only reminders of former wealthy mercantile centres, places of past battlefields and forgotten sovereign states. It is suggested that Borobudur and the Kumbum belong to this series of major Buddhist identification markers.

It is evident that the language of Buddhist architecture slowly evolved over millennia, reflecting changes in religious practise, local traditions and materials. The analysis of Borobudur and the Kumbum demonstrates the enduring nature of Buddhist traditions in art and architecture, regardless of chronological differences, sovereign borders and geographical regions. Familiarity with the development of the universal characteristics of these markers is the key to understanding the architecture of both Borobudur and the Kumbum.
The importance of Borobudur relates to the ability of the architecture and iconography to tell the story of the development of Buddhism inclusive to the mid-9th century and in particular the development of Chinese Buddhist religious philosophy associated with the teachings of the ‘Second Turning of the Wheel of Dharma.’ This teaching is traditionally associated with further expansion on Sakyamuni Buddha’s second discourse on the theme of the Perfection of Wisdom that deals with the ultimate nature of reality. Associated scriptures are the Tathagatagarbha Sutra, ‘the Awakening of the Faith’ sastras, which sees the Buddha essence doctrine as a cosmological theory and the Avatamsaka Sutra. It represents the highest Chinese Buddhist philosophical tradition and marked the second major development in Buddhism, corresponding roughly to the late Mahayana period. In a symbolic fashion Borobudur represents the ideal cosmos, the divine abode or perfect buddha-fields, the residence of the deities, a symbol of the Buddhist teachings. The symbolism expressed by the architecture and bas-relief details of the scriptures are meant to act as teaching aids to develop qualities in the practitioner related to the path of enlightenment.

The universality of the Buddhist symbolism can be seen by the fact that although Borobudur was completed just prior to the demise of the Buddhist world in Central Java, China and Tibet in 842, the architecture and iconography of the Kumbum built six hundred years, mirrors many of the features found at Borobudur. Buddhism was re-introduced into Tibet during the 11th century by Atisa (982-1054) and other translators. Atisa, a famous Buddhist teacher, who had spent twelve years studying under his main teacher in Sumatra, wrote a short treatise, the ‘Lamp on the Path to Enlightenment.’ This was the first attempt to create a system, which integrated all
Buddhist practises into one gradual path. During the next two hundred years Tibetan scholars returned to Indian sources carefully checking for authenticity prior to translating texts and eventually classifying all Buddhist practices associated with the First, Second and Third Turning of the Wheel of the Dharma into the Kagyur and Tangyur canonicals. This includes the Hinayana, Mahayana and Vajrayana teachings, which are all integrated into one pathway. The architecture and iconographic display of Tantric cycles within the 72 chapels of the Kumbum are set out strictly in accordance with these canonicals.

Therefore it is surprising how similar the architectural and iconography of Borobudur and the Kumbum are. This is particularly the case when the full classification of Tibetan Vajrayana did not exist at the time of the construction of Borobudur. However, Borobudur appears to be unusual at the time, as it also represents the classification of all known Buddhist scriptures into one gradual path. This is represented in the form of an ideal universe associated with Mt. Meru.

The architectural layout of Borobudur and the Kumbum are similar to many examples of stupas dating to the 5th to 8th century found in the Nepal valley and in the cave temples of China and Central Asia. Here mural paintings show a typical multi-storey pavilion resting on top of a stepped stupa, introducing the concept of a three-dimensional mandala offering of the ideal cosmos. 387 Similar models are found in northern and north-eastern India where big terraced stupas were erected at Nalanda, Paharpur, from the end of the Gupta and throughout the Pala period. The plinth of many Newar votive stupas of the 7th and 8th century appear to be miniature

387 A. Stein 1907: 2, pl XL quoted in Ricea and Lo Bue 1993: 37
reproductions of big multi storey buildings or temples with outer rows of arched
niches on each of the sides. While the illustrations recall the stupas found in the
Ajanta and Ellora caves and others at Bodh Gaya and Sarnath, in these later stupas
there appears to be have been attempts to incorporate a summae of known Buddhist
doctrines represented as Mt. Meru These monuments are called ‘all round
auspicious’ or sarvatobhadra, the name compares favourably with ‘the multiple
auspicious stupa with many doors’ or ‘bkra-sis sgo-man mchod-rten’ of the
Kumbum, but is also similar to the design of Borobudur.

The importance of both Borobudur and the Kumbum is that they are regarded as
supreme examples of their type, representing the highest point in the Tibetan and
South East Asian evolution of a specific Indian stupa model celebrating ‘preaching’
representing the fundamental meaning of dharmakaya. Lo Bue indicates that one
valid reason for the apparent proliferation of this monumental type of stupa during
the 13th to 15th century in Central Tibet, was directly related to the complex design
allowing the full visual presentation of the dharmakaya to be combined within its
architectural form.\(^{388}\) He adds that the reason for its short lived popularity can be
explained to some degree by the complexity of its architectural design and the expert
skill required in the construction of this structural type, which was unsuited to the
local materials and vernacular building traditions.

A further explanation is provided in this thesis for the evolution and demise of the
stepped stupa structures of Borobudur and the Kumbum. The construction of massive
terraced stupas became inevitably linked to grandiose political schemes. Although

\(^{388}\) Ibid.
both Borobudur (circa 790-845) and the Kumbum (1427-44) were built nearly 600
years apart in vastly different latitudes and climates, their construction is marked by
the rise of powerful independent rulers. The new monarchs celebrated the emergence
of their kingdoms by undertaking vast building programs in newly established
capitals.

A critical factor in the development of both Borobudur and the Kumbum is the existence of
close commercial ties with China as well as India. In Tibet the princes of Gyantse had
recently relocated their capital from sTsechen to Gyantse, sited centrally at the cross roads
of several major trading routes between China and Nepal. While in Java just prior to the
construction of Borobudur, the Sailendra kings had relocated their capital from the eastern
banks of the Opak river, 60kilm further to the west, on the route to the northern seaport
guarding the Maluca Straits between Malaysia and Sumatra. The construction of
Borobudur was contemporary with the Tibetan Yarlung dynasty who were major players in
Central Asia, amassing an empire that included South and Eastern Central Asia as well as
North East China. Despite the Tibetan Chinese treaties of 783 and 822 they occupied
Chinese territories along the Silk Road in Dunhuang, Yulin and Khotan, forcing the Chinese
Tang emperors to develop the South Eastern maritime sea routes. The Sailendra kings of
central Java controlled these routes. This allowed the Sailendra dynasty to benefit from
lucrative trading concessions from China, set prices for commodities and host many
pilgrims travelling both to and from India and China. Ultimately they were influenced by
Chinese Buddhist philosophy.

Similarly, the 15th century princes of Gyantse achieved total independence from the Saska-pa religious rulers of central Tibet, who had governed the region on behalf of the
Chinese Yuan dynasty for nearly two hundred years. The Gyantse princes were able to negotiate favourable trading treaties, receive gifts, titles and favours directly from the Chinese emperor, who held interests in Nepal. The relationship was particularly close with the Chinese Yongle emperor who was responsible not only with relocating the imperial capital from Nanjing to Beijing but also the layout of the Forbidden City during the early decades of the 15th century. The international standing of the two kingdoms encouraged the use of a cosmopolitan mix of builders and artists in the construction of both Borobudur and the Kumbum. This resulted in the creation of a distinctive school of art, where there was a syncretic mix of different architectural and iconographic styles.

It is clear that the stability and sanctity of the new sovereign states of Gyantse and the Sailendra kingdom were consolidated by the construction of royal monastic compounds and stupas, financed by lucrative trading deals with China. The divine merit of rulers and their kingdoms were symbolized by the construction of stupas. The scriptures codified into the language of architecture and iconographic detail in both places draws reference to the Buddha-like nature of the royal princes as living Bodhisattvas, cakravartins or universal monarchs.

Further sanctity was derived from the special divination powers of the location of the capitals. The importance that geomancy plays in the prestige of the site and its power to stabilize the sovereign was important in Tibet where the sanctity of a place or its power is largely derived from its special natural and physical attributes. This also appears to be the case with Borobudur, which was constructed near a small hill, called Tidar, an ancient site regarded as the nail or anchor of Java. The mystical merits of the site laid a good foundation for the creation of a structure that
represented the ideal world and this was determined by the religious doctrines of the day.

It seems credible that the design and layout of Borobudur went much further than representing a sanctifying regal stupa. Many scholars point out that Borobudur was built as a schematic representation of Mount Meru, the ideal world, the dwelling place of the gods. There were several well-known contemporary architectural examples of schematic representation of Mount Meru in Pala India such as the monastic universities of Vikramasila, Uddantipura and Somapuri. In Tibet, the contemporary monastery of Samye (circa 750-90) was laid out and designed as a mandala depicting Mt. Meru, based on the design of the monastic university of Vikramasila.

It is suggested that the interpretation of Chinese Buddhist religious philosophy associated with the teachings of the cult of the Buddha Vairocana and the Buddha-essence doctrines as a cosmological theory were fundamental to the architectural layout of Borobudur. Vairocana is represented at the centre of the five Buddha families, being one of the five transcendental Buddhas, which includes Ratnasambhava, Amitabha, Amoghasiddhi and Akshobya, each being the head of a clan of different Buddhist deities and residing over a particular cardinal direction. The many architectural and iconographic references to Vairocana, together with massive scale of Borobudur echo the colossal statues of Vairocana found in Central Asian and the numerous images of the 1,000 Buddhas found in the cave temples of China. The organization of temporal space reflecting the ideal world of Avatamsaka Sutra became an important political tool in the hands of rulers. As stated previously in the thesis both the Japanese Emperor Shomu (724-48) and the Chinese
Empress Wu (625-705) set out to rule on the basis of Hua-yen. It is quite probable that the Sailendra kings followed their example.

The princes of Gyantse were not able to fully exploit their position although they did seek to verify their family links with the former Yarlung dynasty. The very strict controls placed on the design of the Kumbum and the painting of the mandalas in the interior chapels was guided by several religious teachers according to the classification of the scriptures set out in the Kagyu and Tangyur texts. The mandala cycles of Vairocana are laid out in the second and third levels of the Kumbum. Major temples devoted to Vairocana are found on the bumpa levels together with temples devoted to Sakyamuni and Mahamuni Buddhas as well as the Prajnaparamita. While the upper levels are devoted to the Yoga Tantras and the Kalacakra Tantra.

The difference between Borobudur and the Kumbum is partly due to differences in the approach to the Tathagatagarbha teachings as interpreted by Buddhist schools in China, South East Asia and Tibet. This had fundamental consequences for the evolution of the building type of both Borobudur and the Kumbum. A literal interpretation of the Tathagatagarbha teachings and the belief in ‘an Absolute’ or ‘Atman’ led to the support of Buddhism by the Hindu kings in South East Asia, making possible the eventual syncretisation of Buddhism with Shaivism in Java. It also meant that the concept of the cult of god-king, the universal monarch and the creation of the ideal cosmos was expanded by the Khmer kings of Cambodia far beyond orthodox Buddhist philosophy resulting in the construction of the enormous Angkor Thom complex.
On the other hand, in Tibet, the *Tathagatagarbha* doctrine was taught from an interpretation of the *Ratnagotravibhaga (Uttaratantra)* and the philosophical position of the interdependence nature of all things as set out in the Third Turning of the Wheel of Dharma. The expulsion of the *Jo-nang-pa* sect in Tibet is directly linked to what the *dGe-lugs-pa* sect considered a misguided interpretation of the *Tathagatagarbha* doctrine by the *Jo-nang-pa* school. The *Jo-nang-pa* school were specifically associated with the teachings of the *Kalacakra* and had a long tradition of constructing multi-chapel stupas in Tibet. After their expulsion no further Kumbum-type stupas were built in Tibet and by the 17th century all multi-chapel stupas associated with the *Jo-nang-pa* school were completely refurbished.

Although the architecture and bas-relief panels of Borobudur have more temporal qualities than the murals of the Kumbum, both structures reveal a close associational link with religion and royalty, which was manipulated for mutual advantage. Without the two parties working together the great monumental stupas may never have been built.

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