Chapter 2

LITERATURE REVIEW

The focus of this study is on "Architectural Characteristics of Shan Monasteries in Southern Shan State and Northern Thailand". However, this work must draw from and build upon the broader areas of Shan, Shan monasteries, and vernacular architecture, where most of the research has taken place. Since the volume of literature is large and a number of literature reviews already exist, the purpose of this chapter is not to provide a comprehensive summary of the literature, but rather to focus on the existing knowledge on the subject group and research directions, and to discuss the implications of this literature to the research undertaken in this thesis.

This chapter is divided into two sections:

The first section provides background study related to Shan Monasteries. Thos part comprises historical and socio-cultural background of Shan and related information on Shan monasteries.

The second section provides an overview of the literature related to research approaches in vernacular architecture. This literature includes theoretical discussions and methodological approaches related to vernacular building research.

2.1 Reviews on the Background

In order to understand the background of Shan monasteries, it is essential to know the background of Shan people to whom the Shan monasteries are represented for. The review is on the Shan in their homeland and in their new settlement, particularly in Northern Thailand, in historical and socio-cultural context. For the background of Shan monasteries, the factors influencing the architecture of Shan monasteries and their general architectural characteristics are briefly reviewed.

2.1.1 Historical Background of Shan People

Shan people inhibiting the eastern plateau of present day Myanmar are ethnically Tai[1]. Throughout history and in neighboring South-East Asia region, they have been known by several names. Myanmar and British called them "Shan", Thai and Laos called them "Tai Yai" or "Ngio" and they called themselves "Tai" or "Khun Tai". For the remainder of this study, the term "Shan" will be used.

Although the Tai migrated throughout South East Asia, such as Laos, Thailand and Vietnam long before 19th century, the study only focuses on the migration of Tai to Myanmar, where they turned out to be Shan, and from which their settlements to Northern Thailand in 19th century.

The Shan people belong to the Mongoloid stock and to the Tai linguistic group which is widely scattered in Southeast Asia and China. By the 13th century, the Tai had reached to the southernmost part of the China and founded the Nan-Chao Empire. In 1234 AD, the Nan-Chao Empire was destroyed by Mongols. Defeated Tai people moved further south. One group of the Tai people descended down the Red River and Black River to settle in North Vietnam. The second group went down the Mekong River to settle in Laos, Thailand and Cambodia. The third group went down the Brahmaputra River to set up an Ahom dynasty in Assam. The last group chose to live in the valley of the Shweli (Nam-Mao) River to establish the kingdom of Muang Mao Long. During this period, the Tais slipped through the mountain passes, journeyed along the Chindwin, Ayeyarwady, Shweli, Taping, Myit Nge (Namtu) and Thanlwin (Salween) rivers and settled along the Myanmar-China border areas. In Myanmar, the migrated Tais are well known as "Shan".

A big wave of Shan migration into Myanmar took place in the last period of the Bagan dynasty (1044-1287 AD). It was during the rule of King Narathihapate (Tayokepyemin) when Myanmar was invaded by the Mongol forces of Kublai Khan. The defeated King fled to lower Myanmar, after which Bagan became very weak and administrative power fell into the hands of the three Shan ministers who are the

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[1] The Tai are originally inhibited south China from at least the 9th century BC. Their migration to the Shan States may have begun as early as the 1st century AD. They also moved into north Thailand (Lan Na), Laos, North Vietnam and Assam. See Susan Conway, The Shan: Culture, Art and Crafts (Bangkok: River Books, 2006), p.13

brothers. The three brothers were able to liberate Myanmar from the hands of the Mongol invaders and to establish the three dynasties of Pinya, Sagaing and Innwa which ruled Myanmar for nearly three centuries from AD 1287 to 1531.

After Bagan, there were two centers of Shan or Tai power; one at Innwa (Ava) and another at Tai Mao Kingdom. It has been supposed that Innwa comprised both Shan and Myanmar whereas the Muang Mao Kingdom was wholly Tai or Shan. Muang Mao Kingdom included eleven Yunan Shan States. Shan dominance in Myanmar Proper ended with the fall of Innwa to the Myanmar King Bayintnaung in 1555 AD, and in 1604 AD, Shan consistency was shattered when the Muang Mao kingdom fell to an invading Chinese force (Yawnghwe, 2001).

In the 19th century, long after their power declined, Shan were distributed among more than 30 small states; most of them paid tribute to the Myanmar king. After three Anglo-Burmese wars, Myanmar and the Shan states fell under the British rule. Under the British rule, the Shan States were ruled by hereditary chiefs (Saohpa) as feudatories of the British crown. In 1922 AD, most of these small states were joined in the Federated Shan States. After having been a British colony for nearly a century, the Shan and the Myanmar allied to get independence from the British. A single Shan state was established by the 1947 Myanmar constitution. In 1959 AD, the Shan rulers relinquished much of their power to the Myanmar government.

There have been a few Shan inhabitants found in Northern Thailand since before 19th centuries. They were found mostly in the highlands drained by the upper Thanlwin River. While the far west regions of Northern Thailand have been under at least control of Lan Na, they were difficult to reach from Chaing Mai and offered little interest. Before Mae Hong Son (the principal town of the west of Lan Na) came after the rule of Chiang Mai, this area was inhabited by the Shan who also known as "Tai Yai" by Thai people. They moved from the North Eastern part (today Shan State) of Myanmar. The influx Shan migration to the Northern Thailand followed particularly by the two main factors: the internal conflicts between the Shan principalities and the trading.

The present day Mae Hong Son was one part of Chiang Mai in the past. In 1831 AD, Praya Chiang Mai Puthawong, king of Chiang Mai city, sent Chao Keaw Muang to find wild elephants in the forest in the west of Chiang Mai where he found

several dispersed villages. Chao Keaw Muang combined them to be one and named it as Ban Pon Mu or Ban Pang Mu with a Shan called Phakamong was the chief of the community. Later, it became a center for the capture and training center of elephants. More people came and settled at the elephant training center which turned out to be as a village named as Ban Mae Hong Son. After Mae Hong Son village was established, because of a rebellion at the towns on the western side of Thanlwin River, Shan people from those towns immigrated to Mae Hong Son. Furthermore, because of the conflict between two Saohpas of Mone (Muang Nai) and Maukmai, the family of Maukmai Saohpa moved to Mae Hong Son in 1866 AD. Shan Gale, son in law of Maukmai Saohpa, moved to stay in Ban Khun Yuam beside Yuam River. Later, it was developed as Khun Yuam town. In 1874 AD, Chao Intharawichayanon, the ruler of Chiang Mai, upgraded Mae Hong Son as a city state and Shan Gale was appointed as the first ruler of Mae Hong Son with the title of Para Singha Natraja (Ban-Wat).

After Mae Hong Son began a center for the capture and training of elephants in the 1830s, these areas began to develop, and the teak industry became important. Consequently, more Shan moved into Mae Hong Son and surrounding areas for business oppunity as well. They emigrated first to Ban Pang Mu then extended to Ban Tor Pae, Ban Muang Pon, Amphur Khun Yuam and some part of Ban Mae Lanoi. Further more, they move to other logging centers in Northern Thailand, notably; Chiang Mai, Chiang Rai, Lampang, Phrae, and Phayao, accompanied by the British, whose experience with teak in Myanmar gave them an advantage in controlling the trade (Freeman, 2001).

The teak business flourished in Northern Thailand during the second half of the 19th to the 20th centuries was followed by the British colonization in neighboring Myanmar[2]. The Bowring Treaty between Thailand and Britain provided free trade and extra territories for individual British subjects to trade in Thailand, particularly in teak trading. The conflicts between British subjects and the rulers of Northern Thailand led to the Chiang Mai treaties I and II in 1873 and 1883 respectively. After the second

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[2] Teak trade in Northern Thailand increased after the British annexation of the Pegu area of Burma in 1852 and the Bowring Treaty of 1855 between the British government and the Siamese king. See Chotima Chaturawong, *"The Architecture of Burmese Buddhist Monasteries in Upper Burma and Northern Thailand: The Biography of Trees,"* Dissertation for Doctor of Philosophy, Cornell University, 2003, p. 224

Chiang Mai treaty, British and European teak companies started their teak trade in Northern Thailand. British subjects, Myanmar, Mon, Pa-O and Shan teak merchants became sub-contractors or laborers in the British teak industry and settled in Northern Thailand. Among them, Shans traditionally had had close ties with the people of Lan Na. At the beginning of the Siamese reforms, the Lan Na rulers and the British subjects divided into two groups, those who accepted and those who opposed the Siamese. The British subjects who supported Siamese rules were wealthy teak traders from Myanmar who needed good connections for trade benefits, while those who were close to the local Tai Yuan and their rulers. The Phrae Rebellion in 1902 AD aroused as the Shan got support from the rulers of Phrae against the Siamese governors and the Siamese reforms. The rulers of Phrae, who involved in teak extraction and trade, lost a lot of income as the Siamese controlled the teak forests. The Siamese government also treated strictly to British subjects such as demanded for British pass, or else special tax for entering Siamese territory. They did not also have the right to own land and houses or fell wood to built houses and monasteries. This affected the ordinary Shan under British rule, since the Shan used to travel freely back and forth between Shan State and Northern Thailand before the boundary was fixed and the treaties were signed. Besides, some Shans in Thailand declared themselves as British subjects in order to gain extra-territorial benefits. However, the Siamese were able to crack down the rebellion and gained more power and right to control Northern Thailand. After the rebellion, the rebels were discharged from Northern Thailand except who married with Thai citizens and also the British subjects who worked for forestry industry.

The teak trading in Northern Thailand linked with Lower Myanmar as the timber logs were floated down to Mawlamyine, the center of teak trade and British ship building in Lower Myanmar, through Thanlwin (Salween) River. Around 1884 AD, during the period of Siamese reformation, teak extraction and trade in Northern Thailand moved from the forests of the west to the central and eastern parts of the region where timber logs were rafted down the Ping and Wang rivers which merge into Chao Phraya River and its mouth to Bangkok. After 1900 AD, the route for transporting teak changed from Thanlwin river route to the cheaper Chaophraya river route. Moreover, the A railway from Bangkok to Northern Thailand was established

in 1902 AD. Overtime, the overland trade with Myanmar gradually declined in importance and consequently, the Myanmar and Shan traders had less business opportunities in Northern Thailand from that time onward.

2.1.2 Socio-cultural Background of Shan People

Shan people are reputed as cheerful, hospitable and ready to help at one another. They practice wet land cultivation. They are also famed as good trader, hard working and thrifty people but very religious to spend the last coin in their pocket for donation.

According to Sai Aung Tun (2008)[3], the Shan people in Myanmar can be divided into the following groups:

1. Tai Yai or Shangyi,
2. Tai Maw or Mao Shan,
3. Tai Leng or Shan-Myanmar,
4. Tai Hkamti or Hkamti Shan,
5. Tai Neu or Upper Shan,
6. Tai Hkun or Gon Shan,
7. Tai Lu or Lu Shan,
8. Tai Hsa or Hsa Shan,
9. Tai Yun or Yun Shan.

Among them, "Tai Yai" is the largest group in the Shan State (Conway, 2004). They used many Myanmar words in their speech because of their proximity and interaction with Myanmar. Apart from a variety of Shan groups, there are some minority ethnic groups such as Palaung, Pa-O (Taung Thu), Wa, Danu, Taung Yoe, Intha, Lahu, etc., has been living in Shan State for thousand of years.

Shan social organization was feudal in Myanmar until 1958 AD. A senior prince Saopha (Sawbwa in Myanmar) had the power of life and death over his subjects. A Shan ruler was theoretically absolute. He possessed all lands within his principality or state by divine right. Lands were granted as fiefdoms to vassal chieftains who in return were responsible for tribute and military support. Effective

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[3] Sai Aung Tun, " The Shans in Myanmar: Their Culture and Tradition", *The 10th International Conference on Thai Studies,* (2008)

control over the state and friendly relations with neighbors was maintained through marital alliances and a bureaucracy of officials operating the local administrative machinery who performed the responsibilities and duties assigned them by the Saopha and shared in the tribute, taxes or levies collected from the people living in their circles.

The Shan palaces and regalia of the Saophas are associated with Myanmar sumptuary law. The law was administered through the court of Innwa in the 18th century and Mandalay in the 19th century. A Saopha's symbols of power were laid down in a special book of dispensations granted by the higher court. His regalia and clothes, the gilding and jewel decoration of betel boxes, spittoons, fly-whisks and such articles of use, the dress of ministers, the umbrellas, spears and horses in procession, the caparisoning of the royal elephant, the instruments for processional music, the gateways and the style of residence, all were rigidly prescribed to ensure that the dignity kept up accordance with the status of a royal chieftain, yet did not encroach on the special privileges reserved for the court of Innwa itself.

The Shan people are well known as Tai Yai in Northern Thailand probably representing Tai Yai or Shangyi group which is the largest Tai group in Myanmar. They have their own customs, culture and way of life that has been inherited for generations. The belief system of the Shan in Northern Thailand has been rooted deeply from their ancestor to whom they carry over. The behaviors of the belief express themselves through the form and style of the temple as well as the pattern of arranging the altar. To adapt themselves in accordance with the new environment and the rights in Thailand, the migrated Tai Yai obeys the strong suggestions provided by the authorities. Consequently, a number of their religious beliefs and practices are disguised or concealed (Chandrabhai, 1998). However, several forms of Shan culture and belief, especially in their religion are still practiced and survived.

The majority of the Shan are Buddhists. Sai Aung Tun (2008) stated that there are various Buddhist sects in Shan State. They are;

1. Thudhamma,

2. Shwegyin,

3. Sawti,

4. Pwe Kyaung,

      5. Min Kyaw,

      6. Yuan, and

      7. Yaw Khu

Most of these sects came from Myanmar Proper except the Yuan sect, which is believed to have come to Northern Shan State from Northern Thailand (Lan Na) in the 15th century which introduced the Yuan religious script in Shan state. The Yuan sect flourished until the early Konebaung preiod (1759 AD-1819 AD) when Myanmar monks were sent to Shan states to teach Thudhamma Buddhism (Conway, 2006). The rulers in Southern Shan States were closely allied with King Mindon (1853 AD- 1878 AD) such as the Saopha of Mone was his further in law and the Saopha of Nyaung Shwe was his adopted son. Hence, the Shan form of Buddhism had been greatly influenced by Myanmar Buddhism at the time of King Mindon. The introduction of Thudhamma sect also affected the religious language and writing system of Shan and separated them from the other Tai Buddhist practicing in inland Southeast Asia (Conway, 2003).

As the Shan are deeply religious, they perform year round religious festivals. An interesting and unusual ceremony is the performance of the Pwe Lu Chain Hsang Put or Thambuddhi, during October which is also known as Tai Yai's Poi Lern Sip Ed festival in Northern Thailand. With strips of cane and bamboo, a miniature monastery called the Thambuddhi (Jong Para in Northern Thailand) is built and kept in the front part of the house. At the four corners of the monastery are set up banana plants, sugarcane plants, rice plants and ginger shoots. People offer edible articles as well as seasonal fruits within the monastery. These are wrapped in banana leaves and tied or hung up at the monastery. On the eve of the full moon they take all these offerings to the pagoda. Packets of gifts and presents are also thrown at night at the junction of roads, as discarded property. They are considered as abandoned and ownerless and anyone can pick them up for his own use.

Although the Shans are Buddhists, they also practice animism and worship spirits (phii) to protect them from natural disasters, illness and other evils and dangers. According to Shan belief, there are many kinds of spirits. They are everywhere, in the mountain, in the hill, water, rice field, forests, house, village, town, monastery, temple and pagoda. Some are considered as guardian spirits of the village

and town, city and even country. In almost every Shan village a shrine called haw hpee in Shan is established in the centre of the village for the spirits to reside. The villagers pay respect and make offerings to them occasionally.

2.1.3 Shan Monasteries

The Shans believe that the future existence of a man very much depends upon the merit and demerit that he acquires in the present life. To acquire such merit, they build pagodas, monasteries, rest houses, offer alms to the monks, sponsor a boy's noviciation ceremony and observe the Sabbath days[4] especially during the Lent period[5]. The Shans celebrates for the esteem donors for their merit making, especially for donating monasteries, and honors the donors with the title of Kyaung Taka (man) and Kyaung Takama (lady).

The Shan devotees built large and splendid monasteries throughout their homeland and also in their new settlements. In the cities, they were supported by royalty and citizens, while village communities sustained smaller religious centers. Although the monasteries located separately from the lay community, they were not isolated from local affairs and functioned as mediators between the ruling elite and the people. The monastery was the place where local people entrusted their valuables and family heirlooms in times of war and forced migration (Conway, 2003).

The main elements in the monastery compound are stupa (Zedi), ordination hall (Thein), main monastery building, laymen pavilion (Zayat), toilets and well. The main monastery building of Shan monasteries is a multifunctional building for religious activities and residence for monks. As monks reside in the main monastery building where religious ceremonies are held, space has to be allocated for worship and for living quarters. There is a main shrine room (Buddha hall) where Buddha

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[4] Opportunities for the laity formally to observe the Buddhist precepts come around on four (or occasionally five) duty or holy days (uposatha) in the month determined by the phases of the moon. These occur on the eighth day of the crescent moon, at the full moon, the eighth day of the waning, and at the new moon. The days of the new and full moon are considered the most important for observance. See Silvia Frase-Lu, *Splendor in Wood* (Bangkok: Orchid Press, 2001), p. 45

[5] Such religious activities traditionally intensify during the Buddhist Lent, a three months period from July to September which coincides with the rainy season. During this period of austerities no celebrations or theatrical performances are held and no marriages are performed. Monks are forbidden to travel and are expected to confine themselves to the monastery to devote themselves to meditation and studying the scriptures. Ibid., p. 46

images are set on a raised dais. The abbot or presiding monk has a separate area for study and for sleeping. A large reception hall (Main hall) serves as a multipurpose room that can be divided to provide sleeping quarters for the monastic community, and area where novices are instructed and a zone where visitors can be received. Behind the reception hall is a store where the monks also keep their few belongings.

Shan immigrants, both local and British subject traders, in Northern Thailand were staunchly Buddhist and were heavily influenced by Myanmar Theravada Buddhism. They built and donated their own monasteries as a way of making merit and compensating for depleting the forests[6]. These monasteries became the community centers where their language, belief and culture were practiced and preserved. They are predominantly found in Lampang, Mae Hong Son and Phrae where Shan immigrants and traders mainly resided. The architectural characteristics of these monasteries differed from those of local wats in Northern Thailand. Moreover, their styles influenced by different regional characters of which the trade routes were mainly linked such as lower Myanmar, Northern Thailand and Shan State.

Generally, in Shan monasteries in Mae Hong Son, the monastery compounds contain several buildings namely Sala Kanparian, Sala Phakjamsin, Stupa (Chedi) and Tombs. There was no Ordination Hall (Bot) or Buddha Hall (Viharn) in the past. Sala Kanparian facilitates for Buddha image and for religious activities and residence for monks. Therefore, it has been the main building in the temple and big in size. The temple compound also composed with Stupa. Some wats have many Stupas in the compound. One of the important buildings in the compound is Sala Jamsin, which is for lay people to live in the important religious days. The rest of the elements in the Tai temple are Tombs.

"Sala Kanparian" or the main monastery building is the biggest building in the temple compound. It is also known as "Jong" by Tai Yai communities in Northern The building is generally one storey wooden building with square or rectangular in plan. The buildings face to East or North. It has semi open style having three walls with elevated floors with one or two stairs in front. The floor has steps according to

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[6] A donor likewise believed in nat and tree spirits and aim to share his merit with teak tree spirits whose their abodes were taken because of his teak trade. See Chotima Chaturawong, *"The Architecture of Burmese Buddhist Monasteries in Upper Burma and Northern Thailand: The Biography of Trees,"* Dissertation for Doctor of Philosophy, Cornell University, 2003, p. 288

the level of auspiciousness. The upper level with side walls is for Buddha images where the highest roof level has. In this area, "Kha Ban" is known for a decorated space where Buddha images are placed. The lower step in front of Kha Ban is for monks. Women are not allowed to these two steps. The lowest floor is for lay community.

The roof is high with multi tiered structures. The top roof is the gable roof while the lower roofs are half gable. If the roof has two gables with three tiers, it is called, Song Kor Sam Chai (2 neck 3 roof). In Tai Yai language, it is called, Zaytawun (Jed Bun). The roof has Sam Kor Jour (3 gables) and 4 roofs, it is called Yuan Htat (Yuan Chaak). If the roof is built with more tiers, it is called Pyatthat (Parasat) style roof with 5, 7 and 9 levels and put the umbrella (Tang Hti or Chaat) at the top. The eave boards are decorated with filigree made of zinc. The upward deco is called "Pan Yong" while the downward is called "Pan Soi". The most popular roofing material was zinc roofing sheets which was expensive and imported from Myanmar.

2.1.4 Myanmar Sumptuary Law Related to Monasteries

The monastery being a dwelling of monks was also subject to Myanmar sumptuary laws that applied to the construction of a house. The size, type of structure, the amount of location of embellishment and the nature of the materials used were all subject to various restrictions. In the royal capitals, permission from the king was required to build substantial monastic establishment. In theory, as 'Lord of land and water', the monarch owned all territory within the kingdom. However, land allocated to the building of a monastery become Wuttukan Myay, which meant that once dedicated, it became the property of the religion and could not appropriate for other purpose. It also could not be taxed by the secular authorities. Consequently, all petitions to construct monasteries sent to the Supreme Council of State (Hlut Taw) were carefully scrutinized. The value and location of the proposed site, the petitioner's wealth, occupation, social standing and relationship or friendship with the king and or with other important personages at both the national and provincial levels were all carefully weighed and considered, along with the prestige and erudition of the chief monk who was to occupy the work of merit.

Limitations were placed on the use of brick boundary walls, masonry staircases, paved promenades and the size and extent of the surrounding verandah as well as the use of landing stage (Sin Kat), which was part of a balustrade where important personages could dismount from elephant. The number of tiers allowed on Pyatthat spires and Zatawun roofs were also defined according to rank, as was the extent of decoration allowed in the form of wood curving, gilding, glass inlays and lacquer. Exterior wood curving on walls, over entrances, along the gables and barge-boards, interior room partitions (Marabin), and around the arch of the Buddha's throne were also subject to regulation. Authorization to use certain architectural finials such as a gilded iron umbrella (Hti) and other roof ornaments were scarcely granted. Marble capped verandah posts were limited to royalty while commoner had to make with stucco or ceramic covers. Certain motifs such as praying angle spirits (Deva) figures were also regarded as the privilege of royalty and could not be used by commoners. Monasteries built by the officials are second in grandeur only to those commissioned by the royalty. The regulations for the construction of monasteries by ministers are the brick wall and stairways, a small balustrade (Sin Kat) to dismount from the elephant were permitted. Restraints were on exterior embellishments. Floral wood-carvings were not allowed to cover the whole exterior of the monastery. Gilding was only permitted on the roof, prow shaped projections and on the fascia boards and was forbidden on gable boards. Wood-carving was permitted on the wall of the partition (Marabin). By constrast, exceptions to sumptuary laws were sometimes made for various reasons such as for highly revered monk, a donation of someone who had closed relationship with king and the donation made on behalf of king (Fraser-Lu, 2002).

2.1.5 Monasteries in Northern Thailand

The Thai official classification refers to the foundation process and divides the monasteries into two main classes: royal and common.

Royal monasteries (Phra Aram Lung), founded or renovated by a King, Queen, Viceroy or Crown Prince, or founded or renovated by other people to be presented to the King. Common monasteries (Aram Rat), also called Wat Ratsadon, founded or renovated by a commoner, and processing an ordination hall (Ubosot).

There are two other categories. The first one is monastic residence (Samnak Song) without containing ordination hall and depending upon another monastery for ordinations. The second one is deserted monasteries (Wat Rang) being no more used by monks (usually an archeological site)

The monastic compounds were divided into two main parts an inner enclosure with the ordination halls and occasionally one or several stupas. In the Sanghavasa, an outer area added on one or several sides are located the monks' quarters, the library and other buildings for sermon reading and teaching activities. An outer boundary wall encloses the whole compound. There is however no formal uniformity and different configurations are attested, such as centered, linear, parallel or scattered, in compounds of various sizes. Away from the royal capitals, monasteries were and still are much less systematically planned. They were often built by the villagers according to the availability of funds, usually starting as Samnak Song, with a simple wooden building to house one or two monks, around which pavilion (Sala) and preaching hall (Viharn) were added when possible. Only after the formal permission is granted (in the name of the King), can the Ubosot be erected, which will give the monastery its full statute by allowing ordinations to be performed. In small monasteries, particularly in villages, the inner enclosure separating the Buddhavasa and Sanghavasa is seldom materialized; though always symbolically present (Pichard, 2003).

There were regional variations throughout the country. A typical monastery in Northern Thailand is also a walled enclosure containing a number of buildings with specific functions. The scared Buddhavasa is usually bounded by a rectangular wall with a main entrance in the middle of the east side. Often, this wall may be lined on the inside with a cloister which can be either a wall or a roofed gallery surrounds the cult area. The main monastic buildings and the Buddha images within them usually face East, in the direction of the rising sun.

The principal structure inside the compound is the stupa (Chedi) to enshrine the religious object. The most sacred are the relic of the Buddha himself. With such a scared structure, the base is often enclosed by a railing or wall. The normal position of a stupa is in the center of the enclosure or offset slightly to the west, behind the Viharn.

A constant structure in Northern Thailand wat is the gabled hall known as Viharn. If there is only one monastic building, it is likely to be this multifunctional structure used as an assembly hall for the laity as well as for monks, and usually containing the wat's principal Buddha images at the far end. It is a rectangular building with entrance on one or both end.

The Ubosot is the consecrated ordination hall, used exclusively for monks. All stylistic festures of Viharn apply to the Ubosot but smaller in size since it needs only to accommodate the resident monks not the laity. Women may not usually enter. It is most typically place on the south side and offset to the west.

The library (Ho Trai) normally found only in the important wats. Its original function was the safe storage of hand written and illustrated Buddhist manuscripts.

There are a number of other monastic buildings which may or may not be present in any particular Sanghavasa of a monastery. A bell tower or a drum tower called Ho Rakhang and Ho Klong respectively is to house a bell or a drum which is stuck to call monks to devotions, to announce noon and to toll the end of the day's work. In central Thailand, larger wat may have a preaching hall, called a Sala Karn Parian, but there are only a few of these found in Northern Thailand. It can be located in Buddhavasa as well as Sanghavasa. It is a rectangular pillared hall with or without walls which can be in wood and very large or in masonry and similar to a Viharn. Inside has seat of the preacher and lateral platform for the monks. The function is to sermon readings, large meetings between monks and lay people. An image house called Mandop is a squared open-sided pavilion to house a Buddha image or foot print. There is monk's living quarters traditionally in the form of small one-roomed buildings known as kuti. The kuti were in an area of Sanghavasa outside the Buddhavasa. They are either built in wood, on post, or in masonry. In large monasteries, they may be grouped in units of 5-7 monks cells (Khana) under a senior monk (Chao Khana). In village, Kuti are often the first building of a new monastery. Although the crematoriums are not found in the Northern Thailand monasteries, some tombs of the several members of the royal families or important persons appeared in some monastic compounds. Up to the 19th century, education of village boys provided by the monks seemed to be taken place in Sala or in the verandah around the Kutis. Nowadays, some governmental primary schools are located in a separate part of the

monastery compound. In addition, Paritiyattitham schools have been set up in some monasteries to teach Pali to young monks. They are located inside the compound, usually in modern buildings with classrooms.

2.2 Reviews on the Research Approaches

There are limited numbers of researches conducted on Shan Monasteries from Northern Thailand in the field of vernacular architecture. The Architecture of Tai (Satapatayagum-Tai) written by Onsiri Panin and Ban-Wat (House-Temple) written by Surasa Pomthongkham et.al published as Mae Hong Son special issue about the Architecture of Tai Yai in Northern Thailand particularly in Mae Hong Son Province are two main sources in getting Shan (Tai Yai) architecture in Northern Thailand. However, these two literatures appeared in Thai Text. There are some researches in Myanmar text conducted on Myanmar Monasteries which are the contemporaries of Shan monasteries. Myo Myint Sein et.al described the space and construction of four Myanmar monasteries built in late Kone Baung period in their research article on Monasteries in the Late Kone Baung Period. Lwin Aung, analyzed the Myanmar monasteries built in colonial period based on the spatial composition and architectural forms in his research on Architectural Compositin of the Monasteries in Colonial Period. Fraser-Lu studied the wooden Myanmar Monasteries and related edifices in the book named Splendor in Wood. Chotima Chaturawong completed a dissertation on Myanmar monasteries in Upper Burma and Northern Thailand during late 19th to early 20th century.

Some related researches on vernacular architecture are also reviewed. The encyclopedia of vernacular architecture of the world, volume one, edited by Paul Oliver focused theory and principles for vernacular researches. Vernacular Architecture in the Twenty-First Century Theory, Education and Practice edited by Lindsay Asquith and Marcel Vellinga focused on the challenges of vernacular architecture in the twenty-first century. The study of Indonesian Houses by Schefold et al focused on their tradition and transformation. Widodo studied the morphology and transformation of Southeast Asian cities in his book The Boat and the City.

2.2.1 Conceptual Approach

Before reviewing any further to the conceptual approaches in vernacular researches, it is fundamental to review a brief about the term "Vernacular Architecture" which is the primary area of this particular study. Paul Oliver (1997) stated that vernacular architecture comprises the dwellings and all other buildings of the people. They are related to their environmental contexts and available resources and are customarily owner-built or community-built, using traditional technologies. It has been accepted by the vernacular researchers that all forms of vernacular architecture are built to meet specific needs, accommodating the values, economies and ways of living of the cultures that produce them.

Since the builders are often from within the community, they are aware of not only climatic and typological considerations in their localities, but also the values, rituals and believe shaping the design of the vernacular buildings. Hence, the results from the vernacular studies often used to record and document building traditions and typological changes through history. Besides, many of the vernacular building reflect the nature of the way of life, of different cultures. They may be related or separate and distinct. Paul Oliver (2006) argued that the study of singularities and commonalities shared by different building traditions of diverse societies, and how these have developed, diverged or converged over time is an import aspect. To deal with this aspect, comparative researches together with appropriate conceptual approaches have to be considered.

There are no single approaches to study of vernacular architecture. There can be various theoretical approaches to make research on vernacular buildings (Oliver, 1997). Many vernacular researches fit into more than one category or approach, but are discussed below where they exemplify the conceptual approach being discussed.

Anthropological approach

Anthropological approach considers buildings as cultural artifacts and reveals the relationship of dwelling to family, social structure and mores. Until 1960s, it can only provide documentation and classification of traditional forms such as houses, decorations and for reconstructions. Later, more programmatic approaches to an anthropological study of vernacular architecture were being developed. Architects

initiated with an interest in anthropology not only describing and classifying forms but also understanding them within their local context.

This approach can be found in the study of Panin (1996) and (Pomthongkham et.al). They studied the Architecture of Tai Yai (Shan) in Northern Thailand particularly in Mae Hongson Province, by providing their history, socio-cultural backgrounds and general architectural characteristics. Fraser-Lu (2001) also used the same approach. However, her study emphasized deeply on the daily life of monastery and introduced the Myanmar craftsmanship expressed in the construction and decoration of Buddhist wooden monasteries. Her study divided into two parts; the former studied the Myanmar wooden monasteries within social and cultural context and the latter was the field survey of individual monasteries and their edifices.

A more precise anthropological approach is in the study of Chaturawong (2003). She studied Myanmar monasteries in two areas through a mix of aesthetic tradition and vernacular analysis. It finds the role of monasteries in the context of Buddhism, anthropology, economy and politics. The study through the biography of trees provides multiple links to interpret the Myanmar belief system. It also shows the changing roles from the abode of tree spirits to sacred monasteries and to commodities.

Architectural approach

Architectural approach can uncover technological and organizational principles and brings techniques of analysis on vernacular buildings. Besides, the studies using architectural approach publish or exhibit secondary sources which depict vernacular buildings by using diagrams, typologies, drawings, photographs, models and field works of firsthand documentation. The influence of research on practice has taken many forms, as a result of the many approaches used by architect to study and conduct research on vernacular architecture. Such researches are influenced by the assumptions about the nature of vernacular architecture. Such assumptions influence the focus of the research, the choice of methods, the interpretation of data and the presentation of results.

The two researches using architectural approach are reviewed. They are the studies of architectural composition of Burmese monasteries in Late Kone Baung

period and Colonial period by Myo Myint Sein and Lwin Aung in 1970 and 1976 respectively.

Myo Myint Sein (1970) proved the monasteries in late Kone Baung period were built according to the spatial concept, technological influence, architectural concept and religious concept of the monasteries. He claimed that the analysis only from the façade is insufficient and not logical in analyzing an architectural object since architecture is influenced by the topographies and climatic factors from the beginning of world's architectural history. Thus, the study also considered the topographies and climatic factors in the analysis together with the spatial architectural principles.

In the study of Myanmar monasteries from colonial period, Lwin Aung (1976) claimed that trade before the colonization could convey the foreign architectural styles but the flow of changes must be steady and regular. After being colonized, the styles changed rapidly with the force of political power. It can be evident in administrative and public buildings which are the reflections of the current governmental power. The study was scoped to the religious building because they were considered to be the evidence for normal transformation of the Burmese architectural style under different cultural rule. The research was divided into two parts where the first part based on the composition and transformation of Burmese monasteries since Bagan period from previous researches from various point of views such historical, archeological, and architectural. The second part, the analysis of transformation of the monasteries architectural styles based on the field surveys around delta region of Lower Myanmar. The study resulted into the roof developments and the spatial composition of monastic compounds during colonial period.

Diffusionist Approach

The diffusionist concept reconsiders the processes of building change and the distribution of forms and details between contiguous people. Architectural diffusion does not occur in isolation from other aspects of culture and context. It can be applied to study the spread of cultural traits, innovations and information and sometimes defined as a process between individuals or groups. The spread by migration is

considered as diffusion when transmitted to other individuals or groups in the new place or on the way. It is also classified as spread in space combined with interpersonal or inter-group transmission. There are two criteria for identifying relationship in diffusionist approach. They are form and quantity. The form is to group striking similarities in features whereas the quantity is to claim probability of relationship. The initial idea of this approach is to identify a relationship between cultural traits that might be carried along by migrants or merchants without displacement affecting their form. Although early diffusionist approaches focused on the spread or change in through space, some recent researches focused on the changes both through space and through time.

The studies of Schefold et.al (2004) focused on the tradition and transformation of Indonesian houses in vernacular architecture. Widodo (2004) studied the morphology and Transformation of Southeast Asian cities from architectural view. Although the authors did not definitely state that they use the pure diffusionist approach, their works based on the variation and transformation which might be the subordinate of diffusionist approach.

The variations and transformations of a process can also be studied through both time and space. The study of the changes through time called "Diachronic" while through space called "Synchronic". Synchronic is defined by Widodo as change through different layers; philosophic, sociologic, morphologic. However, Schefold et al (2004) stated Synchronic as changes in the regions as well. Moreover, the study of variation in the building in a given region or even in locality which is synchronic is regarded as a necessary step in applying a diachronic perspective.

Nonetheless, the architecture can be observed through different time frames or historical periods in the process of transformation and within this transformation, certain permanent elements can be identified (Widodo, 2004). However, the changes through time (Diachronic) do not become obvious in the same way in all buildings since some of these represent the latest result of past developments whereas various archaic characters continue to survive in others. Nonetheless, Synchronic variation in a given region can help studying local transformation.

2.2.2 Methodological Approach

"Methodology" in a research is the strategy or plan of action that links methods to outcomes where as "Method" refers to techniques and procedures that have been used to collect and analyze the data. Hence, this part of review endows with data collection and data analysis methods. The previous researches used either qualitative or quantitative, or sometimes, mixed method approach.

Data Collection

Data collections include documentary survey and field survey both qualitatively and quantitatively.

In previous anthropological research relating to monasteries in Myanmar, such as Chaturawong (2003) and Fraser-Lu (2001), the qualitative method for data collection was used principally used. The secondary data come from historical records and previous researches. The primary data collection was the field survey including observations of the studied monasteries and interview with the monks, descendants of the donors and traditional architects. However, Fraser-Lu (2001) completed an extensive field survey of approximately ninety individual monasteries and their edifices.

The study of Myo Myint Sein et.al (1970) based on the physical measured drawings of the selected monasteries from Kone Baung period in Upper Burma. The study used the quantitative data collection which is the field measure works. The measured works included detail measurements not only the monastery but also the related structures inside the monastery compounds, layout of the buildings, and the area of the compound. Before going to the field works, the classification of monasteries build in the same period was carried out according to the criteria. The criteria they used were the architectural style such traditional or foreign influenced. Listing the monasteries was made by using the information from the historical records.

Mix-method approach can be found in the studies of Lwin Aung (1976). The architectural composition of over a hundred numbers of monasteries from eleven towns of delta area was studied for this research. The monks, the donors and the

builders of some monasteries who were still alive were interviewed for data collection.

Data Analysis

The various ways, in which one heritage is formed in each local situation, prove adaptations to regional circumstances and social changes. The interethnic comparison can help in understanding of both shared tradition and the diverging developments of the architectural structures. The variety of building forms can be studied by using mutual contrasting.

Together with both Synchronic and Diachronic approach to study the transformation and variations in Indonesian houses, Schefold, et al (2004) used interethnic comparison between different regions and in the same locality. In a comparative study of Chaturawong (2003), the anthropological background of Myanmar monasteries from upper Burma is used to compare with those of a Northern Thailand Myanmar monastery. Researcher used the detail comparison between Myanmar monasteries and palaces by using the spatial planning. The research used the monasteries from upper Myanmar and Northern Thailand of the same period with the architectural drawings of the previous researches. The results showed the association of Myanmar monasteries in upper Myanmar and so-called Myanmar monasteries in Northern Thailand.

The mix-method analysis can be seen in the following two in which the quantitative data such as measured works and detail drawings were studied and reinterpreted by using qualitative data. Myo Myint Sein et.al (1970) analyzed the architecture of Late Kone Baung monasteries by using theories and principle of spatial relationship, climate responsiveness and aesthetic qualities. Lwin Aung (1976) analyzed Colonial period monasteries by looking at the physical developments of the samples. These two researches have been generated from the field survey and observations. The interpretation of the roof developments were referred to the previous and historical records and interviews in the field.

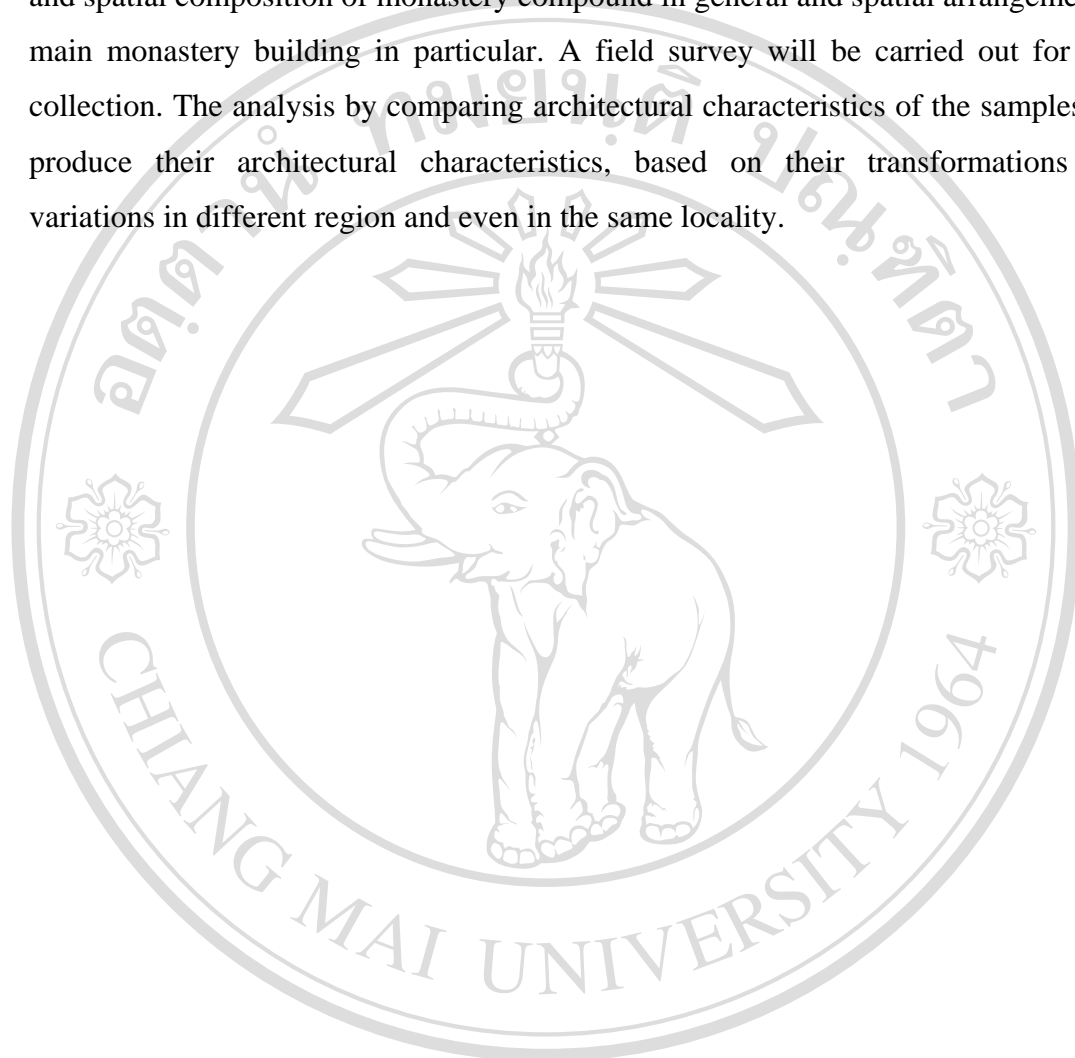### 2.2.3 Research Approach of the Study

The main objective of this study is to explore the Shan influence in the architectural characteristics of Northern Thailand Shan monasteries. They are always misidentified and mix-identified among those of Myanmar monasteries by general observations. Their forms are similar since they have been developed under the suzerainty of Myanmar kings. However, being the consequence of transnationalized phenomena in 19th century i.e., trading and migration, the architecture of Shan Monasteries in Northern Thailand may also be influenced by socio-cultural factors of different locality.

Widodo (2004) stated that architecture can be prescribed as a totality of at least three main layers: morphological (physical, formal), sociological (activity, functional, anthropological), and philosophical (meaning, symbolical, mythological). Among them, morphological articulation is said to be directly related to the sociological inhabitation activities and to the attribution of meanings, it can be said that the sociological measure mainly depend on the activity and functional. For one culture either social custom or belief system, it is mainly based on the activities and functions which can obviously be seen in the spatial arrangement in architecture.

My stand point is, although the Shan monasteries were built in different territory, the concept in the spatial arrangement both in site planning and main monastery building planning could be maintained the same. However, there can be some transformations and variations not only in their spatial planning, but also in their forms and decorations according to the time and space changes.

Also with the knowledge gained by this whole part of review, a multidisciplinary approach which is a collaboration of architectural anthropological and diffusionist approaches will be used for this particular research. According to diffusionist approach, the Shan monasteries in Northern Thailand are taken as transmitted from Shan State of Myanmar. Hence, a comparison between their architectural characteristics will take out the striking similarities and prove their relationship. The anthropological approach will support to comprehend the cultural or traditional influences that may appear during the comparison. Finally, the architectural approach materializes the whole set of research as documentation. Methodologically, a mix-method approach, qualitative and quantitative, will be used

for both data collection and data analysis. The study will be focused on architectural characteristics not only the main monastery building but also the site. The elements and spatial composition of monastery compound in general and spatial arrangement of main monastery building in particular. A field survey will be carried out for data collection. The analysis by comparing architectural characteristics of the samples can produce their architectural characteristics, based on their transformations and variations in different region and even in the same locality.