

Research on the Eastward Orientation of Historical Capital Cities of Burma

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Abstract

The capital cities in Southeast Asia are influenced either by those of China or India in the ancient times. Most of those built under the ancient China model tend to have southward orientation, meaning that the Palace faced the south, while those built with the ancient India model were said to be isotropic and did not have clear orientation. In this research, historical capital cities in Burma (Myanmar) were envisaged in light of physical plans as well as contemporary documents describing them. As a result, some of the capital cities of Burma, particularly the last three capital cities of Konbaung Dynasty, namely Ava [Inva], Amarapura and Mandalay, were found to have eastward orientation. The eastward orientation makes a unique character in the planning of capital cities in the Southeast Asia.

Key Words: Mandalay, Amarapura, Ava, Bagan, Burma, Myanmar, Royal City

1. INTRODUCTION

1.1 Background of Research

Myanmar, or formerly known as Burma, was long governed by kings in its history till the British rule started in late nineteenth century. The kingdoms, some small and localized and others large and integrated, had their administrative center in the capital (royal) city, where the palace for the king was installed. As many of the kings preferred to have his own capital city, shifting of the capital city from one location to another was not uncommon. Thus in Burma, there were a number of historical capital cities. (Fig.1).

1.2 Previous Research

Sometimes Burmese capital cities are said to have the unique feature of eastward orientation. Oka wrote that the eastward orientation is widely seen in capital cities in Southeast Asia, and noted that in Mandalay of Burma, for example, the most important gate is the eastern gate, and that the entire city was laid out facing the east [Oka, 348–356]. Aung-Thwin pointed out that eastward orientation was “the cosmic symbolism of the Upper Myanmar capital cities [Aung-Thwin, 135]”.

Despite these general beliefs, there has not been much empirical discussion regarding the eastward orientation of Burmese capital cities. This research discusses specifically the orientation of Burmese capital cities with a focus on capital cities built by Burmese kings from Bagan through Mandalay.

The author’s previous paper examined the chronological process and physical feature of Mandalay’s city planning, and clarified the origin of the planning of Mandalay. It was concluded that planning of Mandalay followed the historical capital cities of Burma particularly Amarapura. It was also found, among others, that the main gate of Mandalay Palace faces east, and the buildings in the Palace is aligned to this direction [Yamada (2017), 18].

In this research, the orientation of the historical capital cities in

Burma since Bagan through Mandalay is addressed.

1.3 Research Objective

In this study, Burmese capital cities are reviewed based on historical plans and maps and various references and documents describing them written by travelers and observers contemporary to the cities, focusing mainly on the palace and the royal city together with related buildings, such as monasteries. Then the issue of orientation of capital cities are discussed specifically for each of historical capital cities in Burma (Chapter 3). Then the issue of eastward orientation is discussed from wider perspectives regarding the planning of capital cities as well as relevance to religious practices (Chapter 4).

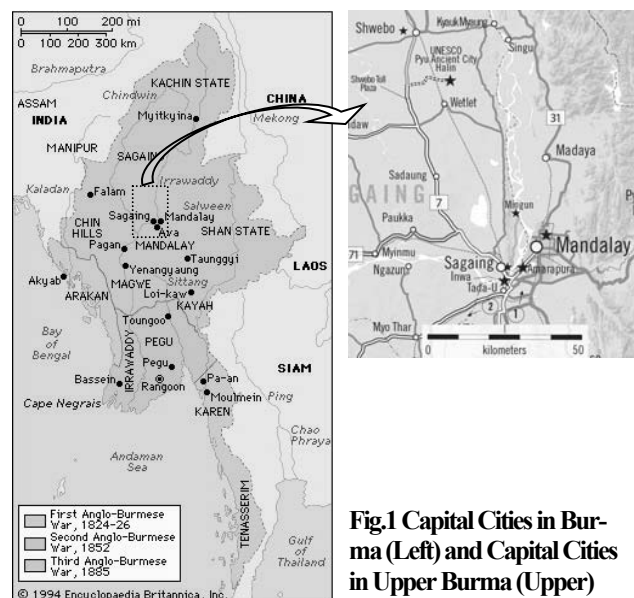


Fig.1 Capital Cities in Burma (Left) and Capital Cities in Upper Burma (Upper)

Source: Encyclopædia Britannica

1.4 Method and Primary Sources

This historical research is based on the following primary sources published in the nineteenth and early twentieth centuries and other essential references:

Crawfurd (1827), Yule (1858) and O'connor (1907): These provided contemporary observations on the profile of the royal palaces of Ava, Amarapura and Mandalay.

Directorate of Archeological Survey (1963): This provide actually measured plans and elevations/sections of Mandalay. Aung Thaw (1972), Kan Hla (1977) and Kan Hla (1978): They respectively provide site-specific spatial plans of pre-Bagan, Bagan and Post-Bagan capital cities in Burma.

Myo Myint Sein (2015) and Moilanen (1993): These provide actually measured plans and elevations/sections of a number of Buddhism architecture, including monasteries and temples, some of which were built together with capital cities.

2. OVERVIEW: CAPITAL CITIES IN BURMA

The capital city in Burma was often relocated when a new king took the throne, so there have been a number of capital cities in Burma as shown in Table 1.

2.1 Urban Period (BC 5th to AD 8th Century)

This period is characterized by the emergence and development of urban society in Burma. In this period, for the first time in the history of Burma, the walled city appeared, some of which represented the Buddhist-Hindu universe with architectural features [Aung-Thwin, 65]. These were built mostly by the Pyu¹ in Upper Burma along the middle reach of the Irrawaddy River, which is a central dry zone of Burma. The largest of the walled cities include Beiktano and Sri Kshetra.

Table 1 Historical Kingdoms of Burma

State/Kingdom/Dynasty	Capital City	Period
Pyu City State	Beikthano	AD1 – AD5
	Halin	AD2 – AD9
	Sri Ksetra	AD4 – AD9
Mon City States	Thaton	AD5 ?
Pagan Kingdom	Pagan (Bagan)	849 – 1297
Pinya Kingdom	Pinya	1313 – 1365
Sagaing Kingdom	Sagaing	1315 – 1365
Ava Kingdom	Ava (Inwa)	1365 – 1555
Prome Kingdom	Prome (Pyay)	1482 – 1542
Pegu Kingdom	Martaban(Mottama)	1287 – 1364
	Pegu (Bago)	1369 – 1538
Mrauk-U Kingdom	Mrauk-U	1430 – 1785
Toungoo Dynasty	Toungoo(Taungoo)	1510 – 1539
	Pegu	1539 – 1550
	Pegu	1552 – 1599
	Ava	1599 – 1613
	Pegu	1613 – 1635
	Ava	1635 – 1752
Konbaung Dynasty	Sagaing	1760 – 1765
	Ava	1765 – 1783
	Amarapura	1783 – 1821
	Ava	1821 – 1842
	Amarapura	1842 – 1859
	Mandalay	1859 – 1885
British Burma	Mawlamyaing(Moulmein)	1826 – 1852
	Sittwe (Akyab)	
	Mawlamyaing	1852 – 1862
	Sittwe	
	Yangon(Rangoon)	
	Yangon(Rangoon)	1862 – 1942
Japanese Burma	Yangon	1942 – 1945
Burma	Yangon	1945 – 1948
Burma	Yangon	1948 – 2005
Myanmar	Naypyidaw	2005 – present

Note: Bold letters indicate integrated kingdom in Burma.

Source: various.

In Lower Burma, some walled cities are known, and these are thought to be Mon² city-states. Thaton in the Mon State is relatively well excavated.

(1) Beiktano

The oldest of Pyu's city-states was Beikthano, meaning the city of Vishnu, which is thought to have prospered from AD 1–5 [Tatsumi, 57–62]. There are ruins with an earthwork of a rounded rectangular shape. Inside of the outer earthwork, there are ruins involving a monastery, temples, and pagodas, and a few ponds for impounding water can be seen even today. The ruins of the palace are in a sharp rectangular shape in the center of the earthwork

(2) Sri Ksetra

Sri Ksetra, or Thayekhittaya in Burmese, is the newest of Pyu's city-states. It sits on the Irrawaddy River, about 250 km downstream of Bagan. Sri Ksetra, meaning "Nation of Glory" in Sanskrit, prospered from AD 4–9. Sri Ksetra includes an elongated round castle ruin, running about 3.5 km east–west 4.4 km north–south. Having a round wall is rare, almost unique, among the walled cities in Burma (Fig. 2).

2.2 Bagan Kingdom (8th to 13th Century)

In AD 832, the Kingdom of Nanchao, located in present day Yunnan of western China, attacked the Pyu Kingdom in Upper Burma and captured about 3,000 of its people. In 849, a walled fortress was built at Bagan (also spelled "Pagan") in the middle reach of the Irrawaddy River. The fortress was built with thick high walls made of brick (Fig. 3).

The Bagan Dynasty (AD 1044–1287), which was the first Burmese dynasty, later integrated the nation of Burma. The capital city of the dynasty was in Bagan, and the center, "Old Bagan", was built with square-shaped walls. Bagan developed an irrigated farmland system and promoted trade with India and China, and as a result, the economy prospered [Tatsumi, 65–67]. In 1283, Khbilai Khan from China invaded Burma, and Bagan fell in 1287 [Gangi, 5].

2.3 Ava and Pegu Kingdoms (14th to 16th Century)

After the fall of the Bagan Dynasty, Burma became disintegrated again.

(1) Ava (Inwa)

The Shan³ made kingdoms for themselves at Pinya and Sagaing, and then, in AD 1364, Ava, or Inwa in Burmese, was founded as the capital of the First Ava Kingdom in Upper Burma [Phayre, 63]. The kingdom was in the dry zone of Burma and was agrarian in nature.

(2) Pegu (Bago)

In Lower Burma in 1369, the Mon reestablished power at Pegu, or present-day Bago, the capital of the First Pegu Kingdom [Aung Thaw, 104]. Pegu, located near the river connecting to the sea, was generally more commercial.

2.4 Toungoo Dynasty (16th to mid-18th Century)

Both the Ava and Pegu Kingdoms reached their pinnacle in the fifteenth century, but had declined by the end of the first half of the sixteenth century [Aung-Thwin, 107]. The Toungoo Dynasty then reunified the territory of Burma.

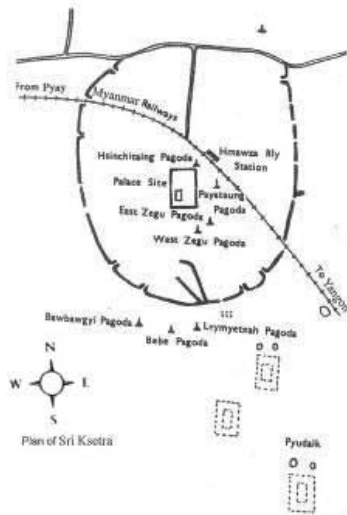
(1) Toungoo

In AD 1510, Toungoo was set as the capital city of the Toungoo Kingdom for some time. Toungoo also had a

square-shaped wall and moats around the city with gates on each side, and the Palace was near the center (Fig. 4).

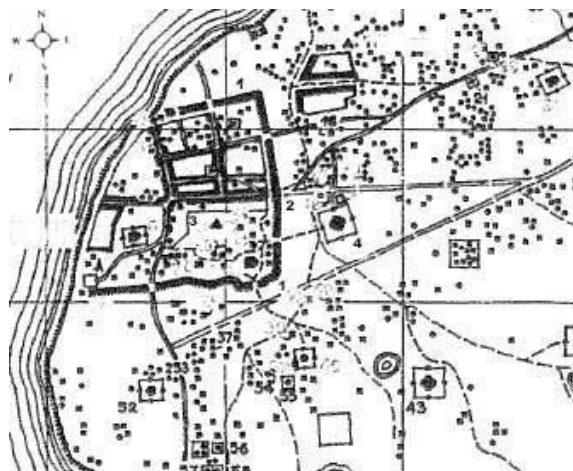
(2) Alterations between Pegu and Ava

The Toungoo Dynasty resumed power in Lower Burma, and in AD 1539, finally recaptured Pegu, which became the capital [Aung-Thwin, 129]. A new Pegu was built in the sixteenth century as a square walled city with five gates on each side [O'Connor, 371–374] (Fig. 5).



Source: Aung Thaw (1972), 20

Fig.2 Sri Ksetra



Note: One side of the square is 1 km. (1) City walls, (2) Tharaba gate, (3) location of royal palaces, (4) Ananda temple

Source: Kan Hla (1977), 16

Fig.3 Old Bagan

A British traveler who visited Pegu in 1568 wrote the following about the city: “it is a city very great and populous, and is made square, and with fair walls, and a great ditch round about it full of water, with many crocodiles in it: it hath twenty gates, and they be made of stone; for every square five gates [“The Voyage of Mr. Ralph Fitch”, in J. Pinkerton (ed.), IX, 416–417].”

In 1600, Ava took over the seat of the Second Ava Kingdom. In 1613, the capital was again shifted to Pegu. Then, in 1636, Ava was re-established as the capital until middle of the eighteenth century [O'Connor, 118].

2.5 Konbaung Dynasty (mid-18th to end-19th Century)

The Konbaung Dynasty, started by King Alaungpaya⁴ in 1752, reunified Burma in 1759, and ruled it until 1885. The Konbaung Dynasty was the last dynasty of Burma.

(1) Shwebo and Sagain

The capital of the kingdom was first set at Shwebo in Upper Burma in 1752, and then in nearby Sagain in 1760. Both of the capital cities were located in the vicinity of Ava, in the heart of the kingdom along the Irrawaddy River.

(2) Ava

In 1764, Ava, which had already served as the seat of the king more than once, was rebuilt as the capital, and a splendid palace was constructed (Fig. 6). Ava was also sometimes called Ratanapura, or the “City of Gems.”

(3) Amarapura

In 1782, King Bawdawpay⁵ built a new capital, Amarapura (meaning “City of the Immortals”), 10 km northeast of Ava. The plan of Amarapura followed the immemorial usage of a capital city, with a square site, a moat, and crenellated walls [O'Connor, 152] (Fig. 7). Amarapura is “an enormous, perfectly square enclosure, with walls over a mile, surrounded by a wide moat and then by numerous supporting towns and villages [Thant Myint-U, 54]”.

(4) Alterations between Ava and Amarapura

Henceforward, the relocation of the capital city between Ava and Amarapura took place a few times in the eighteenth and nineteenth centuries: Amarapura to Ava in 1821, and Ava to Amarapura in 1842, where it remained the capital until the subsequent relocation to Mandalay.

The shift in 1821 from Amarapura to Ava was done by King Bagyidaw⁶. Crawford, who visited Ava in 1826, observed that Ava had circumference of 5–6 miles [8.0–9.6 km] and was surrounded by a brick rampart. He also noted that the northeast area was separated from the larger part of the town by a brick wall, constituting a second town that contained the palace and public offices [Crawford, 743]. Thus, Ava had two walls: an outer wall for the settlements and an inner wall for the palace.

Before relocating to Mandalay, the center of Amarapura comprised a 1.6-km square-shaped grand wooden palace [Kan Hla, (1978), 99]. Amarapura was the capital until Mandalay was newly built in 1859. The plan of Amarapura resembles that of Mandalay. Henry Yule visited Amarapura in 1855 and observed that it was laid out as a square, bounded by a defensive brick wall about 12–13 feet (3.7–4.0 m) high with a battlemented parapet. He also noted that the four sides were each a little short of a mile in length, and that each side had three gates and from 11 to 13 bastions [Yule, 132].

(5) Mandalay

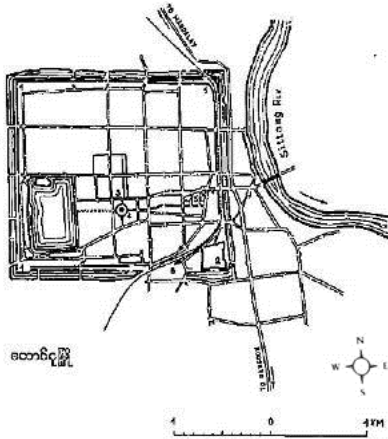
In September 1856, King Mindon⁷ made an intimation for a new city, Mandalay, in accordance with the Buddha’s prophecy. Then, in January 1857, construction of Mandalay was started. The Royal Palace was completed in July 1858, and seven major elements of the new city were completed by March 1862. The construction of the city continued until 1874, when a ceremony for the new capital city was conducted.

Physical features of Mandalay were discussed in detail in the author’s previous research [Yamada (2017)]

2.6 British Rule, Independence and Onwards

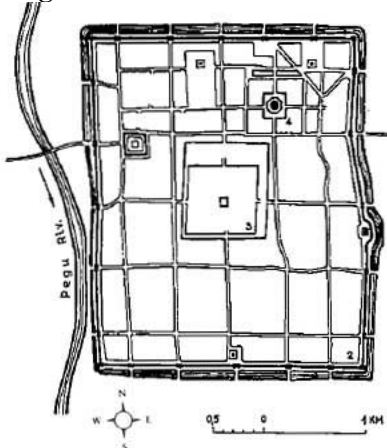
In November 1885, the Third Anglo-Burmese War broke out. The sovereignty of Burma was finally lost in February 1886, and the whole of Burma came under British rule. The capital of the British Burma was set at Rangoon, which had been built by the British in 1850's.

The capital city continued to be at Rangoon, or Yangon in Burmese, after Burma became independent in 1948, until the capital was moved to Ney Pyi Taw located near the center of Myanmar in 2006.



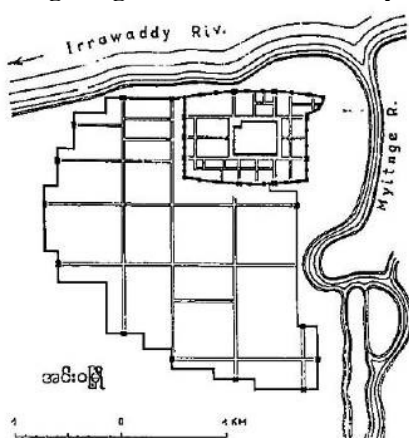
Source: Kan Hla (1978), P.94

Fig.4 Toungoo in or after the end of the 19th century



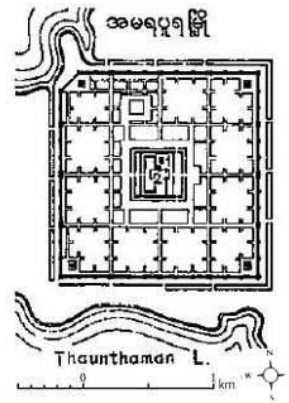
Source: Kan Hla (1978), P.94

Fig.5 Pegu, built in the 16th century



Source: Kan Hla (1978), 94

Fig.6 Ava at the end of the 18th century



Source: Kan Hla (1978), 94

Fig.7 Amarapura – plan of the Citadel in 1782

3. EXAMINATION OF ORIENTATION OF BURMESE CAPITAL CITIES

In this section, some of the historical Burmese capital cities are examined in terms of their spatial structure, particularly their physical orientation.

3.1 Sri Kshetra and Pyu City States

The walled city of Sri Kshetra had 32 gates. Heine-Geldern (1956) states that Sri Ksetra was built in the image of Indra's city, Sudarsana, on summit of Mount Meru, with 32 main gates and a golden palace in its center [Heine-Geldern, 4]. There is little evidence about the city's eastward orientation for Sri Kshetra nor other city states of Pyus.

3.2 Bagan

Old Bagan has walls around it on three sides except for the west which faces the Irrawaddy River. Tharaba Gate, which is the only surviving gate, is located in the middle of the eastern wall. There is a straight road leading to the east from the gate. The Royal Palace is said to be located inside the walls just south side of this central road. Ananada Temple, which is one of the most important temples in Bagan, is located just south of this road to the east outside of the Tharaba Gate.

Tatsumi discussed that, in consideration of Old Bagan, the Tharaba Gate, which is on the east side of the city, is the main gate of the Royal City, and that the Royal City of Bagan faced the east, as did Mandalay [Tatsumi, 67].

Regarding the temples in Bagan, Than Tun discussed that because the Buddha sits facing east and a monk disciple or a lay devotee approaching the Lord shall have to go from east to west and this approach is considered most appropriate. He went on to show counts of temples with only one gate by the orientation: 11 to the north, 34 to the east, 1 to the south and 6 to the west. Most temples are thus found to have the main access from the east [Than Tun (1998), 106-108]. This would be supportive of the eastward orientation of the capital city.

3.3 Pegu

Pegu, or present day Bago, was the capital city of the Mon kingdom until a Burmese King, Bayint Naung⁸, ascended throne in 1539. King rebuilt the palace in 1553 along with a walled city with five gates on each side, as mentioned earlier. This site has been excavated, making a detailed plan of the palace clear.

The central building was the palace, called Kambauza Thardi

Palace, housing the Lion Throne. Directly to the east was a building with three sides of a square used as audience halls, with the one remaining side on the east kept open for an entrance. The buildings, which was rebuild in the 1990s and 2000s, face the east (Fig. 8).

All of the gates on the wall were named after provinces of the Kingdom at the time. Of the five gates on the eastern side, the central one is named Toungoo Gate. Considering that Toungoo was the mother city of the kingdom before the seizure of Pegu, the eastern central Toungoo Gate was presumably the main gate of the walled city⁹.

3.4 Ava

Crawfurd, who was sent on a mission to Burma after the First Anglo-Burmese War, made a detailed record on his envoy to Ava. On 21 October 1826, the mission visited the King at Ava. After entering the inner town, the mission came to the center of the eastern face of the palisade, and Crawfurd observed that the principal front of the Palace was the eastern side, and in this direction, there were three gates. These three gates can be confirmed in a map based on Yule's account. The main gate was the one in the center of the three.

He continued: "[entering the Palace from the eastern gate] that portion of the Palace which contains the Hall of Audience consists of a center and two wings; the first containing the throne, and directly fronting the outer gates of the enclosure [Crawfurd, 752]". The alignment of the major buildings in Ava was thought to be quite similar to those of Amarapura and Mandalay, and the Palace was also considered to be facing the east (Fig. 9).

Okkyaung Monastery, built in 1818 A.D. [Lu Pe Win, 7] near the north-east corner of the Royal Palace of Ava, was also known to have the main access from the east as shown in Fig. 10, which also supports the eastward orientation of Ava.

3.5 Amarapura

Henry Yule visited Amarapura in 1855 as a member of the mission led by Arthur Phayre, the commissioner of Pegu. In his account of the mission to the court of Ava¹⁰, he wrote about the entrance to the Palace of Amarapura: "Entering the inner brick wall from the east, you find yourself in front of the *Mye-min* or Earthen Palace (as it is called from having a clay floor), the principal Hall of Audience." Yule further observed: "The central part of the building runs back to a depth of sixty or seventy feet, and at the extremity of this is the throne. Just over the throne rises a graceful *phja-sath* or wooden spire [Yule, 133]". The alignment of the main buildings, including the Hall of Audience, in front of the eastern and main gates, as well as the wooden spire above the main throne, was almost the same as that in Mandalay (Fig. 11). Also, a color sketch drawn by the Yule's mission shows the elevations with audience halls and the wooden spire facing the east (Fig. 12).

From this, it is clear that the front of Amarapura's Palace, including the Audience Hall, Spire, and Lion Throne, were very similar to Mandalay, as they were both facing east.

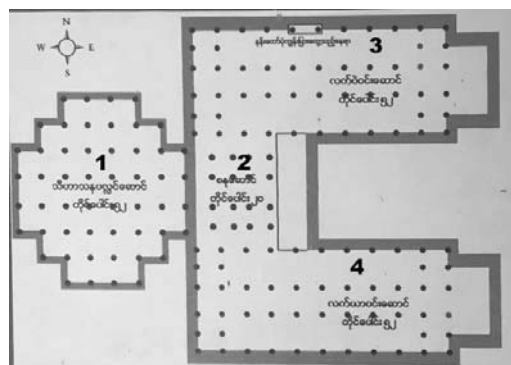
3.6 Mandalay

The main gate to the Palace in Mandalay is on the eastern side. Oertel wrote, "Of the four gates to the King's Palace, the main entrance was through the eastern gate [Oertel, 12]".

The entire Royal Palace was designed to face the east. Aung-Thwin observed that when one entered the [Royal] city by the

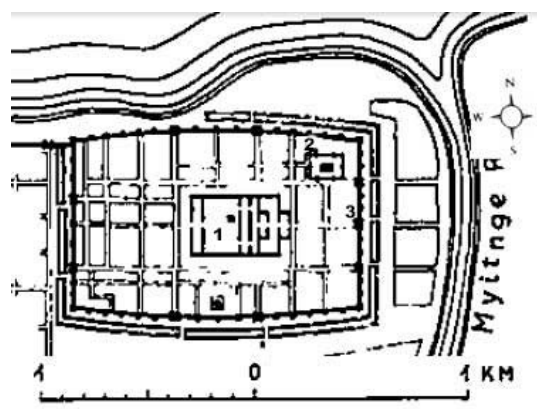
east gate, directly in front would be the Great Audience Hall, the Lion Throne [Aung-Thwin, 91], and the tallest structure, the seven-tiered Pyathat Tha, which rose above the Lion Throne, noting that, "From his throne in the Great Hall of Audience, the King of Burma, as he looked down upon his assembled people, could see the long white road which leads like an arrow to the East gate and out beyond, towards the blue Shan Mountains and the rising sun [in the east] [O'Connor, 30]". More detail spatial profile of Mandalay's palace is discussed in Yamada (2017)

To verify the eastern orientation of Mandalay Palace, the elevation drawings made by DAS in 1908 of the then-existing Palace buildings were investigated. The eastward orientation drawn in 1908 showed a symmetric profile of the Palace buildings from the east side; however, by contrast, the northern elevation was asymmetric, as shown in Fig. 13. The eastern elevation as seen from the east, or the main gate, was in perfect symmetry, whereas the northern elevation was rather irregular and asymmetric. This confirms that the entire Royal City and the buildings inside were designed to face and be seen from the east [DAS, Plates 13, 14].



Note: (1) The Hall of the Lion Throne. (2) Connecting Hall (middle), (3) Left Wing (of Audience Hall); (4) Right Wing (Do.). The entrance is from the east. Source: Displayed at Kambauza Palace and Museum, Bago.

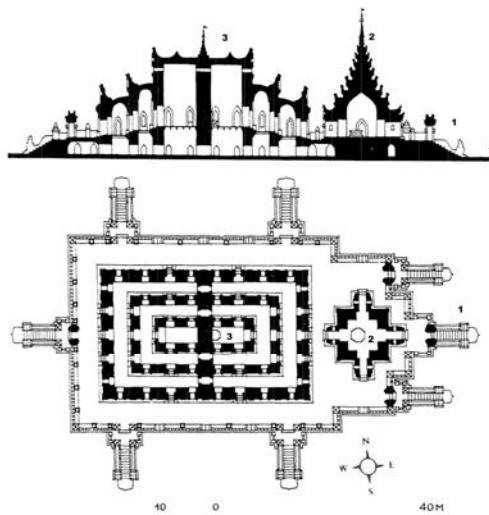
Fig.8 Kambauza Thardi Palace buildings from the mid-16th century based on excavations



Note: (1) Royal palace with the watch-tower in the center of the citadel (2) Okkyaung monastery (3) Eastern main gate

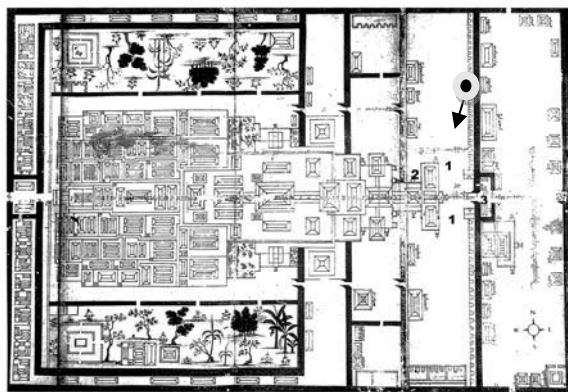
Source: Excerpt from Kan Hla (1978), 95

Fig.9 Central Part of Ava in Mid-19th Century (Excerpt)



Note: (1) Main entrance (2) Wooden Spire (3) Main hall
Source: Moilanen, 120

Fig.10 Okkyauing Monastery in Ava



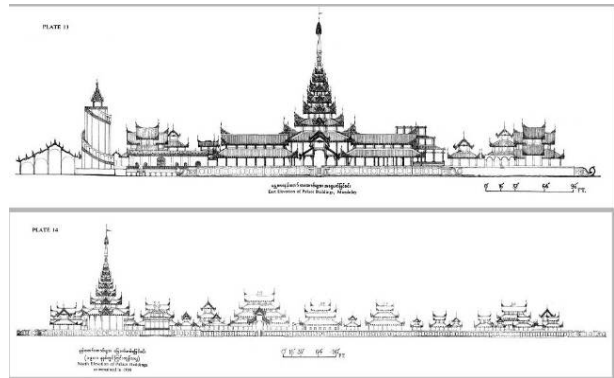
Note: (1) Audience Halls (2) Pyathat Tha (3) Main entrance to Palace The arrow indicates the direction of the sketch shown in Fig. 12.
Source: Moilanen, 145, drawing by S. S. Ozhegov.

Fig.11 Plan of Royal Palace in Amarapura end of 18th Century



Note: A color sketch showing the eastern elevation of Amarapura Palace and Audience Halls (seen from North-east)
Source: Water color by Colesworth Grant [Dumarçay,83].

Fig.12 Royal Place of Amarapura in 1855



Note: Eastern elevation (upper) is grand and symmetric, but the southern elevation (lower) is asymmetric.
Source: DAS (1963)

Fig.14 Royal Palace of Mandalay in 1908

4. DISCUSSION ON ORIENTATION OF BURMESE CAPITAL CITIES

4.1 Eastward Orientation in Burma

The east is generally considered to be the most important direction in Burma. The word *asheh* in Burmese means “east,” but it also means “main” or “front,” and *anaut* in Burmese means “west” and “back.”

4.2 Relation to Ancient Models of Capital City

The spatial structure of the capital cities in the southeast Asia was analyzed extensively, and two models have been proposed. The one is the ancient India model from a historical Indian literature *Arthashastra*¹¹. The other is the ancient China model, from a Chinese literature *Rites of Zhou* [Ohji (2011), 87-90; Yamada (2017), 15-22]. Yamada (2017) analyzed the spatial structure of Mandalay, and found that its physical feature has some factors in common with Ancient India model and Ancient China model concurrently. The ancient India Model has a concentric structure without clear distinction of orientation¹². The ancient China model has a central north-south orientation with the supreme ruler stands facing the south. In this paper, Burmese capital cities face the east, which is different from either of the proposed models, and is presumably unique to the capital cities in Burma.

4.3 Relation to Theravada Buddhism

Theravada Buddhism, which came to Burma during the Bagan Dynasty, focuses more on the teachings of Gautama Buddha and meditation for self-awareness while *Mahayana* has more mystic and ritualistic aspects to it. [Ma Thanegi, 185]. The eastward orientation is strongly related to the teachings of *Theravada* Buddhism, and a number of temples and monasteries are built facing the east, which may have affected to the orientation of the capital city. Than Thun pointed out that a temple with an eastern gate is taken as the one for the teaching of the Buddha to save people from the miseries of life, because “Buddha sits facing east and a monk disciple or a lay devotee have to go from east to west [Than Tun (1989), 106]”. He also mentioned that this comes from the fact that “on the moment of the Enlightenment the Buddha Gotama sat under the Bodhi tree facing east. Hence the Mahabodhi temple in Buddha Gaya has an eastern gate [Than Tun (1989), 106].” This would indicate that the eastward orientation is

related to Theravada Buddhism's teaching.

Eastward orientation is also seen in architecture other than that of the Royal Palace. The monastery, which is Buddhist architecture, faces east in most cases. Myo Myint Sein wrote, "Monasteries in the Konbaung Dynasty normally had the main gate in the east, which was reserved for the King and his family, priests and high officials. The building stretched towards the west with entrances for the public either on the northern or southern side. After entering the East Gate, one can climb the staircase to the floor of the elevated platform, and after passing through an engraved gate was a hall called *Py-athat*, under which the Statue of Buddha is enshrined [Myo Myint Sein, 11]". Fig. 8 shows the plan of Okyaung Monastery in Ava, showing the main entrance to the monastery from the east.

Qingxi Lou mentioned that in Theravada Buddhism¹³, the main building in the temple is made to face the east, and so does the Statue of Buddha. He mentioned that this eastward orientation of Buddhism architecture is seen in Burma, Thailand as well as some part of Yunnan Province of PRC [Qingxi Lou, 78]. This final point would indicate that the eastward orientation of Buddhism buildings as well as capital cities may not be limited to Burma, but may extend to the neighboring countries where the Theravada Buddhism is practiced.

4.4 Observations on Capital Shifts in Burma

The relocation of capital cities occurred quite frequently in the history of Burma. When a capital city was shifted from one city to another, the widely adopted practice in Burma was to "dismantle and rebuild," namely, to dismantle the existing buildings in the old capital and utilize the materials to reconstruct buildings in the new city.

In the case of Mandalay, as noted by O'Connor, "the old palace at Amarapura was bodily transferred to Mandalay [O'Connor, 8]". This is the reason King Mindon had to move to a temporary palace just about one year before the completion of the new Palace in Mandalay. O'Connor wrote that in June 1857, the King and his court moved in splendid procession to Mandalay [O'Connor, 8]. To disassemble buildings in Amarapura, the residents of the court, and even the King, had to move to the new city before its completion.

Indeed, the dismantling and rebuilding of capital cities was not limited to Mandalay. Moore observed, "in the hundred years before that [the building of Mandalay], the palace had already been disassembled and moved from Ava to Amarapura and back again before King Shwebo Min finally reassembled the royal buildings at Amarapura in 1837. Each time, complex wood structures covered with gilt carvings were taken apart and transported to the new royal center. When it was re-erected, embellishments were added, and the whole refurbished with new paint and gilding [Moore, 335]".

Because of this, the main architectural parts, as well as the plans, of capital cities, particularly Mandalay, Amarapura and Ava, are similar to each other. This is considered to be one of the reasons that the eastward orientation was robustly maintained the three successive capital cities of the Konbaung Dynasty; Ava, Amarapura and Mandalay.

5. CONCLUSIONS

In this research, some of the major Burmese historical capital

cities were envisaged in light of the orientation of the Palace and the surrounding city using special structures and contemporary documents by visitors. The outcome of this research is summarized as follows.

- Capital cities before Bagan had little evidence of the eastward orientation.
- Bagan, which was the first capital city by the Burmese, presumably had the eastward orientation, though documentations may yet to be strengthened. Bagan, if proved so, could be considered as the oldest example of eastward orientation of the capital city of Burmese kingdom.
- Pegu, rebuilt in the sixteenth century, also can be assessed to face the east, but as noted in Endnotes, there is opinion contrary to this, so more work needs to be done in this aspect.
- The last three capital cities in the Konbaung Dynasty (1752 - 1885), namely Ava, Amarapura and Mandalay, were found to have clear eastward orientation of the Palace, and observed by contemporary visitors that the main entrance being from the center of the eastern side.
- The eastward orientation of the palace and the capital cities is unique to Burmese capital cities, as the ancient India model is generally isotropic, and the ancient China model has southward orientation.
- The eastward orientation of the palace and the capital cities may be connected to the conception of Theravada Buddhism that the east is the direction for the teaching of the Buddha.

REFERENCES

- 1) Aung Thaw (1972), Historical Sites in Burma, Myanmar, Reprint with a title "Historical Sites in Myanmar" by Min. Religious Affairs and Culture.
- 2) Aung-Thwin, Michael (2013), et.al. A History of Myanmar since Ancient Times, 2nd Ed. London, 2013.
- 3) Cangi E.C., (1997), Faded Splendour, Golden Past – Urban Images of Burma, Oxford University Press.
- 4) Crawford, John (1827), Journal of an Embassy from the Governor-General of India to the Court of Ava, Reprint in *SOAS Bulletin of Burma Research*, Vol. 3, No. 2, 2005, Pp636-959.
- 5) Dumarçay, Jacques, trans. Smithies, M. (1991), The Palace of South-East Asia – Architecture and Customs, Oxford Univ. Press.
- 6) Duroiselle, Charles, (1925), Guide to the Mandalay Palace, Rangoon.. (Second Edition, Calcutta, in 1931).
- 7) Directorate of Archeological Survey (DAS) of Ministry of Union Culture of Burma (1963), The Mandalay Palace.
- 8) Funo S. (2006), The City as Mandala - Spatial Formation and Transformation of Hindu Cities, Kyoto Univ. Press. [in Japanese]
- 9) Hall, D.G.E. (1955), A History of South-East Asia, London: Macmillan Ltd., Pp 536-555.
- 10) Heine-Geldern R. (1963), Conceptions of State and Kingship in Southeast Asia, Dept. of Asian Studies, Cornell Univ.
- 11) Kan Hla, (1977), Pagan: Development and Town Planning, *Journal of the Society of Architectural Historians*, Vol. 36, No. 1, pp. 15-29, University of California Press
- 12) Kan Hla, (1978) Traditional Town Planning in Burma, *Journal of the Society of Architectural Historians*, Vol. 37, No. 2, pp. 92-104, University of California Press
- 13) Kirk, W (1979). Town and Country Planning in Ancient India According to Kautilya's Arthashastra, *Scottish Geographical Magazine*, Vol. 94, No. 2, Pp. 67 – 75.
- 14) Lu Pe Win (1966), Historic Sites and Monuments of Mandalay and Environs, Dept. of Archaeological Survey, Min. of Culture.
- 15) Ma Thanegi, et al. (2005), Myanmar Architecture – Cities of Gold, Singapore.
- 16) Maung Maung Tin and Morris, T. O. (1966), Mindon Min's Development Plan for the Mandalay Area, *Journal of Burma Research Society*, XLIX-i, Pp. 29-34.
- 17) Moilanen, I. et al., (1999) Mirrored in Wood - Burmese Art and Architecture, White Lotus Press.
- 18) Moore Elizabeth (1993), The Reconstruction of Mandalay

Palace: An Interim Report on Aspect of Design, Bulletin of the School of Oriental and African Studies, Univ. of London, Vol. 56, No. 2, pp.335-350.

- 19) Myo Myint (2012), *Conflicting Colonialism: King Mindon's Strategy for Defending Independence, 1853 – 1878*, Ministry of Religious Affairs, Burma.
- 20) Myo Myint Sein (2015), *Preliminary Research on Wooden Architecture in Konbaung Dynasty (1752-1885) in Myanmar* [in Japanese], Proceedings of Seminar on "Traditional Wooden Buildings in Myanmar" held on 13 Feb. 2015 by National Research Institute of Cultural Properties, Tokyo.
- 21) Nagasawa, K. (1975), *In the Nation of Pagodas – Journey through Burma*. NHK publication [Japanese]
- 22) O'Connor V. C. S. (1907), *Mandalay and Other Cities of the Past in Burma*, London..
- 23) Oertel F. O (1893), *None on a Tour in Burma in March and April 1892*, Rangoon (Reprint by White Orchid Press, Bangkok in 1995).
- 24) Ohno, T. (1983), *Mandalay, the Royal City of Burma, Tonan Ajia Kenkyu (Southeast Asian Studies)*, Vol. 21 No. 6 (June 1983), Pp.82-96. [Japanese]
- 25) Ohji, T. (2003), *Castle City in Asia and its Cosmology*, in Funo, S. (ed), *History of Urban and Architecture* [in Japanese].
- 26) Ohji, T. (2011), *Genealogy of Castle City [Tojou no keifu]*, Kyoto Univ. Press [in Japanese].
- 27) Prince Damrong Rajanubhab (1971), *Journey through Burma in 1936* [translated by Kennon Breazeale; edited by Narisa Chakrabongse], River Books, Bangkok, 1991
- 28) Phayre, P. A. (1884), *History of Burma*, Trübner & Co., London.
- 29) Reid, Anthony (1993), *Southeast Asia in the Age of Commerce, Vol.2 Expansion and Crisis*, Yale University
- 30) Qingxi Lou (2001), translated to Japanese by Teruo Shou, *Chinese Traditional Architecture*.
- 31) Tatsumi, M. (2000), *Palace City Ruins in Myanmar, Ritumeikan Chirigaku*, No.12, Pp 57-68. [Japanese]
- 32) Thant Myint-U (2004), *The Making of Modern Burma*, Cambridge Univ. Press.
- 33) Than Tun (1998), *A Bagan Temple's Main Gate: Is there any significance when it opens in any other direction except east?*, *Myanmar Historical Research Journal*, No. 2 Pp106-108.
- 34) Yamada, K. (2013), *A Study on the Origins of City Planning of Yangon (Formerly "Rangoon"), Myanmar, During the British Rule*, Proceedings of Historical Studies in Civil Engineering, JSCE, June 2013. [in Japanese]
- 35) Yamada, K. (2014), *the Development of Planning of Colonial Cities by European Nations*, Proceedings of Historical Studies in Civil Engineering, JSCE, June 2013. [in Japanese]
- 36) Yamada, K. et al. (2017), *Origin of City Planning of Mandalay, Royal City of Burma (Myanmar) in Mid-19th Century*, Proceedings of Historical Studies in Civil Engineering, JSCE, June 2017.
- 37) Yule, Henry (1858), *A Narrative of the Mission to the Court of Ava in 1855*, London.

END NOTES

¹ The Pyu were one of the early ethnic groups that came to live in Burma. They spoke the Tibeto-Burman language. The Pyu culture was heavily influenced by trade with India.

² The Mon are an ethnic group of Myanmar. They were one of the oldest settlers in Burma, and they speak the Mon language, which is part of the Mon-Khmer family.

³ The Shan are a Thai ethnic group living in Myanmar.

⁴ King Alaungpaya, 1714 – 1760, Reign 1752 – 1760, was the founder of the Konbaung Dynasty of Burma. He is considered one of the greatest monarchs of Burma for unifying Burma for the third time in Burmese history.

⁵ King Bawdawpaya, or sometimes spelled Bodawpaya, 1745 – 1819, reign 1782 – 1819, was the sixth king of the Konbaung Dynasty of Burma.

⁶ King Bagyidaw, 1784 – 1846, was the seventh king of the Konbaung dynasty of Burma from 1819 until 1837.

⁷ King Mindon Min, 1808 - 1878, Reign 1853 – 1878, was the king of Burma. He was one of the most popular and revered kings of Burma.

⁸ Bayin Naung Kyawhtin Nawrahta, 1516 – 1581, was king of the Toungoo Dynasty of Burma from 1550 to 1581.

⁹ Aung-Thwin (2013) points out the possibility that the original *Myenan* (Earth Palace) built by Bayinnaung in 1567 most likely faced west rather than east, and that reconstruction in the 1990s and 2000s changed the direction of *Myenan* and the main buildings of the palace to face east (Aung-Thwin, 135, 305). This point is yet to be investigated further.

¹⁰ It should be noted that the British referred to the palace of the Burmese Kingdom after the Second Anglo-Burmese war as the "court of Ava" regardless of where it was. Yule's mission to "the Court of Ava" thus actually visited Amarapura, not Ava.

¹¹ Aside from the Indian model after *Arthashastra*, Dumarçay proposed a plan after another Indian literature *Mayamata*, which "comprises three enclosures; the middle of the innermost enclosure is a shrine dedicated to Brahma, and the king's dwelling is placed next to this, and that of the queen opposite. The whole group of buildings opens to the east." [Dumarçay, 5]. This plan seems to fit most of capital cities in Burma relatively well. This point needs to be studied in future.

¹² Ohji discusses that the ancient India also had a preference in orientation with the east as the most preferred orientation, but this did not produce any orientational disparity over the internal structure [of the palace], and thus is embedded in the isotropic profile of the space [Ohji (2011), 88].

¹³ *Tharavada* is a school of Buddhism practiced in Myanmar, Thailand and Cambodia, while *Mahayana* is practiced in Tibet, China, Korea, Japan and Nepal.

ビルマ（ミャンマー）の歴史的王都の 東向き方向性に関する研究

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Abstract

古代中国の都城のモデルは南面性が認められ、他方、古代インドのそれは同心円状で特定の方向性が認められない。本研究では、ビルマの歴史的都城を空間計画および訪問者らの記述から分析した。その結果、コンバウン朝の最後の3首都であるアワ、アマラプラ、マンダレーは王宮が東向きに建ち、周囲の都市も東に正門があるなど東面していることが分かった。東面性は、ビルマ王都が中国およびインドの首都建設手法と異なる点であり、ユニークかつ特異なものである。

Key Words: *Mandalay, Amarapura, Ava, Bagan, Burma, Myanmar, Royal City*

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