

## Patterns of physical form of a Malay-rooted Urbanism in historical Melaka

This study discusses urbanism in pre-colonial Melaka city, focusing on pre-colonial Melaka city during the Malay Sultanate of Melaka. This study aims to i) explore the urbanism of the pre-colonial Melaka, and ii) study the matrix analysis of pre-colonial Melaka. Data was gathered through secondary data content analysis drawn from previous works such as documented textual analyses and lithographs. The results demonstrate that pre-colonial Melaka urbanism is characterised by sustainable traditional urban forms such as palatial fort, mosques, market, settlements, and padang. Furthermore, the close proximity from the palace to the estuary and bridge reflects the idea that a palace serves as a defence building, centre of administration, and royal residence. Observations of pre-colonial Melaka urbanism shows a degree of city planning, reflecting that sustainable and natural growth is embedded in the Melaka Sultanate era.

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## 1. INTRODUCTION

Urbanism is defined as “the characteristic way of life of city dwellers” or “the study of the physical needs of urban societies” (Wirth, 1938). With regard to the definitions, this study observed from the perspective of physical structure such as population base, technology, and ecological order. There are several urbanism theories by earlier scholars. Aristotle’s *Politics* described the number of inhabitants beyond a specific limit will affect the relationships between the inhabitants and the character of the town. A situation as such will encourage individuals with different personalities and background to interact with each other, causing a probable gap between cultures, background, and local. Meanwhile, the theory of Durkheim by Young (1962) suggested that an increase in density tends to cause differentiation and specialisation within the population. Density has forced men to diversify their activities and increased the complexities social structure. Wirth (1938), an urban ecologist, claimed that urbanism is a response towards urban condition, either economic or functional. He explained that a functional city affected the density of a population; a more densely populated and heterogeneous community will emphasise the characteristics of urbanism in the community. Scholars have different views on the theory of urbanism. Urban form is defined by three fundamental physical elements; buildings, open spaces, plots or lots and streets, which can be understood at different level of resolution (Moudon, 1997). With regards to the determinants of man-made urban form, the focus is on a human intervention that had influenced the shape of the urban form. There are a number of human-made determinants, such as the economy (trade), politics, religions, defence, mobility, social power, and ethical issues (Morris, 1994).

Decades before the Melaka Sultanate period, urbanism in the South East Asia territories has focused on the ‘nagara-based’ (country-based) civilisations. This particular focus links urban planning, form, and cultural landscapes with the temple and ceremonial-based centres, such as

the surviving Angkor and Majapahit, which are broadly known as the vestiges of a temple-based civilisation. Yet, less is known of the ‘nagri’ (state) or maritime-based cities such as Melaka; of their urban forms or patterns, cultural lifestyles, and landscapes.

Malay urban form constitutes several elements of conventional urban form such as fort and stockade. During the era of Malay Kingdom, it was the centre of administration for the Malay rulers (Harun & Jalil, 2014). The administrative centre is an area with administrative offices, residences of the noblemen, and palaces of the ruler. Harun & Jalil (2014) underlined the characteristics of Malay urban form; i) the locations of the Malay forts were close to rivers and hills; ii) mosques were essential landmarks in the city centres, iii) palaces were built overlooking wide open spaces or squares.

In the past, town similarly referred to fort (Harun & Jalil, 2014). The term fort has numerous meanings depending on the sentence and the context of use (Nasir, 1993). In those days, a fort was a city or state (Harun & Jalil, 2014). ‘Fort’ was also the centre of administration, as it was in Melaka and Terengganu. Apart from that, fort also referred to the centre of defence, which was usually surrounded with cannons and tombs as it was in Perak and Johor. According to Reid (2015a), there are three types of fort; i) walled cities with a palace in the centre, many temples and streets, the market is outside the walls, for example, Buddhism cities, ii) walled only for royal palace, in Archipelago area, and iii) the market is central with large squares, palace is to the south, mosque is to the west, particularly in Islamic cities such as Aceh and Bentan. In Melaka Sultanate, it was a combination of (ii) and (iii).

In the Malay Peninsula, urbanism is the process of cultural integration towards a multicultural society, mixing lifestyle, tradition, and other characteristics (Wiryomartono, 2011). For example, in Melaka, the diversity of multiculturalism began since the earlier stage of Melaka Sultanate, as many cultures met at the same geographical point for trading purposes. A cultural collision occurred.



Fig. 1 - Territories of the Melaka Empire Sultanate

To maintain a harmonious town, respects were of paramount importance. Such a multicultural community provided a colourful and unique legacy of buildings that represented different traditions. Wiryomartono (2011) accounted that the traditional urban core in the Malay world to be geographically featured with two settings; Negara Kota (State City) –a feudal agricultural monarchy located in an inland area surrounded by agricultural communities, and Bandar (City)– a maritime city with international trade as its core activities. These are centres that grew from the necessities and efficiencies of trade, yet they still reflect erased urbanism. The characteristics of urbanism were lost due to the successive layering of colonial-linked patterns, leaving only a palimpsest of the vernacular. The Malay urbanism pattern remains one of the lesser-discussed urban forms and landscapes. This particular urbanism is rooted in maritime route patterns and economic growth, which grew and evolved from the regions’ geographical, cultural, and political roots. The type and meaning of urbanism in a Southeast Asian cultural context must arise from within indigenous influence, rather than external introduction. There is also a contention that the cities

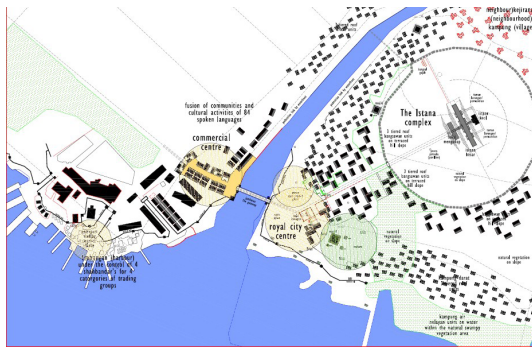


Fig. 2 - Map configuration of Melaka in 1500s (Copyright: Kamariah Kamaruddin, 2018).

of Asia undergo urbanisation without urbanism. Evers & Korf (2000) highlighted that current local developments should refer to the patterns of the past for their urban policy and decisions. A city is comprised of urban tissue (Oliveira, Barbosa & Pinho, 2011). In other words, it is organic; it corresponds to different levels of resolutions and various elements of urban form (Korff, 2009). A good resolution level will show better morphological detail. For example, a low-level urban tissue will only include streets and street block while a higher level will describe features, including the material of buildings. With regard to this study, it will only include low-level urban tissue and four elements of urban form: building, land use, street, and open space, due to limited sources. Furthermore, this paper also discussed the cultures that existed during the Melaka Sultanate. Intangible cultural values include language and custom, while the tangible aspects include buildings or any physical artefacts. The United Nations Educational, Scientific and Cultural Organization (UNESCO) defined cultural heritage as the legacy of physical artefacts and intangible values inherited from past generations and maintained in the present for the benefit of future generations. Dinardi (2015) explained that culture is the language spoken in a particular region, expressing the distinction among the fine arts, and social bonds, and is constitutive of the national identity. Cultural values

are crucial for tourism promotion and urban development, in addition to being a part of one's history. There is yet to be a variety of research done on historical urban form in Melaka. The urban historical field in Malaysia is primarily fragmented; only several historical periods are studied while the rest are ignored. Such a fragmented approach led to an array of inconclusive information. This paper intends to clarify that there were patterns and conscious attempt to plan and reorder the maritime city. In addition, the pattern of culture such as markets is also described based on historical sources such as hikayat (folklore). All in all, this paper discuss Melaka urbanism during Melaka Sultanate -from 12<sup>th</sup> CE to 15<sup>th</sup> CE. The objectives of this study are twofold: (i) to explore the urbanism and cultural of the pre-colonial Melaka, and ii) to prepare on the matrix analysis of pre-colonial Melaka. Documented local and non-local texts of historical studies related to the structure of Melaka were described in this study.

## 2. STUDY AREA

Of the various Malay indigenous cities that straddle the land and sea of the region, Melaka remains a model and source to investigate indigenous patterns. Melaka is located in the southwest coast of the Malay Peninsula and is formed by a narrow choke-point at the Straits of Melaka. Tomé Pires (1944) described how Melaka was an important trading city during the particular time: "Malacca is a city that is made for merchandise, better than all other [cities] on earth, the end of some monsoons and the beginning of others. It is surrounded and lies in the middle, and the trade and commerce between the various nations for a thousand leagues on either side must come to Malacca". According to Fernand Braudel, "[...] geography was certainly responsible for a good deal of Melaka's story". Melaka lay on the maritime channel connecting the waters of the Indian Ocean to those of the China seas, protecting ships from monsoons. It is also situated between the seaways from India and China, and also connects the Penarikan to the Muar-Pahang waterways.

The Malay Peninsula encompasses the whole areas from Johor up to Kedah. Figure 1 shows the territories of Melaka Empire Sultanate during their Golden Age between the years of 1405 to 1511. This map shows the territories under the control of Melaka Sultanate, including the Straits of Melaka that separates Malay Peninsular from the Indonesian island of Sumatera. It should be explained that the use of 'urban' refers to Melaka town in the coastal area only, which does not include the hinterland areas. During Melaka Sultanate, Melaka town includes Kuala Linggi to the hinterland and Kuala Kesang, which are also the limits of the city of Melaka (Pires, 1944).

According to Zheng He, the population of Melaka in 1403 was around 2000. This was supported by Pires (1944). During the installation of Megat Iskandar at Melaka in 1414, the population was at 6000. A statement from d'Albuquerque stated that in 1511, there were one hundred thousand people living in the "city and the suburbs". The statement shows that in 1511, there were five thousand and thirteen thousand individuals per square kilometre in Melaka urban area, which had a total area of between seven to eleven square kilometres (Mcroberts, 1991). As well-measured by Reid (2015), there were about 6.5 people per household, thus 307 houses in 1403, approximately 900 houses in 1414, and approximately 15,000 houses in 1511.

According to Pires, "people began to come from the Aru side and from other places, men such as Celates robbers and also fishermen, in such numbers that three years after his coming Malacca was a place with two thousand inhabitants". The Melaka Sultanate was a powerful institution in Southeast Asia. Several states became its vassals, such as Riau-Lingga, Sumatra, Pahang, Sungai Ujung, Jeram, Langat, Inderagiri, Palembang, Jambi, Ungga, Tungkal, Siantan, Brunei, Beruas, Bentan, Kampar, and Siak. The Melaka Sultanate was responsible for the security of these vassals. For example, Melaka sent an army to help Pahang and Beruas when they were attacked by Ligor and Manjung (Hadi, 1992). Figure 2 shows the town plan of Melaka in 1500. Melaka was divided by the main river, namely Sun-

gai Melaka, into two important parts; the right division was the administration areas - the palace of Melaka and mosque - while the left division was a mixed-use area. These areas were connected by a bridge. The two main districts were recognised as Upeh and Banda Hilir. Upeh was mainly for commercial and residential areas, while Banda Hilir was mainly for administration. The hinterland areas are orchards or 'dusun' in the Malay language.

### 3. BACKGROUND OF MELAKA

The original inhabitants in Melaka were fisherman, also known as 'Orang Laut' (Sea People). A historical Javanese poem mentioned Melaka in 1324, and it was mentioned again within a list of Siamese dependencies in 1360 (Widodo, 2008). Melaka was founded by Parameswara, a Srivijaya prince from Temasek in 1402. He urged the villagers to trade products and other goods and plant crops (Hoyt, 1993). He was finally known as Sultan Iskandar Shah after embracing Islam in 1414. As Melaka was located in the coastal areas, it became prominent as an international trading port and as the centre for Islamic learning and dissemination. The population increased to two thousand and Melaka began its transformation into the most important port. It achieved its status as an extremely important entrepot in Southeast Asia due to its Islamic system and its diplomatic ties with China. The prosperity of Melaka was based mainly on trade. Melaka had developed excellent facilities for the traders, including warehouses, lodging, and officials that provided fair and efficient administration. The rulers of Melaka established a well-ordered commercial centre with all the necessary facilities for international trade. Apart from that, Melaka was the central meeting ground where Indian, Chinese, and Indonesian merchants met to exchange wares. Though Melaka had virtually no products of its own to sell, it was a practical meeting ground for the Arab, Indian, Chinese, and Indonesian merchants. The internal factor lied in its excellent geographical position, and the external factor was the ex-

pansion of Chinese trade under the Ming emperors and Muslim patronage from Parameswara conversion into Islam. Ming dynasties aimed to place Southeast Asia under its tributary system due to Southeast Asia's entrepot fast development. Following this idea, great expeditions under Admiral Zheng He was employed in the early fifteenth century. Zheng He arrived and conducted business in Melaka, such as bringing in roof tiles from China to be used on the roof of Melaka's royal palace (Sandhu, 1961).

As Melaka felt unsafe after being hit by Siamese several times, the Sultan asked for China protection. The earliest date of Ming Annals, on the deployment of a Chinese envoy to Melaka, was 1403 and corresponded with the rise of the polity in Melaka. Zheng He, between 1405 and 1433, actively travelled to spread Islam and was involved in the politics of Java and Maritime (Sen, 2009). In exchange for protection, the Sultan offered a warehouse to China to store their goods in Melaka entreport. Consequently, Melaka was the first foreign nation to receive the emperor's inscription (Suryadinata, 2005), indicating that Melaka was under Ming's tributary protection. The Sultan of Melaka had travelled several times to China to visit the Emperor, demonstrating a close relationship between Melaka and China during that time. Nonetheless, after 1435, Zheng He no longer continued his voyages as the later reign underwent a 400 year long shutting down period.

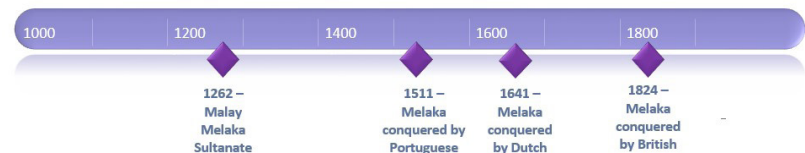
In 1509, the Portuguese Admiral Diego Lopes de Sequeira visited Melaka to make a trade compact. The visit was warmly welcomed by Sultan Mahmud, but over time, several Portuguese people were killed and jailed. The Portuguese returned to Goa, and then back to Melaka with a massive army in 1511, requesting permission to

build a fortress in Melaka. It was denied, causing Portuguese to attack Melaka. The war continued for 40 days, and in the end, the Portuguese won. After the ruling of Portuguese in Melaka, the root of Melaka spread to Johor, Perak, and Pahang. The royal of Melaka (Sultan Mahmud Syah) had escaped to Johor and built their kingdom in Muar, Johor. His descendants (Sultan Muzaffar Syah) was sent to Perak as the first Sultanate in Perak. On the other side, the ruler of Pahang, Sultan Ahmad Syah, was also a descendant of Melaka; the son from the marriage of Sultan Mahmud Syah and the Pahang princess. The Johor Sultanate attempted several times to reclaim Melaka from Portuguese, but in 1641, the Dutch had seized Melaka from Portuguese. In 1824, the British seized Melaka from Dutch. The British had maintained the traditional class divisions; rural Malays were farmers, while Chinese and Indian immigrants were pushed into economic development efforts. A discovery by Ismail et al. (2012) on the establishment new date of the Melaka Malay Sultanate is 1262 by comparing many historical accounts. From this analysis, the Malay Sultanate existed from 1262 to 1511, during the glory of Melaka Sultanate and before the arrival of Portuguese. This study is important to understand urbanism during Melaka golden years. Figure 3 shows the timeline of the Malay Peninsula from the glory of Melaka until Melaka was conquered by the British.

### 4. RESEARCH METHODOLOGY

In this study, relevant secondary sources were reviewed in addition to published historical books, articles, and journals (fig. 4). This study uses synchronic and diachronic reading of a literature review to understand the urban form during the Sul-

Fig. 3 - The timeline of Melaka Sultanate



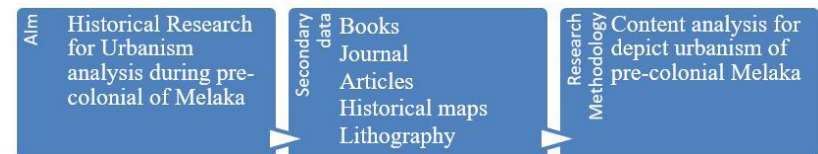
tanate era. A cross-disciplinary reviews of social, culture, polity and urban areas was done to gather a comprehensive understanding this city. Lithography that were drawn by Portuguese accounts were collected and used in this research. The historical method using textual analysis was used in this research consisted of historical documented texts from local, Portuguese, and Chinese authors. For Portuguese and Chinese in particular, the documented texts were written after the occurrence of the events; in other words, the texts were reports of events. Note that past comprehensive works are scarcely available. Literature narratives were also used as a source, as in the Malay narratives, many events are described in classical sentences and 'pantun' (Malay poem). Most of the works describe the culture of the past or arts that belong to a historical tradition, with some were written based on the oral story from the people who lived in a particular village. Following these observations, a content analysis of documented texts from urban planning perspective was carried out to evaluate the urban form and urbanism of a historical event.

### 5. DOCUMENTATION OF MELAKA BEFORE 1511

Based on a documented text from the Portuguese experience during Melaka Sultanate, Duarte Barbosa explained that Melaka was a well-known port during those days: "[...] the richest trading port and possesses the most valuable merchandise, and the most numerous shipping and extensive traffic that is known in all the world". Since Melaka was a strategic place for strong monsoon protection, traders usually waited at the port for the end of the monsoon season. The communities then established ports for traders to exchange goods, find local products, and repair ships (Andaya, 2008). Mansel Longworth Dames (1921) explained Barbosa, a sailor had arrived at Melaka which had recently been conquered by the Portuguese when he wrote. Barbosa in Mansel Longworth Dames (1921) described Melaka as a prosperous, wealthy, and well-known port. Melaka also described to have many golds and was the richest nation in the

world. Another author, Emanuel Godinho (1613), was a Melaka-born Portuguese cartographer writing in the 16<sup>th</sup> Century, had recorded the existence of a well-ordered law, which was based on Islamic law. Castanheda (n.d.) described the merchants in Melaka as very rich, and the richness can be measured by gold. Similarly, D'Albuquerque had noted that the custom, commerce, and development of Melaka were prosperous and luxurious, and it was a powerful empire and the centre of Islamic development in Southeast Asia. Pires (1944) wrote: "[...] and true it is that this part of the world is richer and more prized than the world of the Indies, because the smallest merchandise here is gold, which is least prized, and in Melaka they consider it merchandise [...] in Melaka they prize garlic and onions more than musk, bepzoin and other precious things". It should also be mentioned that the locals in Melaka were of Malay ethnicity, and were the stimulus for the formation of the new ethnic categories of 'Orang Laut' and aboriginals (Andaya, 2008). The continuous stream of traders coming in Melaka created different culture from many areas; a multiculturalism, the result of many cultures living at a trading port. The only available data is lithography and the documented text on the description of Melaka exploration was written by Portuguese and Chinese. The documentation from a Chinese writer, Ma Huan, who travelled to Melaka between 1413 and 1415 was also used in this research. Several local documents were also found, but they have a very limited explanation of the urbanism in Melaka. Figures 5 and 6 shows a lithography drawn by Portuguese during the visit of Lopez de Sequire in Melaka in 1509. A minaret towers, masjid and two and three tier buildings can be seen from this piece.

Fig. 4 - Methodology of the research



### 6. BEFORE AND AFTER ISLAM IN MELAKA

Although Melaka grew from decentralizing 'negeri' (state) and maritime-based polity, the aspects of its pre-Islamic traditional patterns in its urban cores remain. Amongst others were borderlines and gates. The core of the city was initially seen as the seat of cosmological power, the navel of the world. Of symbolic importance, the seat of the ruler represents the source of spiritual power. Manifested and architecturally articulate with the most sacred place of the whole area of Negara, the palace as the seat of the ruler was not always represented by the most monumental and elaborated building in the state, but by the most of sacred and mysterious domain of the city. The city wall defined the transition between the in and outside of Negara. The gateway denoted the point of entry with specific treatment for practical and symbolic purpose. In Melaka, the gateway was the bridge, in which Syahbandar were placed for tax payment. It was also Melaka's first point of entry. The Negara was seen as a symbolic centre of the cosmos built upon the cosmological mandala model that was located in the hinterland. It was also located at an ample geographical setting, either at the symmetrical order of the Hindu cosmological ideas or at a visual orientation. The Negara was also placed at the plain areas between great valleys and river confluence. After the arrival of Islam, Reid (2015b) described that Melaka rose as a maritime city and an Islamic centre. Certain character and remnants of the 'nagara' remain despite maritime centres were often projected without a clear pattern, were organic and random. The urban Melaka urban form began to take place during the transition from Buddhism to Islamic culture. The Southeast Asian polities before the 14<sup>th</sup> CE were generally credited



Fig. 6 - Lithography (see Fig 5) zoomed to show the masjid (mosque), minaret towers and several tall buildings opposite to the shore (n.d)

Fig. 5 - Melaka 1509 - from Portuguese sources, lithograph the arrival of Diego Lopes de Sequeira (n.d)

as a 'negara' (country) form in which there were a sacred centre and mandala (Earth) or cardinal layout. Tarling (2008) stated: "Majapahit and Bubat is a market city located on a wide plain. The Negarakertagama mentioned a cosmopolitan city of many quarters with a square market, surrounded on three sides by tall buildings, with a character of a ritual capital due to a relationship with monarchy with prominence as sacred centre and place of festival celebration[...]". Such architecture was similar to the patterns in Angkor: "temples aligned East-West and North-South purposely to project the image of heaven on Earth". According to Alwi (2001), the cultural system existed since the pre-Islamic era, and the whole Ma-

lay realm, irrespective of their religion, traditions or sub-ethnicities, had embraced the traditions and rites in their culture. Mahkota Iskandar Syah conversion to Islam was one of the reasons for the rapid spread of the religion, and it occurred around 1414. Before embracing Islam, they lived based on the Hindu caste system, which was later assimilated into Malay traditional life (Suryani et al., 2012). The acceptance of Islam in Melaka had significantly influenced the Malay lifestyle and culture in Malay towns. The main factor that enabled the Sultanate of Melaka to increase the Islamic teachings itself (Andaya & Andaya, 1982). Another factor that encouraged the spread of Is-

lam was the idea of equality in Islam (Ishak & Abdullah, 2012), which claims that all individuals are equal in the eyes of Allah, the One God in Islam. Islamic institutions such as 'surau', mosque, and madrasah have strengthened and enhanced existing customs and traditions with more intensive gatherings and collaborations that built a strong community in Pre-colonial Melaka (Wiryomartono, 2011). Moreover, Ma Huan had explained the way of life of people in Melaka; the religion of people in Melaka was Islam, worshipped god, and recited the Quran with a simple tradition. As early as the 1440s, Melaka had adopted the 'jawi' script; Malay language written in Arabic characters (Lowey-ball, 2015).

## 7. THE URBAN FORM OF MELAKA

Fort was one of the essential elements of urban form. The construction of a fort was vital because the facility served as an administration and defence centre. Megat Iskandar Shah built a palace on top of St. Paul Hills. It is important to know if there was any fence or fort built around the palace complex in Malacca, in the *Sejarah Melayu* mentioned that “[...]then Sultan Ahmad stay in Bentayan, Peringgi (Portuguese) stay in Melaka, and they made pagar ruyung of the palace as a fort[...]” – the Portuguese rebuilt the remains of the pagar ruyung wall palace as the fort. The pagar ruyung are the walls that surround the main complex of the palace in Melaka. Pagar ruyung were of stone materials because the Portuguese town was built from these materials, including mosques as well as tombstones in the complex of royal tombs (Nasir, 1990). The pagar ruyung of Melaka, or fort of Melaka, which was guarded by armed warriors at the time, was comprised of administrative, palatial, mosque, sentry towers, and royal residences complexes. One study found the existence of administrative area, mosque, shops, settlement, rivers and streets, agricultural area, and graveyards in Melaka (Ibrahim et al., 2018).

As Megat Iskandar Shah embraced Islam in 1414, another significant mosque called Masjid Jamek was built close to the palace. Report by Castanheda “From the mouth of the Sungai Melaka and facing east (inland), a sailor would see the sultan’s palace complex extending down the right-hand side. This was the southern quarter, where nobility lived. Behind it loomed a large hill with vistas over the river and harbour [...] Looking left, an early visitor would have seen the walled Chinese settlement established for sailors attached to the Zheng He’s missions[...]Further down the Sungai Melaka, one reached Malacca’s second market quarter, on the right-hand side of the river behind the royal complex (as things would be viewed from the harbour). Further on, after the river took a sharp curve to the left, the bazaar gave way to large numbers of Malay houses built to face the water. These houses “are of wood, and



Fig. 7 - Lithography depicted a group of people with elephants at the open spaces in front of the palace that surrounded with stonewall, during the arrival of Diego Lopes de Sequeira (n.d).

principally by the sea-side [...] Bukit Sina (Cina), a hill with a smaller, less wealthy secondary Chinese settlement atop it, was behind the strip of houses on the riverbank. Meanwhile, to the north - that is, on our imaginary sailor’s left-hand side - the main Chinese community eventually gave way to a Javanese quarter, and then to random suburbs occupied chiefly by Malays. This, in turn gave way to the jungle. Beyond that, our boatman would come to villages of fisherman and, very far down the river, to the various garden estates kept as an escape by many of Malacca’s most important noblemen”.

The quote shows an extensive text document that demonstrates the urban form of the city along the river of Melaka. Widodo (2008) described that ‘rumah panggung’(vernacular stilt houses) was clustered at the base of the hill, and on the other side of Melaka River, another settlement was developed. Hamka (2016) also mentioned that the houses were aligned with the coast of Melaka. In 1403, Ma Huan explained that the houses were like rooftop houses about four yards high, on which there was no board and roofed with thatch. The houses in Melaka have been described in detail in Portuguese sources.

In addition, the Portuguese sources (Mansel Longworth Dames, 1921) explained that Upeh was also a commercial area. There were also houses and subterranean storehouses, or room built partly on the ground and under the ground (Birch, 1774). From these statements, we can understand that Upeh was an area with shops and houses or mixed-used areas. This area was a residential area and was a part of the defence area, as it was located in the coastal area. The Malay populations lived in various villages and settlement surrounding the royal palace and palace. The elites lived on the hill whereas the commoners occupied the lowlands. Ibrahim et al. (2020) identified the entrepot, commercial centre, the royal city centre and the neighbourhood, which are indicative of a clustered linear layout strung along both sides of the river bank.

As a further precaution, Parameswara had built his residence upstream from Melaka, at Bertam. He did so that he could receive ample warning of any impending attack and could then flee to the safety of the interior (Andaya, 2008). Although Parameswara's successors maintained a residence on Melaka Hill, they lived for the most part in Bertam, going to Melaka only to settle disputes or dispense justice (Andaya, 2008). Iskandar Syah asked his father's (Parameswara) permission to settle in Melaka Hill, and he built his house on top of the hill where the Kings of Melaka had their dwelling. The palace of Sultan Mansur Syah was built in 1460, and the spaces inside the palace - 'Penanggahan' (kitchen), 'Istana besar' (palace proper), 'surau' (mosque), 'pemandian' (bathing and ablution area), 'balairong' (throne room), 'nobat' (royal musical ensemble hall), 'balai apit pintu' (audience hall), 'balai mendapa' (outer hall of audience) and 'balai' (hall) - were located on the top of the hill. Several questions were raised from this; i) what was the form of Melaka Sultanate fort? and ii) what was the orientation of the Melaka Sultanate palace?

Several authors had discussed on the form of the fort. The Book of Duarte Barbosa by Dames (1921) has explained "forthwith a very fine fortress was built there, which with the city and all the trade thereof and its navigation remained subject to the

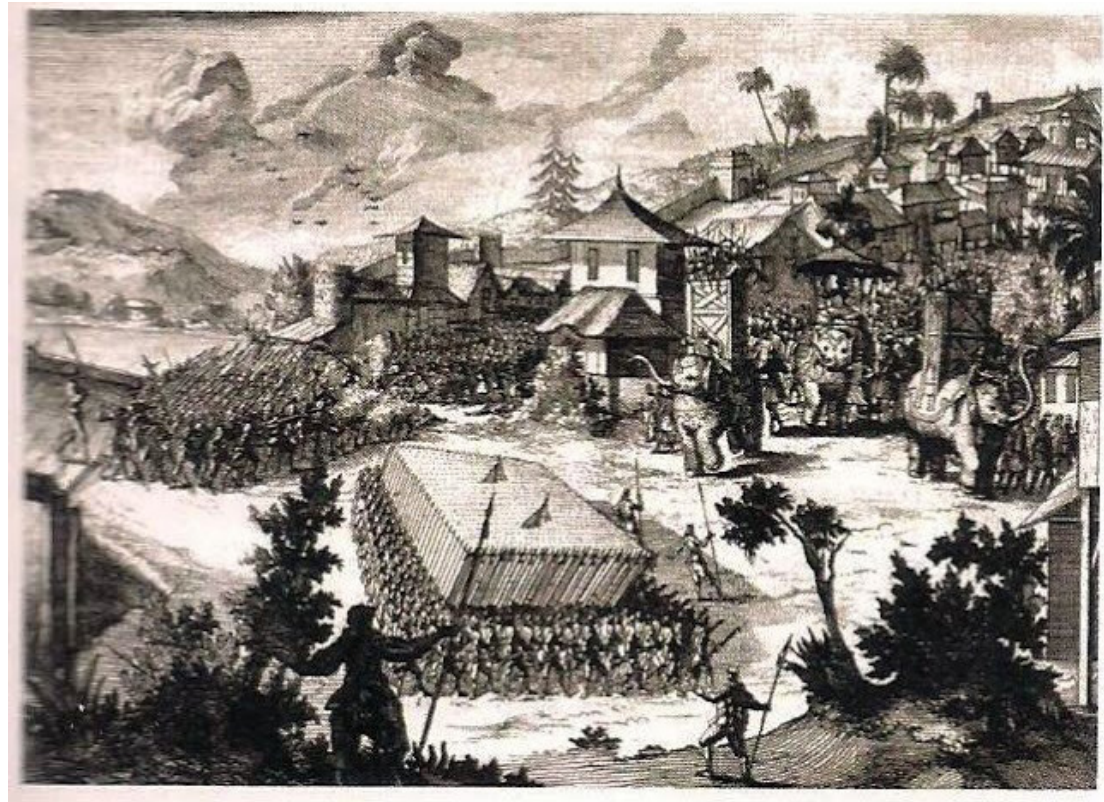


Fig. 8 - Lithography depicted activities at the open spaces in front of the fort. A walled fort was elevated from the lower to hilly areas (n.d).

Portuguese[...]. Sulaiman, Shamsuddin, Norbina, & Anwar (2007) explained that the fort of Melaka was square-shaped. The orientation of the palace of Melaka was highly debated among earlier researchers. Noor (2013) claimed that the orientation of the palace was at the north-east, in the direction of Melaka Town, and argued that the palace should be orientated to the city of Melaka. Noor also added that the hilly topography facing the coastal area was too steep, making it difficult to reach the palace. Nevertheless, the earlier version of Sulalatus Salatin (1979) mentioned that

they followed the south-east direction. This observation was consistent with the finding by Sulaiman et al. (2007) and JahnKassim, Ibrahim, Harun, & Kamaruddin (2018). Meanwhile, Harun and Jalil (2014) explained that Parameswara built his palace on a hill overlooking the Bertam River estuary, which was in the south-east direction.

These authors provided a consistent orientation of the palace of Melaka but with a different angle. For this argument, we should refer to the Portuguese sources. Castanheda (1582) and De Barros (1706) explained in the report that the Portuguese had



positioned his ship right from the bridge and shot the cannon directly to the mosque many times. Text by Albuquerque “[...]to set fire to the king’s houses which stood at the side of the mosque”. Since the palace was located on the hill and the mosque was at the foothill, the palace was orientated directly to the mosque and the bridge. As mosque was located opposite to the palace, these two buildings were diminished due to the continuous attack from the enemy. Adil explained [...] The bridge which joined the southern part, where the palace and the administration centre were located, to the northern part, the commercial centre, was the first target of the Portuguese”. Thus, from the sources of the textual documents and maps provided from authors, we conclude that the palace should be located on the Melaka Hill, at the south-east direction, directly to the bridge.

Another important element of an ancient Malay town was a mosque. This mosque was built at the riverbank of the Melaka River. The mosque was located opposite to the palace, indicating the importance of Islam to the ruler. Another source (Castanheda, 1582) claimed that the mosque site was located inside A Famosa areas, while Tomé Pires in Suma Oriental mentioned that the Portuguese constructed their fortress (Fortaleza) with a 5 stories tower on the site of a mosque. The mosque was also called Masjid Raya, and was the main focal point of Islamic social activities. Both traders and locals visited this mosque to pray. The mosque and several other buildings were made of stone; some of them were wooden houses with a roof made of thatch (Yusof, 2017); and some of the houses were made of stone and ‘kapur’. The identification of the palace and mosque material during Sultanate era also can be referred to the text “The Portuguese fort was built by pulling down the houses of the people and the mosques and the other existing buildings during the period” (Loureiro, 2008).

The bridge was located in the middle of Kota Melaka, specifically at the foothill of Bukit Melaka. Castanheda (1582) explained that the bridge was close to the mosque. During that time, the bridge played an important role in Melaka. It was a cov-

ered bridge, and market-place of twenty pavilions where commodities of all goods were sold. It connected these two areas which were on opposite sides of the river and were located near the harbour in the estuary. People were also conducting businesses along the roads, and some of them conducted business in front of their houses. The market was clustered along the streets and the river (Emanuel Godinho, 1930). There was one event, written by Tun Sri Lanang, when they tried to align the shops to be straight by using the rope. The arrangement of the shops was not organic, but it was planned by the authority.

As to the market in Melaka, quoted from Ma Huan “Oxen, goats, fowls and ducks, although they have them, are not plentiful: prices are very dear; (and) one of their water-buffaloes costs more than one chin of silver. No donkeys and horses are seen”. This statement shows that many of the goods were livestock. For commercial wise, Melaka was one of the port city specifically used by the traders. The Muslim and Chinese traders met at city ports such as Melaka, Ayudha, and Gresik to exchange items (Alatas, 1997). Markets were located along or at the mouth of the river, at the beach, and along the roads. Several laws in Melaka were also documented; for example, The Melaka Law and The Port Law (Liaw & Sarumpaet, 2011). In addition, the markets in cities became the centre of movements, easy access to land and waterways. The market was also a meeting point of different identities/ethnicities for conducting business. Ma Huan also stated that the warehouses were located at the left side of the bridge. The warehouse was wooden palisade like a castle, with four gates and watchtowers, or warehouses near the harbour. It was built to safe-guard the goods of the traders. Open space or ‘Padang’ was important in Melaka Sultanate. The main ‘padang’ was located just next to the mosque. It was also located in front of the Malay Sultanate palace (Harun & Said, 2008). ‘Padang’ was the area for the people to have a meeting with the Sultan. The best location of the mosque that needs open area (‘padang’) for a large outdoor congregation, state ceremonies, rituals, and annual celebrations for Raya led, and Raya Adha (Wiry-

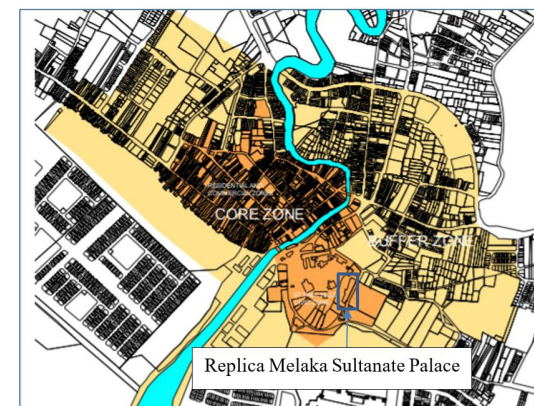


Fig. 9 - Designation of Melaka as UNESCO World Heritage, inserted the Replica Melaka Sultanate Palace (UNESCO, 2007).

omartono, 2014). ‘Padang’ was also used to play games such as ‘sepak raga’, making it an important recreational and meeting sites for the people, thus an important element of a cultural and social landscape. The hinterland area consisted mostly of agricultural area which was found to be dispersed. Agricultural areas were located at the suburban area 12 to 16 km ahead, mostly covered with large orchards, beautiful meadows, or pastures for livestock and rice fields under cultivation (Pinto, 2011). A river system can be identified as the main form of transportation in old Malay cities because all of the historical forts were located near the river. Melaka as an important port used the sea and river as the main transportation route for trading, for moving from one to another, and for living. It was also recorded that there was a principal street leading to the bridge (Barros, n.d.) and the coastal area (Gaspar Correia, 1496). The Malay Annals also recorded that there was a four-junction road located in the middle of the city (Tun Sri Lanang, n.d.). A planned road network and well-arranged bridges were built in the Melaka city to connect the roads, which were separated by the river (Yusof, 2017). These documented texts show that Melaka had a planned road network, especially at the town areas.

The land transportation mainly used elephants (Hashim, 1989), and most literature of Melaka narrate the use of the river as their main transportation. The main transportation for the people and Sultan was by the river or sea, at which traders' activities also took place. The street transportation such as Melaka, elephants were used to carry belongings from the rural to the banks of the river, which the goods were then transported through barges and boats on the river or the sea. River systems according to Gullick were the early nascent states; based on a dendritic system, the Sultan controlled all trade up-stream at the mouth of the river. Melaka town is also complete with trenches (Zainuddin, 1961).

## 8. MELAKA IN PRESENT

Melaka and George Town has been developed as a historic city that received a status as World Heritage Site in July 2008 by UNESCO, becoming Malaysia's first cultural World Heritage Site (WHS) property. Below is the map of the inscribed property and buffer zone of the historic city of Melaka. One particular approach by institution to recreating a nostalgic version of the Melaka urban fabric which has been erased throughout the centuries was the development of replica of the Melaka Sultanate Palace and Malay Sultanate Water Wheel at the side of Melaka river. The replica of Melaka Sultanate Palace was built according to the historical relics of the Melaka Sultanate Palace have been rebuilt from the viewpoint of the literature "Sulalatus Salatin", in order to reminisce on the greatness of Melaka and the uniqueness of the Malay traditional culture in the 15<sup>th</sup> century, using traditional construction techniques and materials (Siti Nurmasturah Harun et al., 2020). The palace originally located on top of St. Paul Hills. According to the annals, Sultan Mansur Shah's seven-tiered palace was built entirely without nails and supported with carved, wooden pillars and featured a copper and zinc roof. The most elaborate royal palace ever constructed in the world in 1459. The annals also stated that it was destroyed the year after the sultan ascended the throne when

it was struck by lightning. The Malay Sultanate Water Wheel was built near to Melaka river that describe about the successful of Malay Sultanate as an international port in the world. During those times, the water wheel was functioned to set the water level as it was visited around two thousands of ships from over the world (Yusof, 2017).

## 9. MATRIX ANALYSIS AND DISCUSSION OF URBANISM OF MELAKA SULTANATE

A matrix analysis was extracted from the reviews of urbanism in Melaka Sultanate (Refer to Table 2). The analysis is divided into several urban spaces or buildings; palace, masjid, fort, harbour, bridge, transportation system, 'padang'/open spaces, market/commercial area and settlement. In summary, the following points emerge from the

matrix of urbanism analysis during the Melaka Sultanate era. Firstly, the urbanism structure during the glory of Melaka Sultanate was planned for a certain extent. For example, the roads located at the market areas were planned using the rope system, making the road linear. The second point is that the Malay Sultanate of Melaka town was made of four basic elements; the palace, mosque, market, and 'padang'. These elements were surrounded by the settlements of the town and were linked with the roads. These elements also obeyed the Islamic principles of urban areas - that mosques are the centre of the Islamic city. Thirdly, Melaka town was divided according to races. The traders or immigrants, those from Arabs, Persian and Chinese, were located in one area called Upeh. Malays were located at Banda Hilir, Jawa at Kampung Jawa: Guierati lived near the ports.



Fig. 10 - Replica of Melaka Sultanate Palace as decrypted in Sulalatus Salatin (Majlis Bandaraya Melaka Bersejarah, 2020)

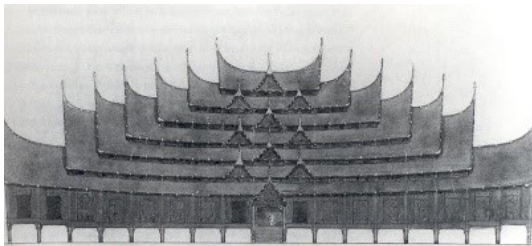


Fig. 11 - Artist impression of the Melaka Sultanate Palace as depicted in *Sulalatus Salatin* (Malay Annal) (Shellbear, 1977).



Fig. 12 - Replica of Water Wheel during the reign of Melaka Sultanate (Merahsilu, 2016).

Some of the Chinese who came during the visit of Zheng He was located at the foothill of Bukit China. At the heart of this city was the 'padang' which was not fully squared but was within the enclosure of key elements. The centre was both political and spiritual. Organic shape 'padang' or centre bordered by the large mosque and administrative palaces. The market place borders the sea and its closest to the sea. Melaka must be understood as a centre of cross-cultural commerce and transoceanic economic activity. What differentiates Melaka

is perhaps the separation between the commercial heart and the administrative heart by the river, including the separation between the harbour, ship or galleons building enclave and zone and the more peaceful localised palace and administrative centre. There would have been certain peak periods of trading activity and ship building activity (as per other port cities) which would have attracted the population that led to the clustering of elements and further impact of a tropical fragile environment. The pre-colonial Melaka shows the sustainability of the city from economic and social perspectives. The general public architecture was a tropical one which provides: i) shelter from sun and rain; ii) a contrast of light timber and shade from both thick wall and extended eaves; iii) sufficient spaces around and between buildings; iv) minimisation of radiant heat and heat island effects; v) air circulation, breeze permeation and passive cooling; vi) generous outdoor living spaces with large window and balcony openings; vii) generous floor to ceiling heights; viii) high-quality landscaping; ix) quality public and private spaces that proliferate and enliven the urban form; and x) passive design that responds to the tropical climate.

Melaka grew from its maritime economy particularly on trading and became the epicentre of the Malay world. Found inside were different quarters of different ethnolinguistic groups, and races, as at some point in the Melaka history of the medieval city, foreign merchants outnumbered local merchants. The city had narrow streets, going through open spaces, buildings and houses, many of which had a masonry ground floor and timber upper floors and were either tiled or thatch roofs. Some elements, as found in historical documents and narrative differentiate Melaka from other cities, the presence of a mosque (which have been argued either dome or Nusantara pyramid or a combination of both) and the presence of a 'covered bridge' which have now totally disappeared, yet whole similarities can be found in local covered bridges in Thailand and other Asian cities. Although the urban grid has totally been erased, similarities can perhaps be associated with the river-aligned grid such as still found in Pontianak Kalimantan.

The current river has been embanked but the actual scene of the river can be seen in this attachment, in which boats could easily be docked and a ground-level which seems 'open' with 'kolong' character rather than totally masonry. Thus, understanding the elements of urbanism during pre-colonial Melaka can be used for the urban planning process for the development of Malay city. The argument of the absence of the pre-colonial tangible past in downtown Melaka and its UNESCO World Heritage site has been engaged since the 1980s. The review and observations of pre-colonial Melaka urbanism show a degree of city planning, reflecting that sustainable and natural growth is embedded in the Melaka Sultanate era. The establishment of pre-colonial Melaka Sultanate was the waterfront setting, on the sea-front at the mouth of a little estuary and hill area that allowed one to observe the coming and going of the ship. Due to the excellent geographical location, streets and blocks in ancient Melaka were first formed in the areas adjacent to the river or the coast, then extending to the inland (Han & Guang, 2018). The characteristics of Melaka city of waterfront setting are i) a settlement with activities related to port, a strong relationship of people, boat and shipping, loads and unloads goods, and ii) human interaction of social and business, iii) centre of trades and transport routes. In relation to future planning, the locational factor should maintain and should not change the landscape of Melaka itself, as it able to diminishes the cultural and heritage of Melaka. The extensive reclamation has affects Melaka's historic centre profile and original setting from fronting the sea to fronting the river. This claimed has supported by Jahn Kassim et al. (2019) that localised form and vocabulary are missing as the new cities of Malaysia, Singapore and Indonesia has highly green technology but lacking of the attendant cultural resonances and memory. In 1937, mud dredged from the river to furnish Melaka with a sea-front 'padang', Bandar Hilir Park, to make it similar pattern from those in Singapore and Pulau Pinang (Kim, 1983). Nor Zalina Harun (2016) however explained that a historical public place, Padang Pahlawan in Melaka, used to

be the ground for the first proclamation of independence in 1957 was demolished for commercial development, and the former function of the 'padang' as a historic public space has deteriorated. Land reclamation has erased the special link that

| Urban Space/ Buildings     | Summary  |
|----------------------------|--|
| Palace                     | Located on the hilltop. Palace was located inside the <i>pagar ruyung</i> or fort and orientated to the southeast direction.<br>Palace as administration and royal residence.  |
| Masjid                     | Mosque (Masjid Melaka Raya) was located at the foothill of Bukit Melaka.<br>Opposite to the palace, facing the coastal areas, and close to the <i>padang</i> and market.<br>The masjid was opposite to the palace.   |
| <i>Pagar Ruyung</i> Fort   | Fort surrounding the palace and located close to the river.<br>It had four corners.<br>Fort was a defence centre.<br>The royal and aristocrats lived inside the fort   |
| Harbour                    | Warehouses for storage of goods provided, located nearby the port and estuary area.  |
| Bridge                     | One of the place for tax collection by <i>Syahbandar</i> .<br>Located at the entrance of the estuary and linked the south and north sector of Melaka.<br>Location was directly opposite the <i>masjid</i> and Melaka palace.   |
| Transportation system      | The organic pattern for the footway.<br>Planned network at the commercial and houses area; linear street pattern for shop and houses.<br>Used rivers as the main transportation.<br>Used elephants as transportation on the land.  |
| <i>Padang</i> /Open spaces | Open spaces ( <i>padang</i> ) located next to the mosque, as areas for a meeting between royal and people.<br>Open spaces used for leisure activities and <i>kenduri</i> (feast).  |
| Market/Commercial area     | Market located on the beach.<br>Residential and commercial area (mixed-use area) in the town.<br>Own orchard and conduct agriculture activities.   |
| Settlement                 | Settlement along the coastal and river areas. Upeh was specifically an area with shops and houses, or mixed-used area, lived by traders from Keling, China, and Arab.<br>The location of the settlement of Cina which was surrounded with the wall at the foothill of Bukit Cina.<br>Settlement of Gujerati was near the port. |

Table 1 - Matrix Analysis on the Urban Configuration and Function in Historical Melaka City.

<http://disegnarecon.univaq.it>

Melaka had with the sea. With extensive reclamation at the harbour in the center of Melaka, it no longer maintain the heritage values of Melaka as historical site. The similar situation of development of residential in the present state of the harbour and the waterfront has also has diminished the original form and function.

The reflection that can be learnt from pre-colonial Melaka Sultanate for the future planning can be arise from sustainable principles. This including alignment with water bodies, the degree of open spaces, degree of greenery and symbolic charges which can be linked to the past of the notion as an ideal rule and basis to develop sustainable planning. Any city or township in Asia, must rebrand its own identity, through geographical, climate, cultural and "historical layering of planning" which will distinguish this particular brand of city from any other (Jahnkassim et al., 2020). Such study also added that such planning, especially in Melaka, should identify its original beginnings to hybrid expression which then evolved side by side with its colonialised history.

## 10. CONCLUSION

Melaka in the 15<sup>th</sup> CE was a city situated against the sea as with other port cities of the same era. This paper examined the aspects of urbanism and culture of the historical city of Melaka, highlighting the urbanism of the pre-colonial Melaka. The pre-colonial Melaka has emerged from the riverine system from trading activities that influence the settlement formation. It started from villages, then grew rapidly after it has attracted traders to conduct business. In the traditional Melaka Sultanate, important elements such as the palace, fort, mosque, 'padang' were located at the riverine system, which described the essence of sustainable urbanism, that sustains the relationship of people and built environment from the customs, lifestyle, culture and traditions. The contribution of this paper enhanced the understanding of the traditional urbanism in Malay town, particularly in Melaka Sultanate. Thus, this study benefited planners and developers with regards to Malay city of urban design.

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## REFERENCES

- Alatas, S. M. (1997). *Cultural symbolism and legitimization in the context of change: Early Malay state formation*. Colombia University.
- Alwi, A. (2001). *Adat Melayu Mengikut Perspektif Orang Islam di Malaysia*. In *Adat Melayu Serumpun*. University Malaya.
- Andaya, B. W., & Andaya, L. Y. (1982). *A History of Malaysia*. Macmillan Asian Histories Series.
- Andaya, L. Y. (2008). *Leaves of the same tree: Trade and Ethnicity in the Straits of Melaka*. University of Hawai'i Press.
- Barros, J. De. (n.d.). On the deeds & discoveries & conquests made by Portuguese in the seas and Eastern Lands. In *Portuguese Documents on Malacca Volume 1*.
- Barros, J. De. (1706). *Held-dadige Scheeps-togt van Alfonso de Albuquerque na de Roode-Zee In het Jaar 1506, en vervolgens gedaan: behelzende de geleegendheid, opkomst en voortgang van de Koningrijken Ormuz, Goa, Malacca, etc*. Leiden: Pieter van der Aa.
- Birch, W. de G. (1774). *The commentaries of the great Alfonso Dalboquerque: Second Viceroy of India*. Hakluyt Society, London.

Castanheda, F. L. De. (1582). *History of the Exploration & Conquest of the Indies By the Portuguese*.

Dames, Mansel Longworth. (1921). *The Book of Duarte Barbosa Vol. 2* (M. Longworth Dames (ed.)). The Asiatic Society. <https://archive.org/details/in.ernet.dli.2015.47303/page/n1/mode/2up>

Emanuel Godinho, de E. (1613). *Description of Malaca and Meridional India in three treatises*.

Emanuel Godinho, de E. (1930). *Eredia's Description of Malacca* (J. V. Mills (ed.)). KMBRAS.

Evers, H.-D., & Korff, R. (2000). *Southeast Asian Urbanism: The Meaning and Power of Social Space* (L. V. Münster (ed.)).

Gaspar Correia. (1496). *Lendas da India*.

Hadi, A. (1992). *Aceh and the portuguese* (Issue April). McGill University.

Hamka. (2016). *Sejarah Umat Islam*. Gema Insani Press.

Han, W., & Guang, C. (2018). *Traditional Urban Form and Evolutionary Mechanisms-Quanzhou and Malacca*. 8(2), 508-513.

Harun, N. Z., & Said, I. (2008). *Paper presented at: Morphology of Padang: A case study of Dataran Merdeka*, Kuala Lumpur. 1-3.

Harun, S. N., & Jailil, R. A. (2014). The History and Characteristics of Malay Early Towns in Peninsular Malaysia. *Asian Journal of Humanities and Social Studies*, 2(3), 403-409.

Harun, Siti Nurmasturah, Shaharudin, H., & Ahmad, M. A. (2020). Traditional Cultural Heritage Artefacts

- in the Sultanate Palace of Melaka: The Benefits of Sustaining Cultural Values Through the Furniture Design and Development Process in Related Fields in Malaysia. *Voice Academia*, 16(1), 15-25.
- Hashim, M. Y. (1989). *Kesultanan Melayu Melaka*. Dewan Bahasa dan Pustaka.
- Hoyt, S. H. (1993). *Old Malacca*. Oxford University Press.
- Ibrahim, I., Abdullah, A., Ibrahim, M., & Murtaza, F. F. N. (2018). Historical Urban Form: A case study of Melaka. *Journal of Malaysian Institute of Planners*, 16(2), 153-163.
- Ibrahim, I., Jahn Kassim, P. S., Harun, N. Z., Abdul Latip, N. S., Mohd Noor, N., & Abdullah, A. (2020). Historical Intimacy in Malay Urban Core Configurations: A Comparative Analysis. *Culture & History Digital Journal*, 9(2).
- Ishak, M. S., & Abdullah, O. C. (2012). Islam and the Malay World : An Insight into the Assimilation of Islamic Values. *World Journal of Islamic History and Civilization*, 2(2), 58-65.
- Ismail, A. R., Ghazali, A. Z., & Zulkarnain Abdul Rahman. (2012). *Penemuan tarikh baru pengasasan empayar kerajaan Melayu Melaka (Cetakan Pe)*. Institut Kajian Sejarah dan Patriotisme Malaysia.
- Jahn Kassim, P. S., Kamaruddin, K., Ibrahim, I., & Harun, N. Z. (2019). A Tropicalized Urban Design Framework from Morphological Patterns of Pre-Colonial Maritime Centers of the Malay World. *GEONFORMATICA POLONICA*, 18, 7-30.
- Jahn Kassim, P. S., Ibrahim, I., Harun, N. Z., & Kamaruddin, K. (2018). Ecological Urbanism in the Tropics Studies on the Sustainable Dimensions of Malay Traditional Urban Centers. *International Journal of Engineering & Technology*.
- Jahn Kassim, P. S., Kamaruddin, K., Syala, N., Latip, A., & Nawawi, N. M. (2020). The Serendipitous City in South East Asia — *Urban Archetypal Design Principles from the Morphological ' Vernacular .'* 2(2), 21-41.
- Kim, K. K. (1983). Melaka's Malay Society in Modern Times. In K. S. Sandhu & P. Wheatley (Eds.), *Melaka: The Transformation of a Malay Capital c. 1400-1980* (pp. 70-92). Kuala Lumpur: Oxford University Press.
- Liaw, Y. F., & Sarumpaet, R. K. (2011). *Sejarah kesusastraan Melayu klasik*. Yayasan Pustaka Obor Indonesia.
- Loureiro, R. M. (2008). Historical Notes on the Portuguese Fortress of Malacca (1511-1641). *Revista de Cultura - International Edition*, 27.
- Lowe-ball, S. B. (2015). *Liquid Market, Solid State: The rise and demise of the great global emporium at Malacca, 1400 - 1641*. Yale University.
- Majlis Bandaraya Melaka Bersejarah. (2020). *Istana Kesultanan Melaka*. <http://www.mmbm.gov.my/ms/pelancongan/istana-kesultanan-melaka>
- Microberts, R. W. (1991). A study in growth: An economic history of Melaka 1400 - 1510. *Journal of the Malaysian Branch of the Royal Asiatic Society*, 64(2), 47-78.
- Merahsilu. (2016). *Daulah Melayu di Melaka - Dunia Melayu Dunia Islam dan gambaran Kota Melaka 500 tahun lalu*. <http://merahsilu.blogspot.com/2016/01/daulah-melayu-di-melaka-dunia-melayu-10.html>
- Morris, A. E. J. (1994). *History of the urban form before the Industrial Revolutions*. New York: Longman Scientific & Technical.
- Moudon, A. V. (1997). Urban morphology as an emerging interdisciplinary field, *Urban Morphology*, Vol. 1, pp. 3-10.
- Noor, S. Z. S. M. (2013). *Pentadbiran Kesultanan Melayu Melaka Kemunculan dan Kegemilangan*. Arkib Negara Malaysia.
- Nor Zalina, H. (2016). *Role and fate of Padang in Malaysian historical cities. December 2008*.
- Pinto, P. J. S. (2011). *Os casados de Malaca, 1511-1641: estratégias de adaptação e de sobrevivência*. 141-156.
- Pires, T. (1944). The suma oriental of Tomé Pires. An account of the east, from the Red Sea to Japan, written in Malacca and India in 1512-1515 and the Book of Francisco Rodrigues rutter of a voyage in the Red Sea, nautical rules, almanac and maps, written and drawn in the. *Hakluyt Society, I*.
- Reid, A. (2015a). *A History of Southeast Asia: Critical Crossroads*. Wiley Blackwell.
- Reid, A. (2015b). Historical Thought and Historiography : Southeast Asia. In *International Encyclopedia of Social & Behavioral Sciences* (Second Ed, Vol. 11). Elsevier.
- Sandhu, K. S. (1961). Chinese Colonization of Melaka – A Study in Population Change, 1500 to 1957 CE. *The Journal of Tropical Geography*, 15.
- Sen, T. T. (2009). *Cheng Ho and Islam in Southeast Asia*. Institute of Southeast Asian Studies.
- Shellabear, W. (1977). *Sejarah Melayu* (3rd ed.). Penerbit Fajar Bakti Sdn Bhd.Adil.
- Sulaiman, A. B., Shamsuddin, S., Norbienna, S. L., & Anwar, M. (2007). *Konsep Baru Model Bandaraya/Bandar Berasaskan kepada Rupa Bentuk Bandar Tradisional (Conceptual New Model of City/Town based on the Traditional Urban Form*.
- Suryadinata, L. (2005). *Admiral Zheng He and Southeast Asia*. Institute of Southeast Asian Studies.
- Suryani, I., Resad, M., Rozali, E. A., & Fahimi, A. (2012). *The importance of learning islamic history and civilization of Malaysia in the building of human capital and identity of the muslim society in Malaysia*. 59, 550-557.
- Tarling, N. (2008). *The Cambridge History of Southeast Asia*. Cambridge University Press.
- Tun Sri Lanang. (n.d.). *Malay Annals*.
- UNESCO. (2007). *Melaka and George Town, The inscribed property and the buffer zone of the Historic city of Melaka and George Town*.
- Widodo, J. (2008). *Zheng He's visits and the shaping of cosmopolitan cities in Southeast Asia - Melaka case : facts and fiction 1. November*, 18-19.
- Wirth, L. (1938). Urbanism as a Way of Life. *The American Journal of Sociology*, 44(1), 1-24.
- Wiryomartono, B. (2011). Urbanism in the Malay World: The Origin and Evolution of the Idea, Function, and Institution of Pre-colonial Bandar Melaka. *The 5th International Conference of the International Forum on Urbanism (IFoU) 2011 National University of Singapore, Department of Architecture Global Visions: Risks and Opportunities for the Urban Planet*.
- Wiryomartono, B. (2014). City, Culture and Society Urbanism, place and culture in the Malay world: The politics of domain from pre-colonial to post colonial era. *City, Culture and Society*, 4(4), 217-227.
- Yusof, H. (2017). *Teknologi Kesultanan Melaka*. Cintai Publication.
- Zainuddin, H. M. (1961). *Tarikh Atjeh dan Nusantara* (Cetakan 1). Pustaka Iskandar Muda Medan.