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THE LEGIBILITY OF URBAN SQUARE IN SHAPING CITY IMAGE OF HISTORICAL CITIES IN PENINSULAR MALAYSIA

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Abstract
The "padang" or square was one of the most notable features of British Colonial towns. This research attempt to prove that the padang can be a strong element in shaping the image of the cities. Historic cities of Kuala Lumpur, Penang and Malacca were chosen as case study sites for their similar characters, uniqueness and importance. The aim and objectives of this research is to study and examine the character of urban squares in historic cities in Malaysia and to find its contributions in shaping the city's image. The deductive study and literature formed the hypothesis of this research that is: the legibility of Urban Square in shaping city image does not stand on its own, but because of strong character of surrounding elements. This mixed-methodology researchcombined literature review, case study, and cognitive methods. It applied qualitative approach in collecting and interpreting data and quantitative approach in the analysis. Data collection to this research is divided in three methods namely Literature Review, Case Study and Interpretation Survey on Image. The findings concluded that all the elements remembered and memorized are the distinctive associated qualities in the image of a place therefore contributing to city image.

Keywords: Urban Square, Legibility, City Image.

1.   Introduction

A city without old places is like a man without memory. Many cities have quarters that confer on them a sense of place and identity through the historic and cultural associations they provide. They are often an integral part of the city's charm and appeal, and their visual and functional qualities are important elements of the city's image and identity. The quarters which are also defined as historic areas are evidences of our past civilisation and act as living museums. Urban squares, urban parks and public open spaces are common elements in Malaysia's urban form and it emergence draw back since the Colonial era. One of the most notable features of British Colonial towns was the *padang*, a large field set against a backdrop of imposing administrative buildings.

Historically, it is proven that the *padang* (square) can have strong features or elements in shaping the image of the cities. The square is not only individually significance but also brings out the variety of beautiful visuals in the form of urban appearance which becomes the image of the particular city. Time Square in New York, Trafalgar Square in London, Place de I'Etoile in Paris, Covent Garden in London and The Plaza Mayor in Madrid are some examples of magnificent urban squares of the world. Prominent urban planners and architects alike have been arguing that the quality of public spaces has much to do with the image that they convey (Cybriwsky, 1999). Loveday (2005) has noted that the great spaces became a social zone – a place to meet, to establish ones place in the social pecking order and ultimately to show the town off to visitors – in many respects, the great public spaces were 'the people's front room'. This research explores the contributions of urban squares in shaping city images. This research will look for physical qualities of urban squares which relate to the attributes of identity, structure and meaning in the mental map of the public. By means of literature reviews and case studies, the research will focus on image interpretation and use in the design of urban squares. Image interpretation is looked at in terms of history, place attachment, spatial identity, and how surrounding use of the surrounding affect the identity of a space.

2.   Literature Review

City form has changed dramatically through the ages. A broad multiplicity of circumstances is expressed in the form history, values, philosophy, population size, systems of government, artistic sensibility, design techniques, building methods, paving techniques among others. These factors affect the topology, geometry, pattern and identity of a city. Similar to the European's countries, the urban squares in Malaysia evolved and developed over a long period of time. In addition towns in Malaysia can be divided into two types. The first type is The Malay Royal Towns and the second is the Colonial Towns. These towns have their own uniqueness and significant.

The history of urban squares dating back from the old world history of human civilization to the current. Literature review highlighted that the existence of urban squares is eminent in all of the cities. It is also learnt that most outstanding and dominant urban squares worldwide are the ones in historical cities. The study also found that all the squares emerge and evolve based on three factors namely, function, city growth and design, and all of which promotes the identity of a city.

Most of the historic cities in Malaysia have distinguished characters of urban form influenced by colonial cityscape. The character of urban form has similar features on the layout of the physical elements such as historic buildings with unique architecture, street and square or *Padang* (Harun. S.N, 2006). Buildings and streets are like organs and skeletons for the cities while the square is definitely the city's heart and soul. Square or open space is one of the important elements that formed the city character. The square also known as *padang* (field) become part of the historic landmarks for all historic cities in Malaysia. The image of square is a very strong element that captured our mind. In this research, the word square will represent "Dataran" and "Padang" will remain as is.

In Peninsular Malaysia, there are several well known and recognised public spaces in the form of square/padang. First and foremost is Padang Kota Lama in Penang. This was the place where Sir Francis Light first landed in Penang Island. Second followed by Pahlawan Square in Melaka, where the Rombongan Merdeka led by Tunku Abdul Rahman first announced the British consent for Tanah Melayu Independence. The third is Merdeka Square in Kuala Lumpur. This square is the surrounded by administrative buildings and recreational club for the British. Other example of square developed by the British is Ipoh Padang in Ipoh. Similar to Kuala Lumpur this square also located next to administration building. The Malay Rulers also developed their own square, which generally located close to the palace, mosque and market. Among the examples are Merdeka Square in Kota Bharu and Bandar Square in Alor Setar.

In Malaysia, the development of urban squares, its functions and typology are similar to the European due to colonization of the Portuguese, the Dutch and the British. However, due to the government effort and vision, we can now be proud of our own urban squares and open spaces which have gone through a paradigm shift and portrayed values of our own. In addition, the study of urban square's history exhibits three main findings;1 - Urban square in historic cities contribute a strong image/identity to the city as a whole. 2 – The surrounding environment of the urban square for example the surrounding buildings help the urban square become more legible. 3 – The elements within the square also contribute in making the square even more legible.

2.1   Urban square and city image

An image of a city environment is a mental representation of external physical reality, while identity usually develops with the growth of city through its inhabitants. The image and identity of a city can be valued into two ways of legibility: urban form and urban culture. Legibility of urban form can be easily recognised by physical elements that give sense and memorable. Sense of Place or *Genius loci* was a concept originally developed by the Romans. According to the Romans, people and place are granted with Life by a "guardian spirit", and responsible in defining a person's character. Additionally, people were expected to maintain a connection with the *genius* of their home because it was believed their survival depended on a physically and spiritually, harmonious relationship to place. According to Norberg-Schultz (1979) the philosophy towards life forms the basis for his approach to public place design. Additionally Norberg-Schultz (1979) believes humans possess an instinctive longing to be near nature. The strong bond humans once had with nature was reduced by the urban environment. As a consequence, humans compensated this deficiency by relating to nature in three ways: 1. Visualizing our understanding of nature through the built form; 2. Restoring unity in an unbalanced situation; and 3. Symbolizing our understanding of nature.

2.2   Legibility Elements

A strong image in Lynch's terms refers primarily to his concept of *Imageability* which means the ability of objects to evoke strong emotions to an observer and *Legibility* which implies the organizations of the elements

of a city that allows them to be seen as a coherent whole. Before Lynch, the concept of legibility has proved invaluable as an analytic and design tool. Lynch *Image of the City* contributed to escalate the new science of human perception and behavior in the city. For urban designers, it is Lynch's inventive use of graphic notation to associate abstract ideas of urban structure with the human perceptual experience liberating them from the previous strictness of the physical master plan. The term "Legibility" is used to describe the ease with which people can understand the layout of a place**.** Lynch employ questionnaire surveys to define a method of analyzing legibility based on five elements: **paths, edges, districts, nodes and landmarks**.

Lynch (1960) suggested that a highly imageable environment, and by its extension the mental image of that environment, is constituted of three components; 1) **Identity -** Is the degree to which a person can recognize or recall an environment (or its cues) as being distinct from other environments (or cues) through its possession of a vivid, unique, or at the very least a particular character of its own. It refers to the 'noticeability' or legibility of environmental elements. 2) **Structure -** Is the manner in which the environmental elements are ordered and related to each other and the degree to which this structure is comprehensible; and 3) **Meaning -** Are the messages and other associations that environmental elements would communicate to the people. As put forward by Lynch legibility means the effortlessness or ease with which the spatial structure of a place can be easily understood and navigated as a whole. A place is highly legible when a street or pedestrian networks that provide travellers with a sense of orientation and relative location and by physical elements that serve as reference points. Whereby, imageability is the quality of a place that makes it individual, distinct, recognizable, and memorable. A place is highly imageable when specific physical elements and their organization seize attention, evoke feelings, and create a lasting impression.

The literature also established Lynch as the frontrunner with his book *Image of the City,* exemplifying the five elements in investigating city image. Lynch interpretation of the concept classifies four important functions served by a clear image of a city; 1- The mobility function – allows people to move around easily. 2- Image serves as a broad frame of reference to the structural knowledge of the city and the activities in it. 3- The emotional function in which a clear image allows one to move about in the city with the sense of comfort, ease and emotional security; and 4- The urban image serves as a symbolic function by providing symbols and strong association with a place. It is sensible to conclude that a city with clear image displays a strong sense of orientation and feeling of security, and promotes utmost relationship between observer and the environment. Therefore, this research used Lynch's approach in identifying as to whether urban square contributes in shaping city image.

3. Methodology

This experimental research adopted **a *mixed-methodology*** where aspects of several methods were combined together in a single study (Creswell, 1994). This include literature reviews, case study method, and cognitive method, which helps in investigating the *correlation* of two categories – city image and city elements. It also applies both qualitative and quantitative components; a dominant qualitative approach in collecting and interpreting data. Qualitative inquiry has been widely used to research 'the meaning, concept, characteristics, metaphors, symbols, and description of things' (Berg, 1995). The less dominant quantitative component will be appropriate in analyzing data. The scope of this research is limited to urban squares at the selected historical cities in Malaysia.

The main focus of this research is to identify the public response to the city image by doing investigative survey. Subsequently, the results of the surveys are then examined to rank the level of legibility of the city from the perspective of the general public. This research adopted three types of survey method, employed from Lynch's method of survey: Photo Recognition Survey, Recall Task Survey and Sketch Task Survey (Mental Mapping).

The list of photos for Photo Recognition Survey were established based on Lynch's five elements of Imageability; paths, Nodes, Landmarks, Edges and Districts. The pilot survey was made to identify each elements for Photo Recognition Survey, and were made during initial site visits to all three sites. The final lists of photos were made upon consideration of informal interviews with local residents and visitor on their identification of elements that are most memorable and distinguishable to them, and researchers own assessment of the sites and its surrounding. The survey actual site survey were later conducted involving 150 respondents, which is 50 respondents for each studied site.

The Quantitative approach using SPSS analysis system is used to analyze the questionnaires. Data were presented according to site starting with Padang Kota Lama, Merdeka Square and Pahlawan Square consecutively. The detail analysis for each sites were presented in the chronology of;

    i.   Photo Recognition Survey Analysis, which exhibited recognisable rank all the elements. The most recognisable element was ranked with no. 1 (on the top of the list) to the least recognisable element was ranked with no. 20 (on the bottom of the list). Then details analysis of the top 5 highest ranking elements which includes the urban square (if it was ranked lower than top 5) were presented showing

the frequency and percentage of each rank given by respondents. The percentage of the frequency is displayed in either pie chart of bar char for easy reference.

ii. Recall Task Survey Analysis, which revealed the most memorable elements to the least memorable elements. Elements listed on the top of the list were chosen by respondents as the most memorable. Then fine points analysis of the top 5 highest ranking elements which includes the urban square (if it was ranked lower than top 5) were presented showing the frequency and percentage of each rank given by respondents.

iii. Sketch Task Survey Analysis, established the most familiar and memorable elements within the case study site. Elements with highest frequency were ranked no. 1, which means it is the most familiar and memorable element.

4. Result and Analysis - Legibility Analysis Of Urban Square In Historic Cities: Penang, Kuala Lumpur And Malacca

This research had chosen three sites of urban square in three different historical cities for the survey purposes. This involves a prominent urban square as a primary case study to better understand urban square and the city character, identity, and sense. Subsequently, two (2) other case studies which is the multiple case studies will be conducted for the purpose of making comparisons, theory building and propose some forms of generalized opinions. The three selected sites are; 1- Merdeka Square (the primary case study) is located in the heart of Kuala Lumpur Historical area which was developed by the British in 1884. 2- Padang Kota Lama (multiple case study) is located at the fringe of Georgetown city centre in Penang, developed by Francis Light in 1780's. and 3- Pahlawan Square (multiple case study) is located at Banda Hilir, Malacca was developed by the British in 1918. All three selected urban square for the most part displayed parallel distinctive characters, progressively developed and significant historical values.

4.1 *Urban squares were able to help in shaping the city's image and identity*

Based on the survey result and finding, urban squares do help shape the city image. This is particularly true and significant in the case of Padang Kota Lama in Penang and Merdeka Square in Kuala Lumpur. Both Padang Kota Lama and Merdeka Square contributed to the projection of city image. Accordingly, in the case of Padang Kota Lama the Imageability of an environment or environmental elements is determined by a certain degree of strength in the perceptual attributes (identity or legibility and physical structure of urban elements/landscape elements) as shown in Table 6.1. In perceptual attributes, the location of Padang Kota Lama next to a beach with a significant "edge" helps make this place recognisable. As for Merdeka Square, the location of Merdeka Square is at the centre of the city which is in between two main Roads (Jalan Raja and Jalan Kinabalu), makes it legible, its presence felt and therefore recognisable.

Table 1.1 – Padang Kota Lama in Penang: The Most Recognisable Elements Source: Ayob. Z. (2010)

Ranking	Elements	N	Highest Rank	Lowest Rank	Mean	Std. Deviation
1	**Padang Kota Lama**	**50**	**1**	**20**	**4,64**	**5,378567**
2	Old Cannons on the Wall	50	1	21	6,46	4,656398
3	Esplanade at the Time Capsule	50	1	19	6,92	5,791761
4	Penang Municipal Council Building	50	1	20	7,22	5,047893
5	Esplanade Garden and Recreation	50	1	18	7,76	4,108528

As for associational attributes (meanings and social elements), with the many significant events and the social functions of both Padang Kota Lama and Merdeka Square make these places closer to the visitors especially the people of Penang and Kuala Lumpur respectively as shown in Table 6.2. Therefore, the findings of this survey demonstrate that Padang Kota Lama is definitely contributing to the city image of both Penang and Kuala Lumpur Historical City.

Table 1.2 – Merdeka Square: The Most Familiar and Memorable Elements Source: Ayob. Z. (2010)

ITEM / PLACE / BUILDING / STRUCTURE	FREQUENCY	RANKING	TOTAL
Merdeka Square	**46**	**1**	**50**
Sultan Abdul Samad Building	45	2	50
SOGO Shopping Complex	41	3	50
Jalan Tar	34	4	50
Selangor Club Building	32	5	50

However, on the subject of Pahlawan Square, the Imageability of an environment or environmental elements is determined by a certain degree of strength in the perceptual attributes (identity or legibility and physical structure of urban elements/landscape elements). It is not clear and being elevated above observers eye level. Even though the associational attributes (meanings and social elements) are strong, still it is deficient if the level of legibility is not indistinguishable and ambiguous. Therefore, the findings of this survey demonstrate that Pahlawan Square is not contributing to the city image of Malacca Historical City.

4.2   History and culture of urban square important in creating city image

Both Padang Kota Lama and Merdeka Square were successfully transmitting a strong image to observers. With the help from their long and momentous history, starting from Francis Light first landed to the Island of Penang, the lowering of the Union Jack Flag and being replaced by the Malaysia Flag at Merdeka Square; to the years of Merdeka Celebration that took place at these two venues. These history and celebration of culture planted a strong impact to observer's perceptions and emotions. By conserving these places as close to its original form and function will definitely help in preserving its future success.

On the other hand, Pahlawan Square failed to retain its success albeit being the momentous place where the Delegation for Independence or "Rombongan Merdeka" first landed and announcing the actual date for Merdeka. This is due to its failure to transmit a strong historical image since the legibility of this place had been concealed by the recently over developed and excessive changes from its original form and function. Table 6.3 display the extracted information on the rank given by the respondents from the three surveys on memorable at all three case study sites.

Table 1.3 – Comparison of rank between Padang Kota Lama, Merdeka Square and Pahlawan Square Source: Ayob. Z. (2010)

ITEM / PLACE / BUILDING / STRUCTURE	FREQUENCY	RANKING	TOTAL
Padang Kota Lama	**41**	**1**	**50**
Merdeka Square	**46**	**1**	**50**
Pahlawan Square/Padang	**32**	**7**	**50**

4.3   The newly introduced city elements do not change the image of historic cities

Extracting from the survey's result, the newly introduced elements did not change the image of historic city. At Merdeka Square, with a newly introduced the "Tallest Flag Pole" in Malaysia and the Giant Television screen were ranked at no. 5 and 17 respectively and were incapable to overshadow the strong image of Merdeka Square itself.

Table 1.4 – Merdeka Square: The Most Familiar and Memorable Elements Source: Ayob. Z. (2010)

Ranking		N	Highest Rank	Lowest Rank	Mean	Std. Deviation
1	**Merdeka Square**	**50**	**1**	**17**	**3,58**	**4,35697892**
5	Flag Pole at Merdeka Square	50	1	20	8,3	5,966744574
17	Giant Television Screen Raja	50	1	20	12,72	6,30529418

Even in Malacca Historical City, the newly erected "Eyes on Malacca" too were ranked lower than Pahlawan Square as proven by the survey result.

Table 1.5 – Pahlawan Square: The Most Memorable Elements Source: Ayob. Z. (2010)

RANKING	MEMORABLE	FREQUENCY											TOTAL
		1	2	3	4	5	6	7	8	9	10	11@ N/A	
1	Porta De Santiago (1)	28	6	4	2	3	0	0	1	0	0	6	50
2	Maritime Museum (2)	1	2	9	7	6	8	3	1	3	1	9	50
3	Jonker Street (3)	3	4	4	5	6	10	3	3	2	0	10	50
8	**Pahlawan Square/Padang (8)**	**1**	**6**	**3**	**3**	**1**	**4**	**2**	**2**	**0**	**0**	**28**	**50**
18	Eye of Malacca (18)	0	0	0	0	0	0	1	0	0	0	49	50

5. Conclusion

According to Lynch (1960) a highly imageable environment is constituted of Identity, Structure and Meaning. This classification includes numerous multi-sensory elements and social elements, and this makes it very useful in discussing the Imageability of environments. Rapoport (1977) suggested that environmental attributes could be categorized into two groups: *physical* or *perceptual attributes* and *Social* or *associational attributes.* Lynch's and Rapoport's categories are correlated and can be integrated, both the 'identity' and 'structure' refer to the perceptual attributes while 'meaning' refers to the associational attributes of environmental elements.

Generally, any environment or its elements has both perceptual attributes and associational attributes, and these attributes together form or evoke impact on our memory, these attributes should be strong, distinctive, and significant; in other words, they should be highly imageable. As shown in the survey, both Padang Kota Lama in Penang and Dataran Merdeka in Kuala Lumpur had displayed a strong physical or perceptual attributes in which place identity and structure are strongly noticeable and legible. Similarly to Social or associational attributes, both sites displayed a high level of legibility. In the case of Dataran Pahlawan in Malacca, due to the excessive alteration and renovation of the site, both perceptual and associational attributes were less vivid and less legible. Base from all the findings and answers to research questions, it has been proven that: "The legibility of Urban Square in shaping city image does not stand on its own, but because of strong character of surrounding elements."

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