UNIVERSITI PUTRA MALAYSIA

IMPACT OF SOCIAL IMAGEABILITY ON INTENSITY OF PASSIVE SOCIAL INTERACTION ALONG DESIGNATED PATHS WITHIN URBAN PARKS IN KUALA LUMPUR, MALAYSIA

FAEZEH MOHAMMADI TAHROODI

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By

FAEZEH MOHAMMADI TAHROODI

Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfilment of the Requirements for the Degree of Doctor of Philosophy

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Chairman : Associate Professor Norsidah Ujang, PhD
Faculty : Design and Architecture

Underutilized parks in Kuala Lumpur showed the fact that the design of these areas could not serve as a responsive social public space. However, Kuala Lumpur seeks to establish itself as one of the top twenty most imageable cities in the world by the year 2020. Therefore, there is an emphasis on developing urban design guidelines toward regenerating existing urban parks and also developing new parks to meet this aim.

The aim of the study is to enhance social interaction through examining the impact of social imageability attributes comprising legibility, accessibility, sensation of orientation and sensation of center on the Intensity of Passive Social Interaction (IPSI) within path structures of Lake Garden Park (LGP) and Titiwangsa Lake Park (TLP) located in Kuala Lumpur city center. A mixed method research strategy is adapted to develop a framework to predict the Intensity of Passive Social Interaction (IPSI) through determining the correlation among social imageability attributes. Accordingly, experiential landscape maps were produced and interpreted to determine the levels of legibility of the parks. Then, integration analysis and gate observation were used to ascertain the levels of accessibility and the Intensity of Passive Social Interaction (IPSI) respectively. Finally, the study applied 330 photo survey questionnaires from urban park users to determine, the extent of sensation of orientation and, the extent of sensation of center. The study hypothesized that there is a significant relationship among social imageability attributes within path structures of urban parks. Both quantitative and qualitative data were related to generate the findings of the research. The correlation value of more than 0.6 for each of two social imageability attributes verifies that these attributes are highly correlated with each other. This association highlights the relevance of social imageability in influencing place experience within public realm. Therefore, it is recommended that the design of the designated paths with

landmarks and possible views to be enriched, thus increasing the experience of these paths via activities. This could be achieved by locating activity nodes at the proximity of designated paths. It is also important to allocate active and accessible land uses at direct visual access of park users. It is also suggested that urban designers to empower activity nodes with sensation of center through offering diversity of activities and visual attractiveness and providing comfortable places to sit, spend time, meet friends and interact with strangers. The study proposes to apply proper distance for each designated path (25 to 100 meter) providing eye contact among people, along with avoiding using sharp angles. In addition, boundary of urban parks should be made permeable. A multiple linear regression framework that predicts the Intensity of Passive Social Interaction (IPSI) indicates that the enhancement of accessibility value, sensation of center and sensation of orientation will increase the intensity of dynamic social activities generating passive eye contact among urban park users. The findings of this study contribute in making urban places more imageable for social interaction to take place more intensely and frequently. Thus encourage the users to experience the entire urban park with ease and enjoyment.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Flasafah

PENGARUH IMAGEABILITY SOSIAL TERHADAP INTENSITI INTERAKSI SOSIAL PASIF DISEPANJANG LALUAN KHUSUS DI DALAM TAMAN BANDAR DI KUALA LUMPUR, MALAYSIA

Oleh

FAEZEH MOHAMMADI TAHROODI

Januari 2018

Pengerusi : Profesor Madya Norsidah Ujang, PhD
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Taman yang kurang digunakan di Bandar Kuala Lumpur menunjukkan fakta bahawa reka bentuk kawasan ini tidak dapat berfungsi sebagai ruang awam sosial yang responsif. Walau bagaimanapun, Kuala Lumpur menyasarkan untuk tersenarai dalam dua puluh bandar yang paling imageable di dunia menjelang tahun 2020. Oleh itu, terdapat penekanan kepada membentuk garis panduan reka bentuk bandar untuk pembangunan semula taman bandar yang sedia ada serta membangunkan taman baru untuk memenuhi matlamat ini. Matlamat kajian ini adalah untuk meningkatkan interaksi sosial dengan mengkaji kesan atribut social imageability yang terdiri daripada kebolehbacaan, kebolehcapaian, sensation of orientation dan sensation of center terhadap Intensiti Interaksi Sosial Pasif (IPSI) dalam struktur jalan di Taman Tasik Perdana (LGP) dan Taman Tasik Titiwangsa (TLP) yang terletak di pusat bandaraya Kuala Lumpur. Strategi kaedah penyelidikan campuran digunakan untuk membangunkan model yang meramalkan Intensiti Interaksi Sosial Pasif (IPSI) dengan menentukan penghubungkaitan antara atribut social imageability. Oleh itu, peta pengalaman landskap dihasilkan dan ditafsirkan untuk menentukan tahap kebolehbacaan taman berkaitan. Kemudian, analisis integrasi dan pemerhatian pintu masuk (gate observation) digunakan untuk menentukan tahap kebolehcapaian dan Intensiti Interaksi Sosial Pasif (IPSI). Dan seterusnya, kajian ini menggunakan 330 tinjauan soal selidik bergambar kepada pengguna taman bandar untuk menentukan sejauh mana kerasaan arah tuju dan sejauh mana kerasaan berpusat. Hipotesis kajian ini adalah terdapatnya hubungan yang signifikan di antara ciri- social imageability dalam struktur jalur taman bandar. Kedua-dua data kuantitatif dan kualitatif dihubungkaitkan untuk mendapatkan dapatan kajian ini. Nilai korelasi lebih daripada 0.6 untuk setiap atribut social imageability membuktikan bahawa atribut ini mempunyai hubungan yang kuat antara satu sama lain. Ini menunjukkan bahawa social imageability mempengaruhi pengalaman seseorang di kawasan awam. Oleh itu, adalah

dicadangkan supaya reka bentuk laluan yang ditetapkan (designated paths) dengan mercu tanda dan pemandangan berpotensi, akan menambah pengalaman di laluan ini melalui aktiviti. Ini boleh dicapai dengan menempatkan nod aktiviti dengan kedekatan kepada jalan yang ditetapkan (designated paths). Adalah juga penting untuk memperuntukkan penggunaan tanah yang aktif dan boleh capai melalui capaian visual langsung oleh pengguna taman. Ia juga mencadangkan agar pereka bandar memperkasakan nod aktiviti dengan sensation of center dengan menawarkan kepelbagaian aktiviti dan daya tarikan visual serta menyediakan tempat yang selesa untuk duduk, menghabiskan masa, bertemu kawan dan berinteraksi dengan orang yang tidak dikenali.Kajian ini mencadangkan untuk menggunakan jarak yang tepat untuk laluan ditetapkan (designated path) (25 hingga 100 meter) yang menyediakan kontak pandangan antara pengguna serta mengelakkan penggunaan sudut yang tajam. Di samping itu, sempadan taman bandar perlu di jadikan telap (permeable). Model regresi linear berganda meramalkan bahawa Intensiti Interaksi Sosial Pasif (IPSI) menunjukkan bahawa peningkatan nilai kebolehcapaian, sensation of center dan sensation of orientation akan meningkatkan intensiti aktiviti sosial dinamik yang menghasilkan kontak pandangan pasif di kalangan pengguna taman bandar.Hasil dapatan kajian ini menyumbang dalam menjadikan kawasan bandar lebih imageable untuk interaksi sosial berlaku dengan lebih banyak dan kerap. Seterusnya, menggalakkan pengguna untuk mengalami keseluruhan taman bandar tersebut dengan keselesaan dan keseronokan.

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This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

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This is to confirm that:

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LIST OF ABBREVIATIONS

IPSI	Intensity of Passive Social Interaction
SC	Sensation of Center
SO	Sensation of Orientation
LI	Local Integration
LGP	Lake Garden Park
TLP	Titiwangsa Lake Park
WDs	Weekdays
WEs	Weekends

CHAPTER 1

INTRODUCTION

1.1 Background of Study

Urban parks, in essence, are social spaces with the role of socializing urban residents which is regarded as one of the important aspects of urban civilization (Hesham, Ismail, & Hisyam, 2014; Baharuddin, Nadia Rusli, & Othman, 2014). The perceptions of urban parks in terms of social interaction and activity is the result of people's interactions with their environmental setting (Das, 2008; Fisher, 2009; Peters, Elands, & Buijs, 2010). Quality of life is the major challenge of the city centers (Mansouri, 2014). The level of social interaction determines the quality of urban park design and subsequently quality of life (Hesham et al., 2014; Ujang, Moulay, & Zakariya, 2015). Good quality urban park design could cater for public needs and satisfaction (Duque & Panagopoulos, 2010). Careful design could enhance social interaction among people (Madanipour, 2001; Kaźmierczak, 2012) by providing meeting opportunities (Völker, Flap, & Lindenberg, 2007). Also, it accommodates psychological fulfillment of urban residents (Shukur, Othman, and Nawawi, 2012; Ngesan, Karim, & Zubir, 2013; Hesham et al., 2014). Social imageability can make parks become responsive social places with social activities (Mehta, 2013) rather than simply being allocated as space for the admiration of their beauty (Baxter, 1998; Llewelyn-Davies, 2000; Thwaites, 2001). This study considers the impact of social imageability attributes on the Intensity of Passive Social Interaction in urban parks of Kuala Lumpur, Malaysia.

Social interaction is commenced with unexpected eye contact in a fleeting moment and acted by at least two people who are present in the space. Therefore, at first, people need to become aware about the presence of other people in urban parks. But how could this awareness be shaped and enhanced through urban park design? The social imageability of urban parks could bring awareness of people's presence. The social imageability is about the design of vibrant and memorable path structures and activity nodes which remain in parks users' perception and motivate them to interact with other park users. Designated paths and salient activity nodes organized within path structure are the physical components of urban park which could influence the social imageability experienced by the users. The notion of path structure is rooted in social sustainability studies. In this approach, cities are mentioned as a living organism. Thus, the social and spatial structures within cities work together in an integrated manner for making livable cities (Holcomb, 2015; Rowe, 2016; Petani & Mengis, 2016). In this regards, path structure in urban design acts as a skeleton for each settlement. Its function is similar to the trees, feeding and distributing activities within its branches as paths (Alexander, 2005). On the other hand, the function of activity nodes as destinations are gathering people together and drawing focal locations in people's minds. The fundamental function of social imageability is designated by giving information to people to find the location of activities. Subsequently, the interaction

among people whom find their ways toward destinations spontaneously happens. This is passive kind of social interaction, created mostly within paths. Passive social interaction is designated as some sort of conversation that is shaped with gleaned information from glimpsing and glancing of passers-by while they move into or outside of one's vision (Legeby, 2013). This passive reaction to the presence of other users turns to the active social interaction commonly while people stay within salient locations and maintain particular consideration such as activity participation (Kendon, 2010; Legeby, 2013). In light of the above descriptions, how could the increase in social imageability enhance the Intensity of Passive Social Interaction in urban parks? The study explores the attributes of social imageability which are designated by the urban design perspectives and their impact on social interaction within public realms. One of these attributes is spatial configuration. At first, to perform any social interaction, park users need to see other people through attending in determined areas. Therefore, these destinations must have public land uses and the path structures must be accessible. The study argues that configuration of paths within path structures have influence on simplifying or impeding movement in accessing destinations such as activity centers. Therefore, the prerequisite for meeting other people is to perceive the layout of the setting and the locations of activities. This denotes the accessibility characteristics of path structures. Moreover, people need to find their ways easily. In urban psychology, it is understood that path structures also have cognitive characteristics. Landmarks and views beyond are introduced to make paths and activity nodes become familiar and recognizable for finding destinations seamlessly. Subsequently, the configuration of paths, nodes and landmarks allow the elements to be perceived and understood through spatial configuration and cognition attributes. Accordingly, legibility of path structures causes more visitation of paths and more eye contact among people. However, these attributes solely provide obvious mental maps, make boring images (Tuncer, 2007; Ewing & Handy, 2009; Hofmann, Westermann, Kowarik, & van der Meer, 2012; Singh, 2016) which could not generate the amount of presence of people and opportunities for greater passive social interaction. On the other hand, way-finding and accessibility depend on functional motivation that makes traveling more attractive. Accordingly, in addition to determine the extent of accessibility for each path, it is therefore important to evaluate the legibility of activities and determining the sensational characteristics of social imageability, as place sensation attributes to examine to what extent they influence the Intensity of Passive Social Interaction (IPSI). Therefore, legible elements need to have functions to encourage social activities. Place sensation is about the organization of senses. These senses are designated with social activities and landmarks and views simultaneously. Sensation of orientation encourages people to perform passive social interaction through dynamic social activities and visual aspects of paths such as landmarks and views beyond. Meanwhile, sensation of center facilitates engagement in active social interaction among people within activity nodes through more stationary social activities such as sitting, talking and gathering. Like sensation of orientation, the legibility of activity nodes play a significant role in making places memorable. In studying the settings as places, more emphasis is given on sensation aspect of path structures through activities. Human activities in everyday social life within public spaces are named social activities. Therefore, following social studies, social activities are introduced to generate social interaction. Social activities foster and create different kinds of social interaction among people as they linger and spend time in public

spaces. For instance, casual gathering to watch one activity creates active social interaction and watching the activities, it self-causes passive eye contact among people. Accordingly, this study explores the legible elements of social imageability and its attributes as spatial configuration attributes (accessibility and legibility of path) and place sensation attributes (sensation of orientation and sensation of center). Although these attributes separately were introduced by prominent urban designers (Hillier & Hanson, 2005, Lynch, 2006; Gehl, 2011; Thwaites & Simkins, 2007) and have been studied quite extensively (Thwaites, Mathers, & Simkins, 2013 ;Al_Sayed, Turner, Hillier, Iida, & Penn, 2014), understanding the social imageability from the integration of these attributes with the impact on Intensity of Passive Social Interaction (IPSI) in the context of urban parks has not been examined until now. Accordingly, the aim of the study is to enhance IPSI by integrating configurational and sensational attributes of social imageability within path structures of Kuala Lumpur city center urban parks.

1.2 Statements of Problem

One of the issues faced by Asian cities is rapid urbanization. Almost three-quarters of the world's population are estimated to be city dwellers by 2050 and Asia is one of the largest regions (United Nation, 2015). Seventy-five percent of the total population in Malaysia is expected to live in urban areas by 2020 ("statistics.gov.my," 2017).

In Malaysia, according to the latest statistical records, the total population reached 31.1 million people in 2015 from 8.2 million in 1960. According to the 2015 census, the Federal Territory of Kuala Lumpur has a population of approximately 1.73 million. Average annual population growth rate is estimated to be 0.3 within this area of 243 (km2). In addition, the population of KL is predicted to grow to 2.2 million by 2020 and triple to 4.8 million by 2050 ("statistics.gov.my," 2017; Sebastian et al., 2016). Therefore, ongoing migration to urban areas at the global level and decline in public open spaces in the city center of Kuala Lumpur (CHKL, 2004, page 6-7) raises the need for sustainable development of urban parks. Rapid urbanization causes urban densification in city centers and urban expansion in suburbs which will have an inevitable effect on capital cities (Haaland & van den Bosch, 2015; Wan Mohd Rani, 2012). Consequently, the change in urban form causes dramatic transformation in urban lifestyle. Thus, living in high rise complex building; using highways instead of living in neighborhoods; and using urban streets, squares and public parks, curb spontaneous social interaction among people (Zhou & Rana, 2012). Consequently, another issue related to urban modernity is a stressful life due to lack of socialization. Stressful lifestyle could end in numerous kinds of illnesses that increase mortality or morbidity. Based on The National Health and Morbidity Survey (NHMS) (2011), 2.6 million adults and nearly half a million of those aged below 18 were overweight. Meanwhile about 11.0 percent of Malaysians aged between 18 and 60 are suffering from various forms of mental illnesses including stress, anxiety and depression. To reduce the impact of isolation on human psychological well-being, we need free and accessible public spaces such as public parks to do various activities outdoor considering that sociability is an important human function (Alexander et al., 1977;

Peters, Elands, & Buijs, 2010). Studies have proven the fact that urban parks, as free of charge public spaces, by facilitating leisure and recreational activities, could lessen the stress and anxiety and promote overall health of society (Ahmad, Ahmad, & Abdullah, 2009; Nor Akmar, 2012; Mohit, 2013; Mansor & Harun, 2014). Besides, in this current decade, despite being planned with modern infrastructure, the design of public spaces has had negative impacts on social imageability. The design of urban parks in Malaysia, for instance could not support the function in terms of encouraging social interaction among people (Hesham et al., 2014; Feng & Astell-Burt, 2016; Moulay, Ujang, & Said, 2017). It means designs of these urban parks would not support the users' imageability during their experience in urban parks. Underutilized parks in Kuala Lumpur (CHKL, 2004, page 8-5) and other Asian cities, such as Singapore, Delhi and Dhaka, showed the fact that the design of these areas could not serve as a responsive social public space (Moser, 2010; Byomkesh, Nakagoshi, & Dewan, 2012; Karuppannan & Sivam, 2013). For instance, a study by Hesham, Ismail, & Hisyam (2014) examines the social interaction of three ethnicities within Batu Pahat, a small town in Malaysia. Malays, Chinese and Indians are major ethnic groups of Malaysia. The finding indicates that the town's urban park design does not cater to the social values of different ethnic groups. It could not gather people together and provide meeting and leisure activities among different groups. The study argues that the existing parks have not captured the imageability of users from different background while the social imageability is not strong enough to evoke a strong sensation of spaces. So, why the designs of urban parks are not responsive in socializing people through social imageability of paths and activity nodes? The attributes of social imageability emerge within distinctive paths and activity nodes within path structure. Therefore, the first concern might be related to the design of path structure as the distributor of social activities. Natural movement in paths could not be continued if the movement is not well-configured and integrated. Thus, the possibility of passive social interaction decreases dramatically in paths which do not provide visual and physical access to the activity nodes as destinations and do not support seamless experience of the park. Moreover, while park users explore the environment, the lack of identifiable landmarks may cause inconvenience to users to find their way and not being able to recall the lay-out with ease. Accordingly, lack of accessibility and legibility of path structures might cause park users not to find activity nodes naturally. These design problems are not confined to matters of accessibility and spatial cognition through landmarks. The lack of place sensation attributes may also weaken engagement in passive and active social interaction. For instance, activity nodes may not encourage park users to come together due to lack of sensation of center. Meanwhile, designated paths may not facilitate seamless experiencing of urban parks due to lack of sensation of orientation. In addition, there is also a need for the sense of here-ness and there-ness which comes together to create engagement to the social experiencing of environment. Further current issue about the design of urban parks is related to globalization leading to certain homogeneity in the appearance and character of major cities across the world (CHKL, 2004). It is imperative for Kuala Lumpur to define its own distinctive image reflective of its tropical climate and multi-ethnic population. This should be well manifested in natural environment such as urban parks (CHKL, 2004, page 3-3). In this regard, it can be said that social and imageable urban parks are essential for urban life in Kuala Lumpur (CHKL, 2004; Sreetheran & Adnan, 2004; Moulay et al., 2017). In the case of Kuala Lumpur, the rapid growth of urban centres could be an opportunity to

regenerate the public realm by designing better social urban parks. In this regard, Kuala Lumpur seeks to establish itself as one of the top twenty most liveable cities in the world by the year 2020 ("thestar.com.my", 2016). Accordingly, the City Hall of Kuala Lumpur establishes practical plans toward regenerating existing urban parks and also developing new parks to meet this aim (Moulay, Ujang, & Said, 2017). There is an emphasis on urban design guidelines specifically for the most important urban parks in the city center such as Lake Garden Park and Titiwangsa Lake Park. Subsequently, guidelines shall be advanced and progressively implemented to develop unique and discernible images for the city via social design of these urban parks (CHKL, 2004, page 6-11). However, in Malaysia, there is a lack of investigation for drawing design factors and improving the social imageability of urban parks to enhance social interaction.

1.3 Location of the Study

The study areas for this research are the Lake Garden Park (LGP) and Titiwangsa Lake Park (TLP). LGP is located in the southeast of Kuala Lumpur city center and Titiwangsa Lake Park (TLP) is located at the northern fringe of the city center. These urban parks serve as refuge from the hustle and bustle of the city and are introduced as representative of the majority of urban parks in Malaysia. Both have historical and aesthetic values and are famous recreational destination (Karuppannan, Baharuddin, Sivam, & Daniels, 2014). Moreover, they are selected[1] due to their significant role in evoking people's mental image and identity about Kuala Lumpur. This led the Federal Government to pay attention to the design factors of these parks as models for design of other parks to achieve a world-class Kuala Lumpur Garden City (CHKL, 2004, page 3-3).

1.4 Research Questions

This study attempts to answer the following questions:

Main research question

How could the improvement of social imageability attributes enhance the Intensity of Passive Social Interaction (IPSI) in urban parks of Kuala Lumpur city center?

[1] LGP and TLP and the criteria for selecting them are introduced in chapter 3 of the thesis.

Sub- Research Questions

1. What are the legible elements and the patterns of activities in TLP and LGP?
2. How legible are the TLP and LGP?
3. What are the levels of accessibility within designated paths in LGP and TLP?
4. What are the Intensity of Passive Social Interaction (IPSI) along the designated paths in TLP and GLP?
5. What are the extent of sensation of orientation and sensation of center in LGP and TLP?
6. How could the relation among accessibility, sensation of orientation and sensation of center shape a framework to predict Intensity of Passive Social Interaction (IPSI) within path structures of urban parks in Kuala Lumpur city center?

1.5 Research Aim

To develop a framework to predict the Intensity of Passive Social Interaction (IPSI) within path structures of urban parks in Malaysia through determining the correlation among, spatial configuration attribute (accessibility) and place sensation attribute (sensation of orientation and sensation of center).

1.6 Research Objectives

The objectives of the research are as follows:

1. To determine the levels of legibility of the designated paths in TLP and LGP.
2. To determine the levels of accessibility within the designated paths in TLP and GLP.
3. To measure the Intensity of Passive Social Interaction (IPSI) along the designated paths.
4. To determine the extent of sensation of orientation and sensation of center in LGP and TLP.
5. To determine the correlation among accessibility, sensation of orientation and sensation of center that could predict the Intensity of Passive Social Interaction (IPSI) within urban parks in Kuala Lumpur city center.

1.7 Research Hypothesis

Conferring to the research problem, goal and objective of the study the following hypotheses are emerged:

H1: The legible elements of LGP and TLP are defined as designated paths, activity nodes, landmarks and views organized within path structure.
H2: There is a significant relationship among the levels of accessibility, Intensity of Passive Social Interaction (IPSI) and legibility in LGP and TLP.
H3: There is a significant relationship among sensation of orientation and sensation of center within LGP and TLP.
H4: There is a significant relationship among legibility, accessibility, sensation of orientation, sensation of center and IPSI within path structures of urban parks.

1.8 Summary of Research Design

This research is a survey research method that has four main phases. The first phase concerns the identification of the legible elements of LGP and TLP and legibility of urban parks. The second phase is about determining the levels of accessibility and measuring of IPSI along designated paths of LGP and TLP. The third phase is about determining the extent of sensation of orientation and sensation of center in LGP and TLP. The final phase is about developing a framework on the relationship between spatial configuration and place sensation that could predict the IPSI within path structures of urban parks in Kuala Lumpur city center.

1.9 Scope and Limitation of the Study

This thesis covers the following scopes and limitations:

- **Spatial configuration**

In determining the extent or level of accessibility of each path within path structure of each study area, this study does not consider the effect of configurational aspects like accessibility of the urban parks in scale of city center or above such as scale of Kuala Lumpur. Therefore, only the configuration of paths shaping the layout of urban parks is studied.

- **Intensity of passive social interaction (IPSI)**

According to the aim of thesis, this study only considers the IPSI within paths. Active social interaction is considered only as one of the criteria of sensation of center. Passive social interaction is a passive eye contact among park users, generating by social activities. This is a spatial activity producing by fundamental spatial activities such as walking, sitting and standing. Social interaction is not a behavior, it is happened spontaneously. So, it is not influenced by other behaviors. Moreover, accordingly to the definition and hierarchy of urban parks, these spaces are not daily used places so, park users might or might not be familiar with other users and, this

thesis does not study the social relation among them. Social structure in this study is about the spatial arrangements of activities within urban parks. This is not about the rules structuring communities and strata of societies. Accordingly, social culture, social context, socially constructed behavior and individually constructed behavior are not related to the scope of this study.

- **Spatial cognition**

Spatial cognition studies clarify the notional closeness between spatial configuration and place sensation. Besides, these studies determined the legible elements like designated paths and landmarks and activity nodes in order to assess the place sensation attributes via cognitive maps.

- **Place sensation**

Place sensation is related to spatial configuration studies to motivate people to engage in social activities. Sensation of orientation within path structures and sensation of centers within activity nodes are examined in LGP and TLP. Sensation of orientation is related with way-finding in spatial cognition studies while adding the notion of social activities.

- **The study areas**

The study areas involve two urban parks inside and beside Kuala Lumpur city center. Those are Lake Garden Park (LGP) and Titiwangsa Lake Park (TLP). This selection is based on the following criteria:

1- The definition and hierarchy of urban parks in Malaysia in terms of size (40 to 100 ha) and pattern of users and use.
2- The main function of urban parks is determined as social activities. Accordingly, although urban parks definitely have other functions such as providing places to rest and refuge, this study just considers how park users could meet each other in passive way (passive social interaction) and how social imageability of urban parks could enhance this function of urban parks. However, the restorative benefit of urban parks is related to the separation and distance from activities and observing other people. Therefore, in this thesis, urban parks are regarded as social spaces with the main role of socializing people through providing meeting opportunities. Moreover, urban parks due to their scale of their function are not places that people daily visit them.
3- Historical background of these parks. Lake Garden Park (LGP) is the first public park in Kuala Lumpur. This park was designed for the British government employees in the 1980s (Bakar, 2002; Abdul Malek, 2011; Hesham, Ismail, & Hisyam, 2014). Titiwangsa Lake Park (TLP) was designed by the Japanese

Landscape Architecture in January 1980. These two parks are representative of the majority of Malaysian parks (Bakar, 2002).

4- Importance of LGP and TLP development in Kuala Lumpur city center in achieving a World Class Garden City (CHKL, 2004).
5- The significant role of LGP and TLP in people's mental image and identity of Kuala Lumpur (CHKL, 2004, page 3-3).
6- The noticeable attention of Federal Government to develop the design factors of these parks as models for design of other parks (Bakar, 2002; CHKL, 2004, page 3-3).

1.10 Significance of the Study

First of all, there is no previous research in urban design field on social imageability of urban parks with regard to enhance social interaction and in the context of Malaysia. Secondly, the study contributes to the growing knowledge on social interaction and social imageability with acknowledging the role of users experiencing urban parks. Users' recognition and identification on the attributes of social imageability provide a framework in increasing the IPSI through the design factors. Thirdly, there have been lot of social studies in urban design trying to highlight the importance of social public spaces (Gehl, 2011 and 2013; K. Thwaites, Helleur, & Simkins, 2005; Kevin Thwaites et al., 2013; Moulay et al., 2017). As well, there are researches about transportation design, providing accessible destinations through walking or motorway streets or highways in order to socializing cities (Hillier & Hanson, 2005; Vaughan, 2007; Mahdzar & Safari, 2014; Peponis, 2016; Xiao, 2017) or neighborhoods (Westhuizen, 2010; Boozani, 2013; Lamíquiz & López-Domínguez, 2015; Singh, 2016). Nevertheless, until recently empirical study on social imageability attributes have been less considered in relation to social interaction within the parks. The survey research design method used in this study comprising field observation, space syntax and landscape experiential method (photo survey questionnaire), helps urban designers to measure the attributes of social imageability. The IPSI predictive framework could estimate the Intensity of Passive Social Interaction. Therefore urban designers could develop social imageability of urban parks, diagnosis their design problems and assess the extent of problems via this framework. In addition, the social imageability of LGP and TLP as two iconic historical urban parks in Malaysia endues the tropical garden city image to Kuala Lumpur in achieving a world class city. Finally, this imageability transforms underutilized urban parks to social public parks. Social imageability by providing comfortable and memorable environment encourages people to visit urban parks more often due to engagement with the activities, social gathering and observing other people within pleasant natural and recreational atmosphere. With this regard the design of urban parks responds to the expectation of people to perform social activities in urban parks and could support the health and wellbeing of residents. Moreover, study on social imageability raise the value of urban parks as attractive tourism destinations. As a result, the research on social imageability contributes to the quality of life, tourism industry, economy and sustainable development of Kuala Lumpur public spaces.

1.11 Definition of the Key Terms

Passive social interaction is defined as some sort of conversation that is shaped with gleaned information from glimpsing and glancing of passers-by while they move into or outside of one's vision within path structure (Legeby, 2013).

Active social interaction is another type of social interaction and occurs whenever persons gather together and maintain particular consideration. For instance this kind of social interaction performs itself by participating in talking and making conversation or cooperating in a game, activity, etc. (Kendon, 2010; Legeby, 2013).

Social activities

Due to social characteristics of public open spaces specifically urban parks, all human activities in everyday social life within these spaces are considered social activities. Social activities are classified into two groups of stationary (passive) and dynamic (active) activities. This classification comes from the study of social activities within path structure and activity nodes and definition of social interaction. Dynamic social activities define the passive form of social interaction and co-presence through walking. Stationary activities define active social interaction through sitting and standing. These fundamental activities facilitate various social activities.

Intensity of Passive Social Interaction is defined as intensity of eye contact provided with dynamic social activities while people cross the nodes (convergence of paths).

Space as a general expression means a continuous area or expanse which is free, available or unoccupied.

Path structure

To give a structure means to give organization or arrangement to something. Path structure is the quality of organizing activities brought from the arrangement of and relations between the spatial units or elements of open spaces. The fundamental component of this structure is paths. The continuous space within path structure has social information, generating natural movement and thereafter stimulating social interaction among people (Mora, 2009; Kostakos, 2010). Thus, social attribute is embedded in path structure.

Spatial cognition

Cognition or perception means "the mental action or process of acquiring knowledge and understanding through thought, experience, and the senses" (Mora, 2009, page 27). Furthermore, spatial cognition initially means as the internal reflection and reconstruction of the structures and relation among spaces in thought and remembering information to assess the built environment (Eraydin, 2007; Carmona, Matthew & Tiesdell, 2007; Barlas, 2006; Aarts, Chalker, & Weiner, 2014).

Spatial configuration in literal meaning is an arrangement of spatial elements in a particular form, figure or combination. The configuration of paths within path structure defines the degree of access to the destinations and activities. Besides, spatial configuration has cognitive characteristics. Thus, configuration of paths, nodes and landmarks within path structure makes an organized whole that is perceived as more than the sum of these parts. Also, spatial configuration and cognition emphasize the novelty or distinctness of the spatial structures (Stevenson, 2010; Aarts, Chalker, & Weiner, 2014).

Social Imageability is introduced as the quality of urban park design due to its significant role in engaging people to perform the social interaction through legible and accessible locations which provide sensation of center and sensation of orientation within activity nodes and designated paths, organized within path structures (Kevin Thwaites & Simkins, 2007b).

Place sensation is about the organization of senses. These senses are defined with social activities and landmarks and views simultaneously. Sensation of orientation encourages urban parks users to engage in passive social interaction and sensation of center boost up active social interaction in activity nodes.

1.12 Structure of the Thesis

Chapter 1 provides the general design of the study. It examines the background of study, the research problems as well as the aims and objectives of the research that are formulated based on the area of study. The formulation of research questions are illustrated and discussed in this chapter.

Chapter 2 presents the latest body of knowledge about social interaction as a socio-functional meaning.

Chapter 3 discusses the research methodology used for this research

Chapter 4 describes the results and analysis. It is about assessing social imageability attributes.

Chapter 5 is about the results and analysis on assessing the relationship between and among variables. The findings lead to develop a framework on how the relation among spatial configuration and place sensation attributes could predict the IPSI within path structures of urban parks in Kuala Lumpur city center, Malaysia.

Chapter 6 discusses the summary of the research findings. This discussion links the theoretical framework to the findings of the study.

Chapter 7 presents the conclusions derived from the study as well as the implications of the main findings on planning and urban design. It presents knowledge contribution, limitations of the study, implication of the main findings and recommendations for future studies.

REFERENCES

Adhvaryu, A., Sung, C., & Erhan, S. Z. (2005). Fatty Acids and Antioxidant Effects on Grease Microstructures . Industrial Crops And Products, 21(2), 285–291.

Aarts, B., Chalker, S., & Weiner, E. (2014). The Oxford Dictionary Of English Grammar. Oxford University Press.

Abdelbaseer, A. M. (2012). Evaluating Way-Finding Ability Within Urban Environment. In Eight International Space Synatx Symposium (P. 39). Santiago De Chile.

Abdelmonem, M. G., & Mcwhinney, R. (2015). In Search Of Common Grounds : Stitching The Divided Landscape Of Urban Parks In Belfast. Cities, 44, 40–49.

Abdul Malek, N. B. (2011). Assessment Of Satisfactions, Preferences, Needs And Use Patterns In Quality Neighbourhood Park Development In Malaysia. Universiti Putra Malaysia.

Afshar, P. F., Foroughan, M., Vedadhir, A., & Tabatabaei, M. G. (2017). The Effects Of Place Attachment On Social Well-Being In Older Adults. Educational Gerontology, 43(1), 45–51.

Akmar, N., & Aziz, A. (2012). Green Space Use And Management In Malaysia. University Of Copenhagen.

Al_Sayed, K., Turner, A., Hillier, B., Iida, S., & Penn, A. (2014). Space Syntax Methodology. London: Bartlett School Of Architecture.

Aleksandra, K. (2013). Landscape And Urban Planning The Contribution Of Local Parks To Neighbourhood Social Ties, 109, 31–44.

Alexander, C. (2005). The Nature Of Order: An Essay On The Art Of Building And The Nature Of The Universe: The Luminous Ground. Book Four. Oxford University Press.

Alves, F. B. (2017). The Traditional Urban Square–A Vital Organ In The City Or A "Thing" Of The Past? In The Pre-Fabrication Of Building Facades (Pp. 37–46). Springer.

Amorim, L. M. Do E., Barros Filho, M. N. M., & Cruz, D. (2014). Urban Texture And Space Configuration: An Essay On Integrating Socio-Spatial Analytical Techniques. Cities, 39,

Andresen, E., Haensel, D., Chraibi, M., & Seyfried, A. (2016). Wayfinding And Cognitive Maps For Pedestrian Models.

Ayob, Z. H. J. (2010). The Legibility Of Urban Square In Shaping City Image Of Historical Cities In Peninsular Malaysia. Universiti Teknologi Mara.

Bada, Y. (2009). Visibility And Spatial Use In Urban Plazas Ref 006 A Case Study From Biskra , Algeria (Pp. 1–11). Stockholm.

Bada, Y., & Farhi, A. (2009). Experiencing Urban Spaces : Isovists Properties And Spatial Use Of Plazas. Courrier Du Savoir, 101–112.

Bafna, S. (2003). Space Syntax: A Brief Introduction To Its Logic And Analytical Techniques. Environment & Behavior, 35(1), 17–29.

Baharuddin, Z. M., Sivam, A., Karuppannan, S., & Daniels, C. B. (2010). Urban Green Space: Stakeholders' And Visitors' Perception In Kuala Lumpur Malaysia. In Making Cities Liveable.

Bahrainy, H., & Bakhtiar, A. (2016). Urban Design Theory. In Toward An Integrative Theory Of Urban Design (Pp. 29–38). Springer.

Bakar, J. A. (2002). A Design Guide Of Public Parks In Malaysia. Penerbit UTM.

Bakar, N. A., Malek, N. A., & Mansor, M. (2016). Access To Parks And Recreational Opportunities In Urban Low-Income Neighbourhood. Procedia - Social And Behavioral Sciences, 234, 299–308.

Baskaya, A. (2004). Wayfinding In An Unfamiliar Environment: Different Spatial Settings Of Two Polyclinics. Environment And Behavior, 36(6), 839–867.

Baur, J. W. R., Tynon, J. F., & Gómez, E. (2013). Attitudes About Urban Nature Parks: A Case Study Of Users And Nonusers In Portland, Oregon. Landscape And Urban Planning, 117, 100–111.

Belir, O. (2013). Accessibility In Public Spaces : Spatial Legibility For Visually Impaired People. In Ninth International Space Syntax Symposium.

Bently,Ian ; Alcock, Alan; Murrain, Paul ; Mcglynn,Sue; Smith, G. (2005). Responsive Environments. Elsevier Ltd.

Berkani, Y. (2013). Urban Morphology And Pedestrian Movement Of Traditional Market Place In Casbah Algiers. Universiti Teknologi Malaysia, Faculty Of Built Environment.

Boozani, H. A. (2013). Walkable Design Neighborhood A Sustainable Urban Form. Blekinge Institute Of Technology, School Of Planning And Media Design.

Byomkesh, T., Nakagoshi, N., & Dewan, A. M. (2012). Urbanization And Green Space Dynamics In Greater Dhaka, Bangladesh. Landscape And Ecological Engineering, 8(1), 45–58.

Campbell, L. K., Svendsen, E. S., Sonti, N. F., & Johnson, M. L. (2016). A Social Assessment Of Urban Parkland: Analyzing Park Use And Meaning To Inform Management And Resilience Planning. Environmental Science & Policy, 62, 34–44.

Carmona, Matthew & Tiesdell, S. (2007). Urban Design Reader. Oxford: Elsevier's Science & Technology.

Carmona, M., Tiesdell, S., & Heath, T. (2003). Public Places - Urban Spaces Dimensions Of Urban Design. Oxford: Elsevier's Science & Technology.

Chapin, F. S., & Knapp, C. N. (2015). Sense Of Place: A Process For Identifying And Negotiating Potentially Contested Visions Of Sustainability. Environmental Science And Policy, 53, 38–46.

CHKL. (2004). Kuala Lumpur Structure Plan 2020 (Draft Stru). Kuala Lumpur: City Hall Kuala Lumpur (CHKL), Malaysia.

Cicalò, E. (2013). City Project And Public Space. Springer Science, Urban And(14), 221–235.

Creswell, J. W. (2013). Research Design: Qualitative, Quantitative, And Mixed Methods Approaches. Sage Publications.

Dai, X., & Wenbo, Y. (2013). A Configurational Exploration Of Pedestrian And Cyclist Movements : Using Hangzhou As A Case Study , China. In Proceedings Of The Ninth International Space Syntax Symposium. Seoul.

Dalton, R. C., & Bafna, S. (2003). The Syntactical Image Of The City: In 4th International Space Syntax Symposium. London.

Das, D. (2008). Urban Quality Of Life: A Case Study Of Guwahati. Social Indicators Research, 88(2), 297–310.

De Jaegher, H., Peräkylä, A., & Stevanovic, M. (2016). The Co-Creation Of Meaningful Action: Bridging Enaction And Interactional Sociology. Philosophical Transactions Of The Royal Society, 1–22.

De Vaus, D. (2013). Surveys In Social Research. Routledge.

Dempsey, N., Brown, C., & Bramley, G. (2012). The Key To Sustainable Urban Development In UK Cities? The Influence Of Density On Social Sustainability. Progress In Planning, 77(3), 89–141.

Dias, P., & Ramadier, T. (2015). Social Trajectory And Socio-Spatial Representation Of Urban Space: The Relation Between Social And Cognitive Structures. Journal Of Environmental Psychology, 41, 135–144.

Doxa, M. (2001). Morphologies Of Co-Presence In Interior Public Space In Places Of Performance. In 3rd International Space Syntax Symposium.

Duque, J. A. G., & Panagopoulos, T. (2010). Urban Planning Throughout Environmental Quality And Human Well-Being. Spat Organ Dyn-Discuss Pap, 4, 7–20.

Esther H.K., Y., Winky K.O., H., & Edwin H.W., C. (2017). Elderly Satisfaction With Planning And Design Of Public Parks In High Density Old Districts: An Ordered Logit Model. Landscape And Urban Planning, 165(May), 39–53.

Ewing, R., & Handy, S. (2009). Measuring The Unmeasurable: Urban Design Qualities Related To Walkability. Journal Of Urban Design, 14(1), 65–84. 55

Fisher, K. D. (2009a). Placing Social Interaction: An Integrative Approach To Analyzing Past Built Environments. Journal Of Anthropological Archaeology, 28(4), 439–457.

Fisher, K. D. (2009b). Placing Social Interaction: An Integrative Approach To Analyzing Past Built Environments. Journal Of Anthropological Archaeology, 28(4), 439–457.

Gehl, J. (2011a). Life Between Buildings: Using Public Space. Island Press.

Gehl, J. (2011b). Life Between Buildings: Using Public Space.

Gehl, J. (2013). Cities For People. Island Press.

Giddens, A. (1976). New Rules Of Sociological Method: A Positive Critique Of Interpretative Sociology. London: Hutchinson.

Giddens, A. (1984). The Constitution Of Society: Outline Of The Theory Of Structuration. University Of California Press.

Giddens, A. (2013). The Constitution Of Society: Outline Of The Theory Of Structuration. John Wiley & Sons.

Goličnik, B., & Ward Thompson, C. (2010a). Emerging Relationships Between Design And Use Of Urban Park Spaces. Landscape And Urban Planning, 94(1), 38–53.

Goličnik, B., & Ward Thompson, C. (2010b). Emerging Relationships Between Design And Use Of Urban Park Spaces. Landscape And Urban Planning, 94(1), 38–53.

Granzow, M. C. (2010). Bringing People To The Park: Inclusion And Exclusion In The Production Of Public Space. Lethbridge, Alberta, Canada.

Greenberg Raanan, M., & Shoval, N. (2014). Mental Maps Compared To Actual Spatial Behavior Using GPS Data: A New Method For Investigating Segregation In Cities. Cities, 36, 28–40.

Haaland, C., & Van Den Bosch, C. K. (2015). Challenges And Strategies For Urban Green-Space Planning In Cities Undergoing Densification : A Review. Urban Forestry & Urban Greening, 14, 10–12.

Hashim, N. H. M., Thani, S. K. S. O., Jamaludin, M. A., & Yatim, N. M. (2016). A Perceptual Study On The Influence Of Vegetation Design Towards Women's Safety In Public Park. Procedia - Social And Behavioral Sciences, 234, 280–288.

Hashim, N. O. (2016). Urban Design Characteristics That Influence Human Activities In Swahili Streets: The Case Of Old Town Mombasa. Urban Design, JKUAT.

Henning, C., & Lieberg, M. (1996). Strong Ties Or Weak Ties? Neighbourhood Networks In A New Perspective. Scandinavian Housing And Planning Research, 13(1), 3–26.

Hesham, E. O., Ismail, S., & Hisyam, R. M. (2014). Residents ' Perception Towards Social Interaction Among Malaysian Ethnic Groups In Urban Park. Recent Trends In Social And Behaviour Sciences-Lumban Gaol Et Al.(Eds), 9–15.

Hillier, B. (2007). Space Is The Machine. London: Press Syndicate Of The University Of Cambridge. This.

Hillier, B. (2009). Studying Cities To Learn About Minds: Some Possible Implications Of Space Syntax For Spatial Cognition.

Hillier, B., & Hanson, J. (2005). The Social Logic Of Space. New York: Cambridge University Press.

Hillier, B., & Vaughan, L. (2007). The City As One Thing. Progress In Planning, 67.

Hofmann, M., Westermann, J. R., Kowarik, I., & Van Der Meer, E. (2012). Perceptions Of Parks And Urban Derelict Land By Landscape Planners And Residents. Urban Forestry & Urban Greening, 11(3), 303–312.

Holcomb, B. (2015). The Urban Wisdom Of Jane Jacobs. The AAG Review Of Books, 3(4), 182–183.

Huang, H. (2001). The Spatialization Of Knowledge And Social Relationships. In 3td International Space Syntax Sympodium (Pp. 1–14). Atlanta.

Jacobs, A., & Appleyard, D. (1987). Toward An Urban Design Manifesto. Journal Of The American Planning Association, 53(1), 112–120.

Jacobs, J. (2015a). The Death And Life Of Great American Cities. Readings In Planning Theory, Fourth Edition, 94–109.

Jacobs, J. (2015b). The Death And Life Of Great American Cities. Readings In Planning Theory (Fourth Edi).

Jalili, T., & Azar, A. (2016). Phenomenology Of Sense Of Place And Its Constituents In Children Educational Environments. International Journal Of Humanities And Cultural Studies (IJHCS) ISSN 2356-5926, 3(2), 862–870.

Johnston, T. (2016). Synthesizing Structure And Agency: A Developmental Framework Of Bourdieu's Constructivist Structuralism Theory. Journal Of Theoretical & Philosophical Criminology, 8(1), 1.

Kanniah, K. D. (2017). Quantifying Green Cover Change For Sustainable Urban Planning: A Case Of Kuala Lumpur, Malaysia. Urban Forestry & Urban Greening, 27(August), 287–304.

Kara, B. (2013). Landscape Design And Cognitive Psychology. Procedia - Social And Behavioral Sciences, 82(2001), 288–291.

Karimi, K. (2012). A Configurational Approach To Analytical Urban Design: "Space Syntax" Methodology. Urban Design International, 17(4), 297–318.

Karimnia, E. (2012). In Search Of Sociable Squares From A Human And Placemaking Perspective Analyzing The Relationship Between Built Environments And Social Life In Two Stockholm Squares: Norrmalmstorg & Nytorget. KTH, Royal Institute Of Technology.

Karuppannan, S., Baharuddin, Z. M., Sivam, A., & Daniels, C. B. (2014). Urban Green Space And Urban Biodiversity: Kuala Lumpur, Malaysia. Sustainable Development, 7(1), 1–16.

Kaźmierczak, A. (2012). The Contribution Of Local Parks To Neighbourhood Social Ties. Landscape And Urban Planning.

Kaźmierczak, A. (2013). The Contribution Of Local Parks To Neighbourhood Social Ties. Landscape And Urban Planning, 109(1), 31–44.

Kellams, T. R. (2017). The Mind , The Narrative , And The City : How Narratives Of Space Make Place In Cognitive Maps. Kansas State University.

Kim, Y. O. (2001). The Role Of Spatial Configuration In Spatial Cognition. 3rd International Space Syntax Symposium, 49.

Kim, Y. O., & Penn, A. (2004a). Linking The Spatial Syntax Of Cognitive Maps To The Spatial Syntax Of The Environment. Environment & Behavior, 36(4), 483–504.

Kim, Y. O., & Penn, A. (2004b). Linking The Spatial Syntax Of Cognitive Maps To The Spatial Syntax Of The Environment. Environment & Behavior, 36(4), 483–504.

Koch, D. (2013). Visibility Analysis , Similarity , And Dissimilarity In. In Ninth International Space Syntax Symposium. Seoul.

Kolodziejski, A. L. (2014). Connecting People And Place : Sense Of Place And Local Action. University Of Manchester.

Kostakos, V. (2010). Geospatial Analysis And Modelling Of Urban Structure And Dynamics. Springer Science & Business Media, 99, 31–52.

Kott, J. (2016). Streets Of Yesterday, Today, And Tomorrow. World Transport Policy And Practice, 21, 42–51.

Kullmann, K. (2017). The Garden Of Entangled Paths: Landscape Phenomena At The Albany Bulb Wasteland. Landscape Review, 17(1).

Lamíquiz, P. J., & López-Domínguez, J. (2015). Effects Of Built Environment On Walking At The Neighbourhood Scale. A New Role For Street Networks By Modelling Their Configurational Accessibility? Transportation Research Part A: Policy And Practice, 74, 148–163.

Law, S. (2017). Defining Street-Based Local Area And Measuring Its Effect On House Price Using A Hedonic Price Approach: The Case Study Of Metropolitan London. Cities, 60, 166–179.

Lazaridou, A. (2013). Three-Dimensional Cultural Environments: The Ashmolean Museum As A Case Study. In Ninth International Space Syntax Symposium. Seoul: Sejong University.

Leather, M., & Nicholls, F. (2016). More Than Activities: Using A “Sense Of Place”To Enrich Student Experience In Adventure Sport. Sport, Education And Society, 21(3), 443–464.

Lee, C. (2016). Promoting Walking Via Ease Of Wayfinding. In Community Wayfinding: Pathways To Understanding (Pp. 171–193). Springer.

Legeby, A. (2010). Urban Segregation And Urban Form. KTH Royal Institute Of Technology Architecture.

Legeby, A. (2013). Patterns Of Co-Presence Spatial Configuration And Social Segregation. KTH Royal Institute Of Technology.

Lesan, M. (2015). Public Streets For Multicultytal USE. Victoria University Of Wellington.

Li, Y., Xiao, L., Ye, Y., Xu, W., & Law, A. (2016). Understanding Tourist Space At A Historic Site Through Space Syntax Analysis: The Case Of Gulangyu, China. Tourism Management, 52, 30–43.

Littke, H. (2016). Revisiting The San Francisco Parklets Problematizing Publicness, Parks, And Transferability. Urban Forestry And Urban Greening, 15, 165–173.

Liu, H., Li, F., Li, J., & Zhang, Y. (2017). The Relationships Between Urban Parks, Residents' Physical Activity, And Mental Health Benefits: A Case Study From Beijing, China. Journal Of Environmental Management, 190, 223–230.

Long, Y., & Baran, P. K. (2011). Does Intelligibility Affect Place Legibility? Understanding The Relationship Between Objective And Subjective Evaluations Of The Urban Environment. Environment And Behavior, 44(5), 616–640.

Luo, Q., Wang, J., & Yun, W. (2016). From Lost Space To Third Place: The Visitor's Perspective. Tourism Management, 57, 106–117.

Lynch, K. (1960). The Image Of The City (Vol. 11). MIT Press.

Lynch, K. (1984). Good City Form. MIT Press.

Lynch, K. (2006). The Image Of The City. Images: A Reader. Massachusetts: The M.I.T.

Madanipour, A. (1996). Design Of Urban Space: An Inquiry Into A Socio-Spatial Process. John Wiley & Son Ltd.

Madanipour, A. (2003). Public And Private Spaces Of The City. Routledge.

Madanipour, A. (2013). Whose Public Space?: International Case Studies In Urban Design And Development. Routledge.

Magda, M. (2003). An Investigation Of The Relation Of Space To Society Mavridou Magda Msc Thesis Acknowledgements. University College Of London.

Mahdzar, S., & Safari, H. (2014). Legibility As A Result Of Geometry Space : Analyzing And Comparing Hypothetical Model And Existing Space By Space Syntax. Life Science Journal, 11(8), 309–317. Retrieved From

Mahmoud, A. H., & Omar, R. H. (2015). Planting Design For Urban Parks: Space Syntax As A Landscape Design Assessment Tool. Frontiers Of Architectural Research, 4(1), 35–45.

Malek, N. A., Mariapan, M., & Shariff, M. K. M. (2012). The Making Of A Quality Neighbourhood Park: A Path Model Approach. Procedia - Social And Behavioral Sciences, 49, 202–214.

Mansouri, M., & Ujang, N. (2016). Tourist' Expectation And Satisfaction Towards Pedestrian Networks In The Historical District Of Kuala Lumpur, Malaysia. Asian Geographer, 33(1), 35–55.

Manum, B. (2009). AGRAPH ; Complementary Software For Axial-Line Analyses. In The 7Th Space Syntax Symposium (P. 13). Stockholm.

Marcus, L., Giusti, M., & Barthel, S. (2016). Cognitive Affordances In Sustainable Urbanism: Contributions Of Space Syntax And Spatial Cognition. Journal Of Urban Design, 1–14.

Markhede, H., & Koch, D. (2007). Positioning Analysis: Social Structures In Configurative Modelling 069. In 6th International Space Syntax Symposium. İstanbu.

Masoumi, H. E. (2011). A New Approach To The Iranian Urban Planning , Using Neo-Traditional Development. Technical University Of Dortmund.

Mehta, V. (2013a). The Street: A Quintessential Social Public Space. Routledge.

Mehta, V. (2013b). The Street: A Quintessential Social Public Space.

Mehta, V. (2014). Evaluating Public Space. Journal Of Urban Design, 19(1), 53–88.

Mitsou, N., De Nijs, R., Lenz, D., Frimberger, J., Wollherr, D., Kühnlenz, K., & Tzafestas, C. (2012). Online Semantic Mapping Of Urban Environments. Spatial Cognition VIII. Springer.

Mohammed, N. M. (2011). Integration Of Social Life With Urban Space Syntax.

Montello, D. R. (2016). Behavioral Methods For Spatial Cognition Research. Research Methods For Environmental Psychology, 161.

Mora, R. (2009). The Cognitive Roots Of Space Syntax. University College London.

Morello, E., & Ratti, C. (2012). A Digital Image Of The City : 3D Isovists In Lynch Urban Analysis. MIT Open Access Articles.

Moroni, S. (2016). Urban Density After Jane Jacobs: The Crucial Role Of Diversity And Emergence. City, Territory And Architecture, 3(1), 13.

Moser, S. (2010). Putrajaya: Malaysia's New Federal Administrative Capital. Cities, 27(4), 285–297.

Moulay, A., & Ujang, N. (2016). Legibility Of Neighborhood Parks And Its Impact On Social Interaction In A Planned Residential Area. International Journal Of Architectural Research: Archnet-IJAR, 10(1), 184–194.

Moulay, A., Ujang, N., & M.S., M. K. (2014). Legibility Of Neighbourhood Park And Its Impact On Social Interaction. International Conference On Sustainable Urban Design For Livable Cities (Sudlic2014), 10(1), 209–219.

Moulay, A., Ujang, N., Maulan, S., & Ismail, S. (2017). Understanding The Process Of Parks' Attachment: Interrelation Between Place Attachment, Behavioural Tendencies, And The Use Of Public Place. City, Culture And Society, (March), 0–1.

Moulay, A., Ujang, N., & Said, I. (2017). Legibility Of Neighborhood Parks As A Predicator For Enhanced Social Interaction Towards Social Sustainability. Cities, 61, 58–64.

Nasir, R. A., Ahmad, S. S., & Ahmed, A. Z. (2013). Physical Activity And Human Comfort Correlation In An Urban Park In Hot And Humid Conditions. Procedia - Social And Behavioral Sciences, 105, 598–609.

Nasution, A. D., & Zahrah, W. (2012). Public Open Space Privatization And Quality Of Life, Case Study Merdeka Square Medan. Procedia - Social And Behavioral Sciences, 36(June 2011), 466–475.

Ngesan, M. R., Karim, H. A., & Zubir, S. S. (2012). Human Behaviour And Activities In Relation To Shah Alam Urban Park During Nighttime. Procedia - Social And Behavioral Sciences, 68, 427–438.

Ngesan, M. R., Karim, H. A., & Zubir, S. S. (2013). Image Of Urban Public Park During Nighttime In Relation To Place Identity. Procedia - Social And Behavioral Sciences, 101, 328–337.

Ngesan, M. R., & Zubir, S. S. (2015). Place Identity Of Nighttime Urban Public Park In Shah Alam And Putrajaya. Procedia - Social And Behavioral Sciences, 170, 452–462.

Nielsen-Pincus, M., Hall, T., Force, J. E., & Wulfhorst, J. D. (2010). Sociodemographic Effects On Place Bonding. Journal Of Environmental Psychology, 30(4), 443–454.

Norberg-Schulz, C. (2000). Architecture: Presence. Language, Place, 67.

Nordh, H., Alalouch, C., & Hartig, T. (2011). Assessing Restorative Components Of Small Urban Parks Using Conjoint Methodology. Urban Forestry & Urban Greening, 10(2), 95–103.

Omer, I., & Goldblatt, R. (2012). Urban Spatial Configuration And Socio-Economic Residential Differentiation: The Case Of Tel Aviv. Computers, Environment And Urban Systems, 36(2), 177–185.

Omer, I., & Zafrir-Reuven, O. (2015). The Development Of Street Patterns In Israel Cities. Journal Of Urban And Regional Analysis, VII(2), 113–127.

Ostwald, M. J., & Dawes, M. (2012). Differentiating Between Line And Point Maps Using Spatial Experience: Considering Richard Neutra's Lovell House. Nexus Network Journal, 15(1), 63–81.

Papargyropoilou, P. (2006a). Park Interpretations. The Bartlett School Of Graduate Studies.

Papargyropoilou, P. (2006b). Park Interpretations.

Peponis, J. (2016). The Space Syntax Of Intelligible Communities. In Community Wayfinding: Pathways To Understanding (Pp. 35–60). Springer.

Peschardt, K. K., Schipperijn, J., & Stigsdotter, U. K. (2012). Use Of Small Public Urban Green Spaces (SPUGS). Urban Forestry & Urban Greening, 11(3), 235–244.

Petani, F. J., & Mengis, J. (2016). In Search Of Lost Space: The Process Of Space Planning Through Remembering And History. Organization, 23(1), 71–89.

Peters, K., Elands, B., & Buijs, A. (2010). Social Interactions In Urban Parks: Stimulating Social Cohesion? Urban Forestry & Urban Greening, 9(2), 93–100.

Piaget, J., Inhelder, B. R., & Inhelder, B. (2015). Memory And Intelligence (Psychology Revivals). Psychology Press.

Pickett, S. T. A., Cadenasso, M. L., & Mcgrath, B. (2013). Resilience In Ecology And Urban Design. Springer Netherlands.

Portugali, J. (2010). Complexity; Cognition And The City. Springer.

Project For Public Spaces. (2005). A User Analysis And Place Performance Evaluation.

Rahman, N. A., Shamsuddin, S., & Ghani, I. (2015). What Makes People Use The Street?: Towards A Liveable Urban Environment In Kuala Lumpur City Centre. Procedia - Social And Behavioral Sciences, 170(November), 624–632.

Rashid, M. (2017). Studies On The Geometry Of Urban Layouts: A Review Of The Literature. In The Geometry Of Urban Layouts (Pp. 19–45). Springer.

Rasidi, M. H., Jamirsah, N., & Said, I. (2012). Urban Green Space Design Affects Urban Residents' Social Interaction. Procedia - Social And Behavioral Sciences, 68(November), 464–480.

Raymond, C. M., Brown, G., & Weber, D. (2010). The Measurement Of Place Attachment: Personal, Community, And Environmental Connections. Journal Of Environmental Psychology, 30(4), 422–434.

Razak, M. A. W. A., Othman, N., & Nazir, N. N. M. (2016). Connecting People With Nature: Urban Park And Human Well-Being. Procedia - Social And Behavioral Sciences, 222, 476–484.

Rowe, M. (2016). Jane Jacobs And The Self-Organizing City. Contemporary Perspectives On Jane Jacobs: Reassessing The Impacts Of An Urban Visionary, 21.

Sadat, A., Majedi, H., & Habib, F. (2016). The Role Of Physical Characteristics In Enhancing Social Interaction And Use Of Urban Space (A Case Analysis Of Neighborhood Center Of Soltan). Journal Of Design And Built Environment, 1–6.

Salwa, S., & Mahdzar, S. (2013). Streets For People : Sustaining Accessible And Sociable Streets In Pasir Gudang City Centre. In Ninth International Space Syntax Symposium.

Santos, T., Mendes, R. N., & Vasco, A. (2016). Journal Of Outdoor Recreation And Tourism Recreational Activities In Urban Parks : Spatial Interactions Among Users, (2012), 1–9.

Schiller, D., Eichenbaum, H., Buffalo, E. A., Davachi, L., Foster, D. J., Leutgeb, S., & Ranganath, C. (2015). Memory And Space: Towards An Understanding Of The Cognitive Map. Journal Of Neuroscience, 35(41), 13904–13911.

Sebastian, A., Alzain, M. A., Asweto, C. O., Mahara, G., Guo, X., & Song, M. (2016). The Malaysian Health Care System: Ecology, Plans, And Reforms. Family Medicine And Community Health, 4(X), 1–11.

Sevinç, Z., & Bozkurt, E. (2015). Wayfinding Behaviors In A Healthcare Environment : A Case Study Analysis Of Individual Differences. Gazi University Journal Of Science, 3(3), 37–45.

Shamsuddin, S., & Ujang, N. (2008). Making Places: The Role Of Attachment In Creating The Sense Of Place For Traditional Streets In Malaysia. Habitat International, 32(3), 399–409.

Shuib, K. B., Hashim, H., & Nasir, N. A. M. (2015). Community Participation Strategies In Planning For Urban Parks. Procedia - Social And Behavioral Sciences, 168, 311–320.

Simões Aelbrecht, P. (2016). "Fourth Places": The Contemporary Public Settings For Informal Social Interaction Among Strangers. Journal Of Urban Design, 1–29.

Sing, K. W., Jusoh, W. F. A., Hashim, N. R., & Wilson, J. J. (2016). Urban Parks: Refuges For Tropical Butterflies In Southeast Asia? Urban Ecosystems, 19(3), 1131–1147.

Singh, R. (2016). Factors Affecting Walkability Of Neighborhoods. Procedia - Social And Behavioral Sciences, 216(October 2015), 643–654.

Sivalioğlu, P., & Berköz, L. (2016). Relationship Between Place Attachment And User Satisfaction At Some National Parks In Turkey, 13(1), 171–181.

Slone, E., Burles, F., & Iaria, G. (2016). Environmental Layout Complexity Affects Neural Activity During Navigation In Humans. European Journal Of Neuroscience, 43(9), 1146–1155.

Sreetheran, M. (2017). Exploring The Urban Park Use, Preference And Behaviours Among The Residents Of Kuala Lumpur, Malaysia. Urban Forestry And Urban Greening, 25(May), 85–93.

Sreetheran, M., & Adnan, M. (2004). Green Network Development Of Kuala Lumpur City : From The Perspective Of Kuala Lumpur Structure Plan. Forest Research Institute, Kuala Lumpur, Malaysia, 7, 38–42.

Statistics.Gov.My. (2017).

Stevens, Q. (2006). The Shape Of Urban Experience: A Reevaluation Of Lynch's Five Elements. Environment And Planning B: Planning And Design, 33(6), 803–823.

Stevenson, A. (2010). Oxford Dictionary Of English. Oxford University Press, USA.

Stewart, C. (2016). PATH As Place : Exploring The Concept Of Place In Toronto ' S Grade-Separated Pedestrian Network By. The University Of Guelph.

Szymanski, B. J., & Szymanski, B. (2010). Can Place Be Created ? Cultivating Sense Of Place In New Developments.

Talen, E. (2010). The Spatial Logic Of Parks. Journal Of Urban Design, 15(4), 473–491.

Thwaites, K., Helleur, E., & Simkins, I. M. (2005). Restorative Urban Open Space: Exploring The Spatial Configuration Of Human Emotional Fulfilment In Urban Open Space. Landscape Research, 30(4), 525–547.

Thwaites, K., Mathers, A., & Simkins, I. (2013). Socially Restorative Urbanism: The Theory, Process And Practice Of Experiemics. Routledge.

Thwaites, K., & Simkins, I. (2007a). Experiential Landscape. New York: Taylor & Francis Group.

Thwaites, K., & Simkins, I. M. (2007b). Experiential Landscape: An Approach To People, Place And Space. Routledge.

Tolman, E. C. (1948). Cognitive Maps In Rats And Men. Psychological Review, 55(4), 189.

Tomko, M., & Winter, S. (2013). Describing The Functional Spatial Structure Of Urban Environments. Computers, Environment And Urban Systems, 41, 177–187.

Topcu, K. D., & Topcu, M. (2012). Visual Presentation Of Mental Images In Urban Design Education:Cognitive Maps. Procedia - Social And Behavioral Sciences, 51, 573–582.

Trancik, R. (1986). Finding Lost Space: Theories Of Urban Design. John Wiley & Sons. Retrieved From Https://Books.Google.Com/Books?Id=Ucdjxonfegmc&Pgis=1

Tuncer, E. (2007). Perception And Intelligibility In The Context Of Spatial Syntax And Spatial Cognition: Reading An Unfamiliar Place Out Of Cognetive Map. In 6th International Space Syntax Symposium.

Turner, A. (2003). Analysing The Visual Dynamics Of Spatial Morphology. Environment And Planning B: Planning And Design, 30(5), 657–676.

Turner, A. (2004). Depthmap 4.

Turner, A., Penn, A., & Hillier, B. (2005). An Algorithmic Definition Of The Axial Map. Environment And Planning B: Planning And Design, 32(3), 425–444.

Tversky, B. (2003). Structures Of Mental Spaces: How People Think About Space. Environment & Behavior, 35(1), 66–80.

Ueno, J. (2009). An Analysis Of Pedestrian Movement In Multilevel Complex By Space Syntax Theory - In The Case Of Shibuya Station- Ref 118. In L. M. And J. S. Daniel Koch (Ed.), Proceedings Of The 7th International Space Syntax Symposium (Pp. 1–12). Stockholm.

Ujang, N. (2008). Place Attachment Towards Shopping Districts In Kuala Lumpur City Centre, Malaysia. Universiti Putra Malaysia Place.

Ujang, N. (2012). Place Attachment And Continuity Of Urban Place Identity. Procedia - Social And Behavioral Sciences, 49, 156–167.

Ujang, N. (2014). Place Meaning And Significant Of The Traditional Shopping District In The City Of Kuala Lumpur. International Journal Of Architecture Research, 8(1), 66–77.

Ujang, N., Moulay, A., & Zakariya, K. (2015). Sense Of Well-Being Indicators: Attachment To Public Parks In Putrajaya, Malaysia. Procedia - Social And Behavioral Sciences, 202(December 2014), 487–494.

United Nation. (2015). World Population Prospects The 2015 Revision. The Department Of Economic And Social Affairs. New York.

Vaughan, L. (2007). The Spatial Syntax Of Urban Segregation. Progress In Planning, 67(3), 205–294.

Volchenkov, D., & Blanchard, P. (2008). Discovering Important Nodes Through Graph Entropy Encoded In Urban Space Syntax. Arxiv Preprint

Wagner, S. (2016). A New Direction For Bellevue: From Cars To People And A Livable Community. University Of Washington.

Wan Mohd Rani, W. N. M. (2012). Modelling The Relationship Between Urban Form And Social Sustainability In Malaysian Cities – Access To Local Services And Public Facilities. Heriot-Watt University.

Wang, D., Brown, G., & Liu, Y. (2015). The Physical And Non-Physical Factors That Influence Perceived Access To Urban Parks. Landscape And Urban Planning, 133, 53–66.

Wang, J., Zhu, Q., & Mao, Q. (2007). The Three-Dimensional Extension Of Space Syntax 048. In 6th International Space Syntax Symposium, İstanbul. İstanbul.

Westhuizen, D. L. Van Der. (2010). Neighborhood Access, Pedestrian Movement, And Physical Activity In Detroit: Implications For Urban Design And Research.

Whyte, W. H. (2012). The Last Landscape. University Of Pennsylvania Press.

Wilbanks, T. J. (2015). Putting “Place” In A Multiscale Context: Perspectives From The Sustainability Sciences. Environmental Science And Policy, 53, 70–79.

Wright Wendel, H. E., Zarger, R. K., & Mihelcic, J. R. (2012). Accessibility And Usability: Green Space Preferences, Perceptions, And Barriers In A Rapidly Urbanizing City In Latin America. Landscape And Urban Planning, 107(3), 272–282.

Wulfhorst, G., & Buttner, B. (2012). Transportation Demand Management. In Transportation In The New Millenium. Munchen.

Xiao, Y. (2017). Space Syntax Methodology Review. In Urban Morphology And Housing Market (Pp. 41–61). Springer.

Yin, R. K. (2015). Qualitative Research From Start To Finish. Guilford Publications.

Zhai, Y., & Baran, P. K. (2016). Do Configurational Attributes Matter In Context Of Urban Parks? Park Pathway Configurational Attributes And Senior Walking. Landscape And Urban Planning, 148, 188–202.

Zheng, L. (2010). A Spatial Cognition Investigation By Using The Integrated Methodology Combined With Cognitive Map And Space Syntax. In The 5th International Conference On Computer Science & Education (Pp. 111–115).

Aarts, B., Chalker, S., & Weiner, E. (2014). The Oxford Dictionary Of English Grammar. Oxford University Press.

Abdelbaseer, A. M. (2012). Evaluating Way-Finding Ability Within Urban Environment. In Eight International Space Synatx Symposium (P. 39). Santiago De Chile.

Abdelmonem, M. G., & Mcwhinney, R. (2015). In Search Of Common Grounds : Stitching The Divided Landscape Of Urban Parks In Belfast. Cities, 44, 40–49.

Abdul Malek, N. B. (2011). Assessment Of Satisfactions, Preferences, Needs And Use Patterns In Quality Neighbourhood Park Development In Malaysia. Universiti Putra Malaysia.

Afshar, P. F., Foroughan, M., Vedadhir, A., & Tabatabaei, M. G. (2017). The Effects Of Place Attachment On Social Well-Being In Older Adults. Educational Gerontology, 43(1), 45–51.

Akmar, N., & Aziz, A. (2012). Green Space Use And Management In Malaysia. University Of Copenhagen.

Al_Sayed, K., Turner, A., Hillier, B., Iida, S., & Penn, A. (2014). Space Syntax Methodology. London: Bartlett School Of Architecture.

Aleksandra, K. (2013). Landscape And Urban Planning The Contribution Of Local Parks To Neighbourhood Social Ties, 109, 31–44.

Alexander, C. (2005). The Nature Of Order: An Essay On The Art Of Building And The Nature Of The Universe: The Luminous Ground. Book Four. Oxford University Press.

Alves, F. B. (2017). The Traditional Urban Square–A Vital Organ In The City Or A "Thing" Of The Past? In The Pre-Fabrication Of Building Facades (Pp. 37–46). Springer.

Amorim, L. M. Do E., Barros Filho, M. N. M., & Cruz, D. (2014). Urban Texture And Space Configuration: An Essay On Integrating Socio-Spatial Analytical Techniques. Cities, 39, 58–67.

Andresen, E., Haensel, D., Chraibi, M., & Seyfried, A. (2016). Wayfinding And Cognitive Maps For Pedestrian Models.

Ayob, Z. H. J. (2010). The Legibility Of Urban Square In Shaping City Image Of Historical Cities In Peninsular Malaysia. Universiti Teknologi Mara.

Bada, Y. (2009). Visibility And Spatial Use In Urban Plazas Ref 006 A Case Study From Biskra , Algeria (Pp. 1–11). Stockholm.

Bada, Y., & Farhi, A. (2009). Experiencing Urban Spaces : Isovists Properties And Spatial Use Of Plazas. Courrier Du Savoir, 101–112.

Bafna, S. (2003). Space Syntax: A Brief Introduction To Its Logic And Analytical Techniques. Environment & Behavior, 35(1), 17–29.

Baharuddin, Z. M., Sivam, A., Karuppannan, S., & Daniels, C. B. (2010). Urban Green Space: Stakeholders' And Visitors' Perception In Kuala Lumpur Malaysia. In Making Cities Liveable.

Bahrainy, H., & Bakhtiar, A. (2016). Urban Design Theory. In Toward An Integrative Theory Of Urban Design (Pp. 29–38). Springer.

Bakar, J. A. (2002). A Design Guide Of Public Parks In Malaysia. Penerbit Utm.

Baskaya, A. (2004). Wayfinding In An Unfamiliar Environment: Different Spatial Settings Of Two Polyclinics. Environment And Behavior, 36(6), 839–867.

Baur, J. W. R., Tynon, J. F., & Gómez, E. (2013). Attitudes About Urban Nature Parks: A Case Study Of Users And Nonusers In Portland, Oregon. Landscape And Urban Planning, 117, 100–111.

Belir, O. (2013). Accessibility In Public Spaces: Spatial Legibility For Visually

Impaired People. In Ninth International Space Syntax Symposium.

Bently,Ian ; Alcock, Alan; Murrain, Paul ; Mcglynn,Sue; Smith, G. (2005). Responsive Environments. Elsevier Ltd.

Berkani, Y. (2013). Urban Morphology And Pedestrian Movement Of Traditional Market Place In Casbah Algiers. Universiti Teknologi Malaysia, Faculty Of Built Environment.

Boozani, H. A. (2013). Walkable Design Neighborhood A Sustainable Urban Form. Blekinge Institute Of Technology, School Of Planning And Media Design.

Byomkesh, T., Nakagoshi, N., & Dewan, A. M. (2012). Urbanization And Green Space Dynamics In Greater Dhaka, Bangladesh. Landscape And Ecological Engineering, 8(1), 45–58.

Campbell, L. K., Svendsen, E. S., Sonti, N. F., & Johnson, M. L. (2016). A Social Assessment Of Urban Parkland: Analyzing Park Use And Meaning To Inform Management And Resilience Planning. Environmental Science & Policy, 62, 34–44.

Carmona, Matthew & Tiesdell, S. (2007). Urban Design Reader. Oxford: Elsevier's Science & Technology.

Carmona, M., Tiesdell, S., & Heath, T. (2003). Public Places - Urban Spaces Dimensions Of Urban Design. Oxford: Elsevier's Science & Technology.

Chapin, F. S., & Knapp, C. N. (2015). Sense Of Place: A Process For Identifying And Negotiating Potentially Contested Visions Of Sustainability. Environmental Science And Policy, 53, 38–46.

Chkl. (2004). Kuala Lumpur Structure Plan 2020 (Draft Stru). Kuala Lumpur: City Hall Kuala Lumpur (Chkl), Malaysia.

Cicalò, E. (2013). City Project And Public Space. Springer Science, Urban And(14), 221–235.

Creswell, J. W. (2013). Research Design: Qualitative, Quantitative, And Mixed Methods Approaches. Sage Publications.

Dai, X., & Wenbo, Y. (2013). A Configurational Exploration Of Pedestrian And Cyclist Movements : Using Hangzhou As A Case Study , China. In Proceedings Of The Ninth International Space Syntax Symposium. Seoul.

Dalton, R. C., & Bafna, S. (2003). The Syntactical Image Of The City: In 4th International Space Syntax Symposium. London.

Das, D. (2008). Urban Quality Of Life: A Case Study Of Guwahati. Social Indicators Research, 88(2), 297–310.

De Jaegher, H., Peräkylä, A., & Stevanovic, M. (2016). The Co-Creation Of Meaningful Action: Bridging Enaction And Interactional Sociology. Philosophical Transactions Of The Royal Society, 1–22.

De Vaus, D. (2013). Surveys In Social Research. Routledge.

Dempsey, N., Brown, C., & Bramley, G. (2012). The Key To Sustainable Urban Development In Uk Cities? The Influence Of Density On Social Sustainability. Progress In Planning, 77(3), 89–141.

Dias, P., & Ramadier, T. (2015). Social Trajectory And Socio-Spatial Representation Of Urban Space: The Relation Between Social And Cognitive Structures. Journal Of Environmental Psychology, 41, 135–144.

Doxa, M. (2001). Morphologies Of Co-Presence In Interior Public Space In Places Of Performance. In 3rd International Space Syntax Symposium.

Duque, J. A. G., & Panagopoulos, T. (2010). Urban Planning Throughout Environmental Quality And Human Well-Being. Spat Organ Dyn-Discuss Pap, 4, 7–20.

Esther H.K., Y., Winky K.O., H., & Edwin H.W., C. (2017). Elderly Satisfaction With Planning And Design Of Public Parks In High Density Old Districts: An Ordered Logit Model. Landscape And Urban Planning, 165(May), 39–53.

Ewing, R., & Handy, S. (2009). Measuring The Unmeasurable: Urban Design Qualities Related To Walkability. Journal Of Urban Design, 14(1), 65–84.

Fisher, K. D. (2009a). Placing Social Interaction: An Integrative Approach To Analyzing Past Built Environments. Journal Of Anthropological Archaeology, 28(4), 439–457.

Fisher, K. D. (2009b). Placing Social Interaction: An Integrative Approach To Analyzing Past Built Environments. Journal Of Anthropological Archaeology, 28(4), 439–457.

Gehl, J. (2011a). Life Between Buildings: Using Public Space. Island Press.

Gehl, J. (2011b). Life Between Buildings: Using Public Space.

Gehl, J. (2013). Cities For People. Island Press.

Giddens, A. (1976). New Rules Of Sociological Method: A Positive Critique Of Interpretative Sociology. London: Hutchinson.

Giddens, A. (1984). The Constitution Of Society: Outline Of The Theory Of Structuration. Univ Of California Press.

Giddens, A. (2013). The Constitution Of Society: Outline Of The Theory Of Structuration. John Wiley & Sons.

Goličnik, B., & Ward Thompson, C. (2010a). Emerging Relationships Between Design And Use Of Urban Park Spaces. Landscape And Urban Planning, 94(1), 38–53.

Goličnik, B., & Ward Thompson, C. (2010b). Emerging Relationships Between Design And Use Of Urban Park Spaces. Landscape And Urban Planning, 94(1), 38–53.

Granzow, M. C. (2010). Bringing People To The Park: Inclusion And Exclusion In The Production Of Public Space. Lethbridge, Alberta, Canada.

Greenberg Raanan, M., & Shoval, N. (2014). Mental Maps Compared To Actual Spatial Behavior Using Gps Data: A New Method For Investigating Segregation In Cities. Cities, 36, 28–40.

Haaland, C., & Van Den Bosch, C. K. (2015). Challenges And Strategies For Urban Green-Space Planning In Cities Undergoing Densification : A Review. Urban Forestry & Urban Greening, 14, 10–12.

Hashim, N. O. (2016). Urban Design Characteristics That Influence Human Activities In Swahili Streets: The Case Of Old Town Mombasa. Urban Design, Jkuat.

Henning, C., & Lieberg, M. (1996). Strong Ties Or Weak Ties? Neighbourhood Networks In A New Perspective. Scandinavian Housing And Planning Research, 13(1), 3–26.

Hesham, E. O., Ismail, S., & Hisyam, R. M. (2014). Residents ' Perception Towards Social Interaction Among Malaysian Ethnic Groups In Urban Park. Recent Trends In Social And Behaviour Sciences-Lumban Gaol Et Al.(Eds), 9–15.

Hillier, B. (2007). Space Is The Machine. London: Press Syndicate Of The University Of Cambridge. This.

Hillier, B. (2009). Studying Cities To Learn About Minds: Some Possible Implications Of Space Syntax For Spatial Cognition.

Hillier, B., & Hanson, J. (2005). The Social Logic Of Space. New York: Cambridge University Press.

Hillier, B., & Vaughan, L. (2007). The City As One Thing. Progress In Planning, 67.

Hofmann, M., Westermann, J. R., Kowarik, I., & Van Der Meer, E. (2012). Perceptions Of Parks And Urban Derelict Land By Landscape Planners And

Residents. Urban Forestry & Urban Greening, 11(3), 303–312.

Holcomb, B. (2015). The Urban Wisdom Of Jane Jacobs. The Aag Review Of Books, 3(4), 182–183.

Huang, H. (2001). The Spatialization Of Knowledge And Social Relationships. In 3td International Space Syntax Sympodium (Pp. 1–14). Atlanta.

Jacobs, A., & Appleyard, D. (1987). Toward An Urban Design Manifesto. Journal Of The American Planning Association, 53(1), 112–120.

Jacobs, J. (2015a). The Death And Life Of Great American Cities. Readings In Planning Theory, Fourth Edition, 94–109.

Jacobs, J. (2015b). The Death And Life Of Great American Cities. Readings In Planning Theory (Fourth Edi).

Jalili, T., & Azar, A. (2016). Phenomenology Of Sense Of Place And Its Constituents In Children Educational Environments. International Journal Of Humanities And Cultural Studies (Ijhcs) Issn 2356-5926, 3(2), 862–870.

Johnston, T. (2016). Synthesizing Structure And Agency: A Developmental Framework Of Bourdieu's Constructivist Structuralism Theory. Journal Of Theoretical & Philosophical Criminology, 8(1), 1.

Kara, B. (2013). Landscape Design And Cognitive Psychology. Procedia - Social And Behavioral Sciences, 82(2001), 288–291.

Karimi, K. (2012). A Configurational Approach To Analytical Urban Design: "Space Syntax" Methodology. Urban Design International, 17(4), 297–318.

Karimnia, E. (2012). In Search Of Sociable Squares From A Human And Placemaking Perspective Analyzing The Relationship Between Built Environments And Social Life In Two Stockholm Squares: Norrmalmstorg & Nytorget. Kth, Royal Institute Of Technology.

Karuppannan, S., Baharuddin, Z. M., Sivam, A., & Daniels, C. B. (2014). Urban Green Space And Urban Biodiversity: Kuala Lumpur, Malaysia. Sustainable Development, 7(1), 1–16.

Kaźmierczak, A. (2012). The Contribution Of Local Parks To Neighbourhood Social Ties. Landscape And Urban Planning.

Kaźmierczak, A. (2013). The Contribution Of Local Parks To Neighbourhood Social Ties. Landscape And Urban Planning, 109(1), 31–44.

Kellams, T. R. (2017). The Mind , The Narrative , And The City : How Narratives Of

Space Make Place In Cognitive Maps. Kansas State University.

Kim, Y. O. (2001). The Role Of Spatial Configuration In Spatial Cognition. 3rd International Space Syntax Symposium, 49.

Kim, Y. O., & Penn, A. (2004a). Linking The Spatial Syntax Of Cognitive Maps To The Spatial Syntax Of The Environment. Environment & Behavior, 36(4), 483–504.

Kim, Y. O., & Penn, A. (2004b). Linking The Spatial Syntax Of Cognitive Maps To The Spatial Syntax Of The Environment. Environment & Behavior, 36(4), 483–504.

Koch, D. (2013). Visibility Analysis , Similarity , And Dissimilarity In. In Ninth International Space Syntax Symposium. Seoul.

Kolodziejski, A. L. (2014). Connecting People And Place : Sense Of Place And Local Action. University Of Manchester.

Kostakos, V. (2010). Geospatial Analysis And Modelling Of Urban Structure And Dynamics. Springer Science & Business Media, 99, 31–52.

Kott, J. (2016). Streets Of Yesterday, Today, And Tomorrow. World Transport Policy And Practice, 21, 42–51.

Kullmann, K. (2017). The Garden Of Entangled Paths: Landscape Phenomena At The Albany Bulb Wasteland. Landscape Review, 17(1).

Lamíquiz, P. J., & López-Domínguez, J. (2015). Effects Of Built Environment On Walking At The Neighbourhood Scale. A New Role For Street Networks By Modelling Their Configurational Accessibility? Transportation Research Part A: Policy And Practice, 74, 148–163.

Law, S. (2017). Defining Street-Based Local Area And Measuring Its Effect On House Price Using A Hedonic Price Approach: The Case Study Of Metropolitan London. Cities, 60, 166–179.

Lazaridou, A. (2013). Three-Dimensional Cultural Environments : The Ashmolean Museum As A Case Study. In Ninth International Space Syntax Symposium. Seoul: Sejong University.

Leather, M., & Nicholls, F. (2016). More Than Activities: Using A “Sense Of Place” To Enrich Student Experience In Adventure Sport. Sport, Education And Society, 21(3), 443–464.

Lee, C. (2016). Promoting Walking Via Ease Of Wayfinding. In Community Wayfinding: Pathways To Understanding (Pp. 171–193). Springer.

Legeby, A. (2010). Urban Segregation And Urban Form. Kth Royal Institute Of Technology Architecture.

Legeby, A. (2013). Patterns Of Co-Presence Spatial Configuration And Social Segregation. Kth Royal Institute Of Technology.

Lesan, M. (2015). Public Streets For Multicultytal Use. Victoria University Of Wellington.

Li, Y., Xiao, L., Ye, Y., Xu, W., & Law, A. (2016). Understanding Tourist Space At A Historic Site Through Space Syntax Analysis: The Case Of Gulangyu, China. Tourism Management, 52, 30–43.

Littke, H. (2016). Revisiting The San Francisco Parklets Problematizing Publicness, Parks, And Transferability. Urban Forestry And Urban Greening, 15, 165–173.

Liu, H., Li, F., Li, J., & Zhang, Y. (2017). The Relationships Between Urban Parks, Residents' Physical Activity, And Mental Health Benefits: A Case Study From Beijing, China. Journal Of Environmental Management, 190, 223–230.

Long, Y., & Baran, P. K. (2011). Does Intelligibility Affect Place Legibility? Understanding The Relationship Between Objective And Subjective Evaluations Of The Urban Environment. Environment And Behavior, 44(5), 616–640.

Luo, Q., Wang, J., & Yun, W. (2016). From Lost Space To Third Place: The Visitor's Perspective. Tourism Management, 57, 106–117.

Lynch, K. (1960). The Image Of The City (Vol. 11). Mit Press.

Lynch, K. (1984). Good City Form. Mit Press.

Lynch, K. (2006). The Image Of The City. Images: A Reader. Massachusetts: The M.I.T. Press.

Madanipour, A. (1996). Design Of Urban Space: An Inquiry Into A Socio-Spatial Process. John Wiley & Son Ltd.

Madanipour, A. (2003). Public And Private Spaces Of The City. Routledge.

Madanipour, A. (2013). Whose Public Space?: International Case Studies In Urban Design And Development. Routledge.

Magda, M. (2003). An Investigation Of The Relation Of Space To Society Mavridou Magda Msc Thesis Acknowledgements. University College Of London.

Mahdzar, S., & Safari, H. (2014). Legibility As A Result Of Geometry Space : Analyzing And Comparing Hypothetical Model And Existing Space By Space

Syntax. Life Science Journal, 11(8), 309–317.

Mahmoud, A. H., & Omar, R. H. (2015). Planting Design For Urban Parks: Space Syntax As A Landscape Design Assessment Tool. Frontiers Of Architectural Research, 4(1), 35–45.

Malek, N. A., Mariapan, M., & Shariff, M. K. M. (2012). The Making Of A Quality Neighbourhood Park: A Path Model Approach. Procedia - Social And Behavioral Sciences, 49, 202–214.

Mansouri, M., & Ujang, N. (2016). Tourist' Expectation And Satisfaction Towards Pedestrian Networks In The Historical District Of Kuala Lumpur, Malaysia. Asian Geographer, 33(1), 35–55.

Manum, B. (2009). Agraph ; Complementary Software For Axial-Line Analyses. In The 7th Space Syntax Symposium (P. 13). Stockholm.

Marcus, L., Giusti, M., & Barthel, S. (2016). Cognitive Affordances In Sustainable Urbanism: Contributions Of Space Syntax And Spatial Cognition. Journal Of Urban Design, 1–14.

Markhede, H., & Koch, D. (2007). Positioning Analysis: Social Structures In Configurative Modelling 069. In 6th International Space Syntax Symposium. İstanbu.

Masoumi, H. E. (2011). A New Approach To The Iranian Urban Planning , Using Neo-Traditional Development. Technical University Of Dortmund.

Mehta, V. (2013a). The Street: A Quintessential Social Public Space. Routledge.

Mehta, V. (2013b). The Street A Quintessential Social Public Space.

Mehta, V. (2014). Evaluating Public Space. Journal Of Urban Design, 19(1), 53–88.

Mitsou, N., De Nijs, R., Lenz, D., Frimberger, J., Wollherr, D., Kühnlenz, K., & Tzafestas, C. (2012). Online Semantic Mapping Of Urban Environments. Spatial Cognition Viii. Springer.

Mohammed, N. M. (2011). Integration Of Social Life With Urban Space Syntax.

Montello, D. R. (2016). Behavioral Methods For Spatial Cognition Research. Research Methods For Environmental Psychology, 161.

Mora, R. (2009). The Cognitive Roots Of Space Syntax. University College London.

Morello, E., & Ratti, C. (2012). A Digital Image Of The City : 3d Isovists In Lynch Â€Tm S Urban Analysis. Mit Open Access Articles.

Moroni, S. (2016). Urban Density After Jane Jacobs: The Crucial Role Of Diversity And Emergence. City, Territory And Architecture, 3(1), 13.

Moser, S. (2010). Putrajaya: Malaysia's New Federal Administrative Capital. Cities, 27(4), 285–297.

Moulay, A., & Ujang, N. (2016). Legibility Of Neighborhood Parks And Its Impact On Social Interaction In A Planned Residential Area. International Journal Of Architectural Research: Archnet-Ijar, 10(1), 184–194.

Moulay, A., Ujang, N., & M.S., M. K. (2014). Legibility Of Neighbourhood Park And Its Impact On Social Interaction. International Conference On Sustainable Urban Design For Livable Cities (Sudlic2014), 10(1), 209–219.

Moulay, A., Ujang, N., & Said, I. (2017). Legibility Of Neighborhood Parks As A Predicator For Enhanced Social Interaction Towards Social Sustainability. Cities, 61, 58–64.

Nasir, R. A., Ahmad, S. S., & Ahmed, A. Z. (2013). Physical Activity And Human Comfort Correlation In An Urban Park In Hot And Humid Conditions. Procedia - Social And Behavioral Sciences, 105, 598–609.

Nasution, A. D., & Zahrah, W. (2012). Public Open Space Privatization And Quality Of Life, Case Study Merdeka Square Medan. Procedia - Social And Behavioral Sciences, 36(June 2011), 466–475.

Ngesan, M. R., Karim, H. A., & Zubir, S. S. (2012). Human Behaviour And Activities In Relation To Shah Alam Urban Park During Nighttime. Procedia - Social And Behavioral Sciences, 68, 427–438.

Ngesan, M. R., Karim, H. A., & Zubir, S. S. (2013). Image Of Urban Public Park During Nighttime In Relation To Place Identity. Procedia - Social And Behavioral Sciences, 101, 328–337.

Nielsen-Pincus, M., Hall, T., Force, J. E., & Wulfhorst, J. D. (2010). Sociodemographic Effects On Place Bonding. Journal Of Environmental Psychology, 30(4), 443–454.

Norberg-Schulz, C. (2000). Architecture: Presence. Language, Place, 67.

Nordh, H., Alalouch, C., & Hartig, T. (2011). Assessing Restorative Components Of Small Urban Parks Using Conjoint Methodology. Urban Forestry & Urban Greening, 10(2), 95–103.

Omer, I., & Goldblatt, R. (2012). Urban Spatial Configuration And Socio-Economic Residential Differentiation: The Case Of Tel Aviv. Computers, Environment And Urban Systems, 36(2), 177–185.

Omer, I., & Zafrir-Reuven, O. (2015). The Development Of Street Patterns In Israel Cities. Journal Of Urban And Regional Analysis, Vii(2), 113–127.

Ostwald, M. J., & Dawes, M. (2012). Differentiating Between Line And Point Maps Using Spatial Experience: Considering Richard Neutra's Lovell House. Nexus Network Journal, 15(1), 63–81.

Papargyropoilou, P. (2006a). Park Interpretations. The Bartlett School Of Graduate Studies.

Papargyropoilou, P. (2006b). Park Interpretations.

Peponis, J. (2016). The Space Syntax Of Intelligible Communities. In Community Wayfinding: Pathways To Understanding (Pp. 35–60). Springer.

Peschardt, K. K., Schipperijn, J., & Stigsdotter, U. K. (2012). Use Of Small Public Urban Green Spaces (Spugs). Urban Forestry & Urban Greening, 11(3), 235–244.

Petani, F. J., & Mengis, J. (2016). In Search Of Lost Space: The Process Of Space Planning Through Remembering And History. Organization, 23(1), 71–89.

Peters, K., Elands, B., & Buijs, A. (2010). Social Interactions In Urban Parks: Stimulating Social Cohesion? Urban Forestry & Urban Greening, 9(2), 93–100.

Piaget, J., Inhelder, B. R., & Inhelder, B. (2015). Memory And Intelligence (Psychology Revivals). Psychology Press.

Pickett, S. T. A., Cadenasso, M. L., & Mcgrath, B. (2013). Resilience In Ecology And Urban Design. Springer Netherlands.

Portugali, J. (2010). Complexity; Cognition And The City. Springer.

Project For Public Spaces. (2005). A User Analysis And Place Performance Evaluation.

Rahman, N. A., Shamsuddin, S., & Ghani, I. (2015). What Makes People Use The Street?: Towards A Liveable Urban Environment In Kuala Lumpur City Centre. Procedia - Social And Behavioral Sciences, 170(November), 624–632.

Rashid, M. (2017). Studies On The Geometry Of Urban Layouts: A Review Of The Literature. In The Geometry Of Urban Layouts (Pp. 19–45). Springer.

Rasidi, M. H., Jamirsah, N., & Said, I. (2012). Urban Green Space Design Affects Urban Residents' Social Interaction. Procedia - Social And Behavioral Sciences, 68(November), 464–480.

Raymond, C. M., Brown, G., & Weber, D. (2010). The Measurement Of Place Attachment: Personal, Community, And Environmental Connections. Journal Of Environmental Psychology, 30(4), 422–434.

Rowe, M. (2016). Jane Jacobs And The Self-Organizing City. Contemporary Perspectives On Jane Jacobs: Reassessing The Impacts Of An Urban Visionary, 21.

Sadat, A., Majedi, H., & Habib, F. (2016). The Role Of Physical Characteristics In Enhancing Social Interaction And Use Of Urban Space (A Case Analysis Of Neighborhood Center Of Soltan. Journal Of Design And Built Environment, 1–6.

Salwa, S., & Mahdzar, S. (2013). Streets For People : Sustaining Accessible And Sociable Streets In Pasir Gudang City Centre. In Ninth International Space Syntax Symposium.

Santos, T., Mendes, R. N., & Vasco, A. (2016). Journal Of Outdoor Recreation And Tourism Recreational Activities In Urban Parks : Spatial Interactions Among Users, (2012), 1–9.

Schiller, D., Eichenbaum, H., Buffalo, E. A., Davachi, L., Foster, D. J., Leutgeb, S., & Ranganath, C. (2015). Memory And Space: Towards An Understanding Of The Cognitive Map. Journal Of Neuroscience, 35(41), 13904–13911.

Sebastian, A., Alzain, M. A., Asweto, C. O., Mahara, G., Guo, X., & Song, M. (2016). The Malaysian Health Care System: Ecology, Plans, And Reforms. Family Medicine And Community Health, 4(X), 1–11.

Sevinç, Z., & Bozkurt, E. (2015). Wayfinding Behaviors In A Healthcare Environment : A Case Study Analysis Of Individual Differences. Gazi University Journal Of Science, 3(3), 37–45.

Shamsuddin, S., & Ujang, N. (2008). Making Places: The Role Of Attachment In Creating The Sense Of Place For Traditional Streets In Malaysia. Habitat International, 32(3), 399–409.

Simões Aelbrecht, P. (2016). “Fourth Places”: The Contemporary Public Settings For Informal Social Interaction Among Strangers. Journal Of Urban Design, 1–29.

Singh, R. (2016). Factors Affecting Walkability Of Neighborhoods. Procedia - Social And Behavioral Sciences, 216(October 2015), 643–654.

Sivalioğlu, P., & Berköz, L. (2016). Relationship Between Place Attachment And User Satisfaction At Some National Parks In Turkey, 13(1), 171–181.

Slone, E., Burles, F., & Iaria, G. (2016). Environmental Layout Complexity Affects

Neural Activity During Navigation In Humans. European Journal Of Neuroscience, 43(9), 1146–1155.

Sreetheran, M., & Adnan, M. (2004). Green Network Development Of Kuala Lumpur City : From The Perspective Of Kuala Lumpur Structure Plan. Forest Research Institute, Kuala Lumpur, Malaysia, 7, 38–42.

Statistics.Gov.My. (2017).

Stevens, Q. (2006). The Shape Of Urban Experience: A Reevaluation Of Lynch's Five Elements. Environment And Planning B: Planning And Design, 33(6), 803–823.

Stevenson, A. (2010). Oxford Dictionary Of English. Oxford University Press, Usa.

Stewart, C. (2016). Path As Place : Exploring The Concept Of Place In Toronto ' S Grade-Separated Pedestrian Network By. The University Of Guelph.

Szymanski, B. J., & Szymanski, B. (2010). Can Place Be Created ? Cultivating Sense Of Place In New Developments.

Talen, E. (2010). The Spatial Logic Of Parks. Journal Of Urban Design, 15(4), 473–491.

Thwaites, K. And S. L. (2007). Experiential Landscape. New York: Taylor & Francis Group.

Thwaites, K., Helleur, E., & Simkins, I. M. (2005). Restorative Urban Open Space: Exploring The Spatial Configuration Of Human Emotional Fulfilment In Urban Open Space. Landscape Research, 30(4), 525–547.

Thwaites, K., Mathers, A., & Simkins, I. (2013). Socially Restorative Urbanism: The Theory, Process And Practice Of Experiemics. Routledge.

Thwaites, K., & Simkins, I. M. (2007). Experiential Landscape: An Approach To People, Place And Space. Routledge.

Tolman, E. C. (1948). Cognitive Maps In Rats And Men. Psychological Review, 55(4), 189.

Tomko, M., & Winter, S. (2013). Describing The Functional Spatial Structure Of Urban Environments. Computers, Environment And Urban Systems, 41, 177–187.

Topcu, K. D., & Topcu, M. (2012). Visual Presentation Of Mental Images In Urban Design Education:Cognitive Maps. Procedia - Social And Behavioral Sciences, 51, 573–582.

Trancik, R. (1986). Finding Lost Space: Theories Of Urban Design. John Wiley & Sons.

Tuncer, E. (2007). Perception And Intelligibility In The Context Of Spatial Syntax And Spatial Cognition: Reading An Unfamiliar Place Out Of Cognetive Map. In 6th International Space Syntax Symposium.

Turner, A. (2003). Analysing The Visual Dynamics Of Spatial Morphology. Environment And Planning B: Planning And Design, 30(5), 657–676.

Turner, A. (2004). Depthmap 4.

Turner, A., Penn, A., & Hillier, B. (2005). An Algorithmic Definition Of The Axial Map. Environment And Planning B: Planning And Design, 32(3), 425–444.

Tversky, B. (2003). Structures Of Mental Spaces: How People Think About Space. Environment & Behavior, 35(1), 66–80.

Ueno, J. (2009). An Analysis Of Pedestrian Movement In Multilevel Complex By Space Syntax Theory - In The Case Of Shibuya Station- Ref 118. In L. M. And J. S. Daniel Koch (Ed.), Proceedings Of The 7th International Space Syntax Symposium (Pp. 1–12). Stockholm.

Ujang, N. (2008). Place Attachment Towards Shopping Districts In Kuala Lumpur City Centre, Malaysia. Universiti Putra Malaysia Place.

Ujang, N. (2012). Place Attachment And Continuity Of Urban Place Identity. Procedia - Social And Behavioral Sciences, 49, 156–167.

Ujang, N. (2014). Place Meaning And Significant Of The Traditional Shopping District In The City Of Kuala Lumpur. International Journal Of Architecture Research, 8(1), 66–77.

Ujang, N., Moulay, A., & Zakariya, K. (2015). Sense Of Well-Being Indicators: Attachment To Public Parks In Putrajaya, Malaysia. Procedia - Social And Behavioral Sciences, 202(December 2014), 487–494.

United Nation. (2015). World Population Prospects The 2015 Revision. The Department Of Economic And Social Affairs. New York.

Vaughan, L. (2007). The Spatial Syntax Of Urban Segregation. Progress In Planning, 67(3), 205–294.

Volchenkov, D., & Blanchard, P. (2008). Discovering Important Nodes Through Graph Entropy Encoded In Urban Space Syntax. Arxiv Preprint Arxiv:0709.4415., 1–16.

Wagner, S. (2016). A New Direction For Bellevue: From Cars To People And A Livable Community. University Of Washington.

Wan Mohd Rani, W. N. M. (2012). Modelling The Relationship Between Urban Form And Social Sustainability In Malaysian Cities – Access To Local Services And Public Facilities. Heriot-Watt University.

Wang, D., Brown, G., & Liu, Y. (2015). The Physical And Non-Physical Factors That Influence Perceived Access To Urban Parks. Landscape And Urban Planning, 133, 53–66.

Wang, J., Zhu, Q., & Mao, Q. (2007). The Three-Dimensional Extension Of Space Syntax 048. In 6th International Space Syntax Symposium, İstanbul. İstanbul.

Westhuizen, D. L. Van Der. (2010). Neighborhood Access, Pedestrian Movement, And Physical Activity In Detroit: Implications For Urban Design And Research.

Whyte, W. H. (2012). The Last Landscape. University Of Pennsylvania Press.

Wilbanks, T. J. (2015). Putting "Place" In A Multiscale Context: Perspectives From The Sustainability Sciences. Environmental Science And Policy, 53, 70–79.

Wright Wendel, H. E., Zarger, R. K., & Mihelcic, J. R. (2012). Accessibility And Usability: Green Space Preferences, Perceptions, And Barriers In A Rapidly Urbanizing City In Latin America. Landscape And Urban Planning, 107(3), 272–282.

Wulfhorst, G., & Buttner, B. (2012). Transportation Demand Management. In Transportation In The New Millenium. Munchen.

Xiao, Y. (2017). Space Syntax Methodology Review. In Urban Morphology And Housing Market (Pp. 41–61). Springer.

Yin, R. K. (2015). Qualitative Research From Start To Finish. Guilford Publications.

Zhai, Y., & Baran, P. K. (2016). Do Configurational Attributes Matter In Context Of Urban Parks? Park Pathway Configurational Attributes And Senior Walking. Landscape And Urban Planning, 148, 188–202.

Zheng, L. (2010). A Spatial Cognition Investigation By Using The Integrated Methodology Combined With Cognitive Map And Space Syntax. In The 5th International Conference On Computer Science & Education (Pp. 111–115).