

LITTLE STREETS AND HIDDEN ROUTES: A STUDY ON ALLEYS OF BUKIT BINTANG, KUALA LUMPUR.

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ABSTRACT

Alleys have been part of Kuala Lumpur's urban form and an integral part of its landscape infrastructure for centuries since the 1900s. Until now, the urban form is synonymous to danger, filth, waste and crimes, unappealing to the public; due to underutilization and the lack of proper regulation to ensure efficient use of the urban corridors. The interest in rejuvenating the alleys is rapidly increasing, however, literatures and studies on the subject are evidently lacking. The study follows the guiding question of how to improve the use of alleys in Kuala Lumpur as transitional space and / or social space. Accordingly, the study investigates the current condition of alleys in the city, factors that impact the functioning and its role and characteristics as part of the street network hierarchy. These findings discuss walkability and alleys' significance in the urban fabric as the key assets to public vitality and communal activity in Kuala Lumpur, creating 'city pockets' – collective interaction space in experiencing the city. Focusing on understanding this interstitial space and its potential, with hopes to improve the spatial quality of the city, the study aims to identify the elements that influence the use of alleys by mapping, documenting, and recording the current status of alleys and user responses. The study pays particular attention to physical characteristics, and personal and cultural dynamics, which will ultimately affect the use of alleys in Kuala Lumpur and presents tools and approaches in design strategies to facilitate richer levels of social interaction and place making for urban planners, designers and architects. The improved maze-like network of the alleys would present new opportunities not only to the locals in regaining their sense of place and community, but also to the travelers and tourists who seek to explore the city.

Keywords: alleys, underutilized space, public vitality, city pockets, interstitial space.

INTRODUCTION

As Kuala Lumpur progressing towards building a better city, its pedestrian network unfortunately continuously decreasing in quality and quantity. The attempt to transform Kuala Lumpur into a mega metropolitan city, results to the construction of new institutions and tall and big complexes which created many small and narrow lanes between the buildings- the interstitial space, the gap between buildings- but remained neglected and unused. Instead of utilizing these pocket spaces for urban growth, they become the unnecessary elements for pedestrians; either to pass or stay for activities. In this research, an alley is seen as the 'city pockets', where the social values and local cultures shine through. This maze-like network of narrow lanes is the intimate place to understand the city's history, story and values as how the local authority, Kuala Lumpur City Hall (DBKL) highlights as; *"It might seem unimportant but it does play a big role as it portrays the image of a city, society and civilization of a nation."* (Arkib Negara, Dewan bandaraya Kuala Lumpur and Malay Mail, 19/02/99)

An alley is understood as the narrow path, passageway or lane that usually runs between, within or behind buildings in cities or towns (Oxford Dictionary, 1989), and often used by both pedestrians and vehicles. Considered as the minor roads in the street nomenclature (Beirao, Montenegro, Gil, Duarte, Stouffs, 2009), and in addition of mostly being at the furthest from where the front façade is, it provides a rear access to the buildings and act as the intermediate zone (Kurokawa, 2006) between places (macro-scale) and the interior with the outdoor environment (micro-scale). Alleys provide a boundary that describes the geographical lines and develops the perceptions, psychological and envisaged relationship between various social groups living in unison within the urban setting (McQuire & Niederer 2009), and not only reflects the environment of the context but also other influences like cultural, activity and demographic.

In the recent years, there is an increase of studies on alleys in Malaysia, but most of the discussions are looking at alleys at a micro-level. The analyses are restricted to its limited boundary, and many of the projects done aim to develop alleys as separate, individual development. But very few discuss the topic on the macro-scale; alley as a full network that forms within the city, from the socio-physical perspective. Alleys in Kuala Lumpur claim approximately 55% of the city's footprint. However, there is no current record of the alleys' state and conditions, or any kind of feasibility study on alleys in Malaysia. Furthermore, being a multi-cultural country, there is a necessity to understand the effects it has to the psychology and perceptions, physical elements and social interaction within the complex network of communication in spaces. There have been no studies that analyze the alleys from these perspectives. The outcomes of the study should allow us to understand the potential and future of alleys as an active part of everyday urban life, in addition to its functions as a travel route in exploring the city by incorporating alleys with other networks in the grid.

The motivation of this thesis initially comes from the experience of working with the local authority and having extensive arguments with colleagues within or outside the department on certain regulations related to back lanes and alleys. Further reading of other sources solidifies the interest and need in understanding this underappreciated urban form. Alleys have been

around for centuries and it has been part of the urban morphology in any part of the world for big and small developments. In Malaysia, these narrow roads between rows of buildings are commonly viewed as where the dangerous and dirty things are. Although they have existed for at least a thousand year, they too have been neglected for that long (Federal Department of Town and Country Planning Peninsular Malaysia (DTCP), 2010). In European and some East Asian countries however, alleys are a kind of traditional form of urbanism, consciously arranged and designed as linkages and connections of places and spaces (Kostof, S., 1992). Case studies of the countries that shows good example of the usage of alleys could help the research in grasping the idea of re-defining the small streets and using it as the means in improving the pedestrian flow in Kuala Lumpur.

Taking from New Urbanism in the 1980s, which puts pedestrianism and community as the values to reinvigorate neighborhoods (French, 2011), the importance of the often-neglected small passages, laneways, small streets and alleys in urban city growth are advocated in many studies and research. The interest of studying alleys and laneways in urban planning is increasing drastically worldwide (Kakimoto, 2013), with governments and authorities launching projects and plans to re-activate alleys in their cities. Students and professionals alike, begin to explore ways to improve the utilization of the urban form.

With an estimated population of 8.6 millions, Kuala Lumpur was listed as the top ten of the most dangerous cities in the world (Trip Advisor, 2012) due to the poor walkability state and the increase rates of crimes. There are about 35,000 recorded street crimes every year, and Kuala Lumpur being in the top four states accounted for 70 percent of the street crimes in Malaysia (PDRM Index Crime, 2009), with alleys being one of the favorites spots for property and street crimes. The problems of alleys in Kuala Lumpur could be categorized into two levels; the immediate and the higher level. The immediate problems include underutilization, poor connectivity, unsafe environment, and lack of planning and management, which result in the problem at the higher level; the city's walkability and sense of place.

In this study, alleys are defined as urban streets that fulfill three criteria; 1) located on the side, between or at the back of the building (not just the back-alleys), 2) its size is narrower than 6.1 meters with minimum size of 3.048 meters (Fire Brigade Services Act 1988 (act 341)), and 3) it does not provide primary access to more than half of the buildings alongside. These three criteria are the important factors that differentiate alleys and streets in the context of Kuala Lumpur despite some of the streets in the city are named as 'Lorong', which directly translates as 'alley'.

This paper will present the literature review on alleys in Malaysia, through history and other papers that have studied alleys (both Malaysia and globally). The focus of the paper and research, including information on the study area will then be discussed before explaining the methodology to achieve the result and data of the study.

LITERATURE REVIEW

With the changing landscape of planning, and housing development become more compact and dense, alleys are steadily eliminated from the designs. Today, alleys are used for the "messy chores" (Langdon, 1994; pg. 157) of changing oil for cars and other "ills of streets" (Martin, 1996; pg. 143). Vehicles replace the people, and the spaces that use to be alive and vibrant with activities are now functioning as additional storage (for goods and vehicles). Lynch (1990) uses the term "wasted space" (pg. 102) with positive connotation to refer to alleys as the outdoor spaces that allows "exploration" and "adventures" but most of the new development promotes social activities to be encouraged at the front street instead, taking away some of the social functions of alleys (Martin, 2001). However, Hage (2014) argues that with New Urbanism and the current community design trend, the alleys uphold the role of a community space, and gradually gaining recognition as an important factor in urban prosperity (UN Habitat, 2013). Due to the history and unique cultural character, some alleys become, in their own right, a destination and landmark, in example the 'blue' alleys in the province of Chefchaouen in Morocco and alleys in Ping Yao, China that run along the ancient walls and the medieval market lanes. Apart from alleys regaining their historic function, The Green Alley Movement, which started in Chicago as one of the solutions to its periodic flooding, introduces a new use for alleys from the environmental perspective. Plants and greeneries are carefully planted in the alleys, and furniture, materials and ecosystem are thoroughly designed. These efforts are not just for aesthetic purposes but also for ecological, sustainable and public health goals (Newell, Seymour, Yee, Renteria, Longcore, Wolch, Shishkovsky, 2011).

In Eastern countries like Japan, similar to the North America's "alley dwellings", the Japanese residential alleyways, *roji* is a place where people actually live in (Imai, 2009). In contrary to the western counterpart, which related to social segregation (Martin, 1996; 2001; Borchert, 1980; Beasley, 1996), *roji* were the result of the high population of people and buildings in Japan. The densely crowded accommodations were planned in a manner where there is little distance in between the dwellings (to ensure maximum use of land), creating narrow laneways that sustain the 'life' of community in the neighborhood. Similarly, other historic alleyways in Eastern Asia like *lilong* of Shanghai (Arkaraprasethkul, 2010), *golmok* of Korea (Bharne, 2013) and *hutong* in Beijing (Heath, Tang, 2010) functioned as the thoroughfares in their compact development and gathering places for the residents. The alleys are the cores of community life; with businesses and trades lined up along the alleys and the narrow streets are the connectors to other important public buildings (temples, monasteries, etc). In present day, many of these alleys still exist in their respective cities, recognized and cherished as cultural heritage that presents branding and identity of their culture.

Alleys as the Transitional Capillaries

As cities around the globe continue to develop and influenced by modernization and globalization, the subject of pedestrianism remain a major concern in an effort to make cities fit for humans and their need to move and travel. Streets and alleys are, conceptually and practically, the predominant features in channeling these movements.

In architectural practice, transitional space is often associated with spaces that connect the internal of a building with the outdoors, but the expression 'transitional' in a macro-level is synonymous to the general purpose of streets and alleys;

accommodating and facilitating movements from one place to another (Government and Welsh Assembly, 2007). Researchers use various terms when referring to transitional space, with mostly describing it as half or semi spaces, the middle areas (Chun, Kwok, Tamura, 2004) and the intermediate zones; and these descriptions illustrate the characteristics of liminality and the transient role of streets. Christensen and O'Brien (2003) suggested that the liminal quality of streets and alleys allows these intermediary spaces to be considered as transitional space, and not just limited to the tangible (physical) aspects but also in the abstract (intangible) manner. The presence of various cultures, beliefs and lifestyle which are manifested by the surroundings permits the users to be absorbed in the syncretism and experience the multiple transition while moving through the space.

Alleys as the Ordinary Social Space

A social space refers to the public spaces that is accessible and open to people, and a space that allows "companionship" and "association", a place for "friendly gathering" (Etymology Dictionary). Streets and alleys, in a way, are the main public space of the cities (Jacobs, 1961). Numerous designers and planners believe that streets should function as the place of interaction that generates exchange and interests between users (Jacobs, 1993, Haas Klau, 1999, Mahdzar, 2008) and go beyond its disposition as travel conduits. Unfortunately, unlike how the streets and alleys used to be treated in the past, presently, people made no effort to change and connect with these intermediate spaces to create social links outside their dwelling units. Gehl (2011) listed three types of activities that occur in between the buildings; necessary activity, optional activity and social activity. And these activities are what encourage people to move and to explore the streets and use the outdoor spaces.

It is also interesting that Mehta (2010) liken streets and alleys as the 'third place', where informal social gathering happens and serving the purpose as the 'anchors' of community life and a place that offers wider and more variety of interaction, which a home and office place can't offer (Oldenburg, 1999). Often third places are cafes, restaurants, community centres, etc. as it is widely perceived as related to businesses, but the emphasize on place making and sociability (Mehta, V., Bosson, J., 2010) in creating these places should present an opportunity of looking at alleys as the third place itself. In this thesis, the notion of third place as a 'breathing' escape place; that is personal yet seeking social interaction with others (Crick, A., 2011) is the key element in making alleys as the common, ordinary social space of the city.

Alleys in Malaysia

Historically, the streets in Malaysia has always seems to be wide in size (Gullick, 2003), with rickshaws and stalls lining up in between the buildings. This is the result of the earlier settlements (before 1875) being planned with market as the focal point and houses and small shops then built on each side of the market space. Although the streets then gradually getting smaller as the town becomes denser throughout the years, due to the rebuilding of a healthier and safer Kuala Lumpur in 1886, "the streets are widened, metalled and drained" (Sir Frederick Weld, October 1886). Therefore, it is not a surprise to see that the current streets in Malaysia that are named *lorong*, which directly translated as alley or lane, are mostly bigger than the conventional alleys (fitting into the definition of "narrow" and "small" lanes). Some of these *lorong* are considered as secondary streets and most of them share the same characteristics of main streets in terms of size and function (prioritizing vehicular use). With the increase of building density, the lanes are getting narrower and Malaysia adopt a new term for these smaller, tertiary streets; *lorong belakang* (back-lane), describing all narrow lanes that run in between the buildings, branching out from the main and secondary streets. And these smaller, hidden capillaries usually goes unnoticed and unnamed.

In the context of Malaysia, alleys have always been viewed as problematic and unnecessary spaces (Tawil et al., 2013), but its existence is inevitable, as local authorities demand these back-lanes to be allocated in all types of development (Road, Drain and Building Act, 1974 (act 133)). However, despite all the complaints and negative perceptions, this urban form has been part of Malaysian urban landscapes for centuries and is needed to connect places in the city, to establish interactions within community and to express the local identity in Malaysian context.

Local authorities are starting to acknowledge alleys as an important landscape in urban life, and various efforts (i.e., forums, talks, seminars, competitions, etc.) have been conducted in the attempt to spread awareness and initiate discussions among urban designers, planners and architects. Walls are decorated with murals and street furniture (including service amenities) is painted with street arts, hoping to improve citizens' perception of alleys and back lanes. Numerous efforts are attempted by local governments in rejuvenating alleys in major cities through activity or purposes, with its most notable achievement being the art alley in Georgetown, Penang, and the use of alleys in spreading awareness, resonating histories, promoting eco-life, educational trivia and endorsing local artists in Kuala Terengganu's Chinatown alleys. These are some of the good examples of alleys' makeovers. These endeavors go beyond just beautification effort and attempt to establish communication and dialogues, which from general observation, seems to receive positive responses. These examples imply the possibility of reviving alleys in Malaysia as social space that encourage interactions and branding identity to develop the sense of place (Hernandez et al., 2007).

Unfortunately, there have been very few and minor efforts been done in the capital of Malaysia, Kuala Lumpur, despite being the heart of the country and considered as one of the significantly booming cities of South East Asia, and this might be the effect of the local authority's regulation. According to the Back-Lane regulation (JPBD, 2012), the Department of Town and Country Planning (JPBD) describes alleys as service lane as the main function. However, in reality, the alleys are still used as social space (Martin, 2002) especially when there are activities that encourage interaction. The ubiquitous 24-hours "kedai mamak" (*mamak* eateries) lined up plastic tables and chairs on streets and alleys during the night, and some 'luxury' ones have big tripod screens to project movies and football matches. Furthermore, the episodic "pasar malam" (night market) scene and small stalls become the factors that also influence people to use the alleys. This raises the question of how do the citizens actually value and view these interstitial spaces in their daily life?

Urban planners and sociologists believe that understanding the residents' attitudes and perceptions towards alleys is one of the first steps in improving the urban form (Seymour, Bradbury, Wolch, Reynolds, 2008), hence the many studies that have been done in both small and big cities around the world to assess the community's perceptions on alleys and its conversion. Unfortunately, the literature available in relation to Malaysian context and user perceptions is insufficient to almost none, with most of it addressing streets and not alleys in particular.

Furthermore, Wheeler (2004) stresses that physical planning and development are crucial in order to provide better street network and to improve community daily life around the streets. Pleasant streets and alleys enhance the sense of community and sense of place, which in turn will improve the walkability in any part of the city. The street network helps to ensure efficiency in movements by providing link points of interest and activity, clean lines of sight and travel, and wayfinding elements (Marc, 1998); offering alternatives and choices. The 5Cs of attributes to utilize streets in encouraging walking and use; connected, convenient, comfortable, convivial and conspicuous, (Gardner et al., 1996; Elbially, 2013; Refaat and Kafafy, 2014) outline the importance of street and physical planning when aiming to create a walkable community by prioritizing pedestrians' needs. With streets and alleys being the determining element of intra-city connections, their planning and designs, with the focus on the activity surrounding and along the alleys are important in urban planning strategies.

OBJECTIVE AND STUDY AREA

The research for the paper focuses on investigating the alleys in Kuala Lumpur with an aim to make them safe and comfortable public spaces for people where it offers pleasant experience for the users. According to Jan Gehl (1996), while buildings provide boundaries, which help to determine space, it is the presence of people, activities and inspiration forming one of the most influential qualities of urban space. Cities, which are lacking in this particular aspect –the relationship and interaction between buildings and humans – become a dry and cold place to experience. In this paper, the study builds on the focus of improving the relative functions of alleys; transitional and social space. These uses support activities and movements that include, but not limited to, transient movements and stationary and lingering activities in the space.

The general aim of the research is to improve the use of the alleys as an everyday urban landscape in the city, in both as its use as transitional and social space. It is an empirical investigation of the elements that influence pedestrians and community in using the alleys in cities. The key question is: *What are the elements that help enhance the use of alleys in supporting movements and social activities?* The paper specifically focuses on investigating the current condition and how the citizens are using alleys in their daily life.

The research was done in one of the areas that have the highest concentration of citizens and activities in Kuala Lumpur City Centre, Bukit Bintang. There are a total of 92 streets in Bukit Bintang and takes up to 35% of the area's footprint. With a high number of alleys in the area (52 alleys), 56.5 percent of Bukit Bintang public capillaries are alleys, and this highlights the importance of using alleys efficiently to provide better quality of city's life.

Figure 1: The Builts – Streets – Parks / Plazas Footprint of Bukit Bintang



	Builts	Streets	Parks / Plazas
Bukit Bintang, Kuala Lumpur	64%	35%	1%

METHODOLOGIES

This paper combines observation of the alleys' current condition and survey questionnaire on the users' relationship and perception on alleys. 24 alleys were selected out of 52 alleys based on Karl Kropf's Route Structure Analysis (2008) that categorizes the streets within an area in relation to the provision centres. Streets in Bukit Bintang were categorized and 24 alleys were chosen to ensure a fair amount of each routes are represented and studied (Tabulated in Table 3). Figure 2 shows the RSA routes of Bukit Bintang and the selected alleys. There are seven types of routes, as seen in Table 2.

Table 2:RSA Routes and Descriptions (Rines, 2014)

Route Types	Description
SUPER-STRATEGIC	Long distance routes connecting many centres tangentially
STRATEGIC	Routes with a centre on both ends
SEMI-STRATEGIC	Routes with a centre on one end and route on the other
SECONDARY-STRATEGIC	Routes with any type of higher strategic route on both ends
THOROUGHFARE	Routes connected on each end to different routes
LOOP	Routes connected on each end to the same route
CUL-DE-SAC	Routes connected on one end

Figure 2:RSA Routes of Bukit Bintang and the Selected Alleys



Table 3: The Selected Alleys based on RSA Routes categorization

	<i>Super-Strategic</i>	<i>Strategic</i>	<i>Semi-Strategic</i>	<i>Secondary-Strategic</i>	<i>Thoroughfare</i>	<i>Loop</i>	<i>Cul-de-sac</i>
Overall Alleys	0	0	10	6	21	0	15
Selected Alleys	0	0	6	3	9	0	6

The selected alleys then were observed for two weeks on the same time every day, both weekdays and weekends, for 15 minutes. An 'Observation Form' was used to note the surrounding context, the inventory of the physical settings, the condition of the alleys and its features, and the behavioral of the users when using the alleys. This allows the researcher to investigate the number of users, the current use of alleys and the overall state of the space and its attributes.

The second phase of the research involves a structured survey questionnaire with the users. The respondents were chosen randomly and were asked to participate in the survey questionnaire in order to assess their relationship with the alleys and their perception towards the alleys in the area. The survey questions consists of four sections; 1) respondents' personal information, 2) relationship with the alleys including the frequency of using the alleys, how they use it and factors that influence the use or lack of use of alleys, 3) perception on the alleys regarding their impression and alleys as social space, and 4) rating the statements that best describes their impression on the alleys. A total of 40 respondents were asked, and 24 survey questionnaires were used in the analysis, excluding the visitors who would have limited experience with the alleys in the area.

DATA AND ANALYSIS

Generally, alleys are moderately used every day, with an average of 73 people using the alleys during the day in 15 minutes of observation, and an average of 61 users in the evening to night. Out of the 24 alleys, only 2 alleys are categorized as not being used (Table 4), with no obvious trace of activities, and no recorded users. The alleys are used for service place, garbage place and access – either front or rear access, true to its intended function. However, there are some alleys that are well used for eatery, vendors and open space where people can just sit around and interact during their break or free time. It is noted that the density of people in the surrounding areas that are connected to the alleys are mostly medium to very high (both vehicular and pedestrian), which could be a contributing factor in generating traffic into the alleys. Gehl (1996) believes that in general, areas that have high concentration of people, activities and movements provide opportunities for the streets and alleys around it being utilized.

Table 4: Current Use of Alleys

Current Use	<i>Parking</i>	<i>Front Access</i>	<i>Rear Access</i>	<i>Eatery</i>	<i>Vendor</i>	<i>Garbage Place</i>	<i>Open Space</i>	<i>Storage</i>	<i>Service</i>	<i>Not Used</i>
No. of alleys	17	3	14	3	1	12	2	5	16	2

Although the majority mentioned they rarely use alleys (41%) compared to 27% that use the alleys 2-3 times to everyday (figure 3), most of the respondents agree that alleys are beneficial to their daily life routine and that they do see potentials and advantages in the liminal space (table 5). They find that alleys are mostly beneficial in that it helps them to "save time" by avoiding traffics and "can minimize the usage of time to go from a place to another". The idea of "time-saving" was also mentioned both as one of the main factors in safety and comfort in using alleys "especially when you know exactly where you are going and which alleys to use". In addition, connectivity is another frequently mentioned benefit as the users described alleys as "great for shortcuts" as the streets-alleys connectivity helps shorten the distance between places. Connectivity and accessibility are the two aspects that the UN Habitat (2013) has listed as important factors that could improve walkability of a city through streets and alleys.

Figure 3: Frequency of Use

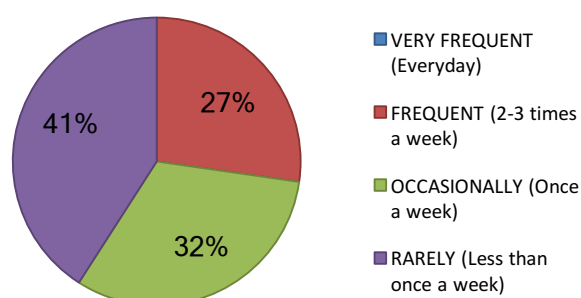


Table 5: Q11. Benefit of Alleys

Does the Alleys Benefit You In Any Ways?	
YES	13
NO	1
UNDECIDED	8

Based on the user's responses, it is not a surprise to see that most of the alleys in Bukit Bintang are used as transitional space; 11 out of 24 alleys, compared to 3 alleys for social use and 5 for both social and transitional use (Table 6). This data also corresponds to their description of use where it is mainly treated as shortcuts; for both walking (71%) and driving (62.5%). The respondents then listed safety (8) as the biggest influencer in the decision of using the alleys, while other factors included are connectivity (5), time-saving (3), crime (3), and a mention of wayfinding element (1) and familiarity with the area (1). 2 of the respondents also agreed that having eateries and night markets in alleys and streets is one of the reasons that makes alleys desirable as a point of destination to be explored. However, it is usually the issue of cleanliness and hygiene that becomes the setbacks of truly enjoying the environment of alleys. All of the factors pointed up by the respondents are the factors that various studies have argued as important not only in improving walkability but also establishing branding and a "third-place" for the people in the city (Mehta, 2010), which is a possibility for alleys in Kuala Lumpur to "play a significant role in contributing a lively neighborhood" (Ismail, Ching, 2016) in the future of the city.

Table 6: Types of Alleys & Average Number of Users in A Week

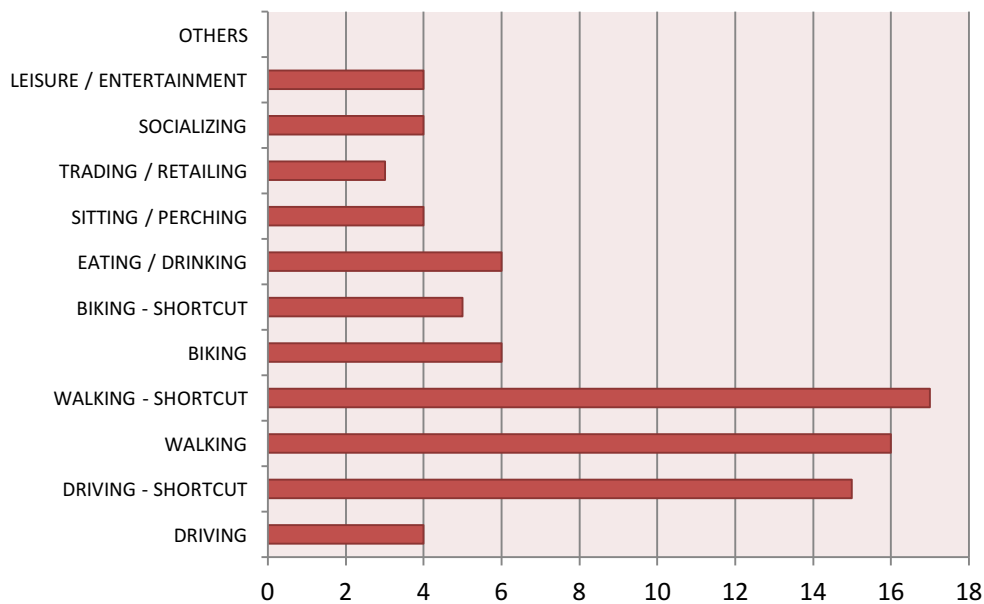
Types of Alley Use	Transitional	Social	Both	None
No. of alleys	11	3	5	5
Ave. no. of people in 15 min / a week (Day)	740	370	599	58
Ave. no. of people in 15 min / a week (Night)	703	362	505	31

When asked about alleys as potential social space, 59% disagree by citing cleanliness and safety as the main reasons for its unsuitability. Words like "dark", "scary", "dirty" and "smelly" are often used to describe the alleys in the area, which is understandable, as there are only 4 out of 24 alleys that are well lit and properly maintained, while the other 20 alleys present visible problems such as; the absence of lighting, bad condition of curbs and other amenities, dirty garbage place, the treatment of its façade, and many more.

However, there are 5 respondents that mentioned the potential of alleys based on other examples of successful rejuvenation projects in Melbourne and Japan that made them believe the importance of maintaining alleys in Kuala Lumpur. Another user alluded that having a variety of activities could bring in more people in the alleys, and in turn, making alleys an important space in city's landscape. The relationship between activities and the use of alleys and streets in Kuala Lumpur was studied by Wong (2011) in his study of walkability and community identity in the city. He concluded that during certain times in a year, the streets and alleys of Kuala Lumpur became crowded and favourable for celebrations for weddings, and cultural and religious festivals. It is also advantageous, in some ways, that most of the city's building use is a mix of residential and either retail or commercial. This allows various possibilities in flexibility of time, activities and place.

Furthermore, when looking at the users' description of use (Figure 4), even though most people use it as shortcuts and for moving around, the alleys still have quite a variation of use, especially other lingering activities (socializing, leisure, eating, trading, sitting, all have around the same number of more than 12% of mentions). This shows that alleys in Bukit Bintang have the potential of being utilized more when there are an increase in activities and functions, especially with the existing high density of people using the streets around it.

Figure 4: Description of Use



Moreover, it is interesting to note that 41% of the users have positive impression on alleys despite the fact that 50% of them rated 4 to 5 on the safety of the interstitial spaces in the area. This could be because most of the safety related issues mentioned by the users are associated to the insufficient infrastructures like lighting (8) and lack of people and activity (underutilization (7)) – a problem related to development and planning itself, which could, and should, be improved for the benefit of the city's landscape and citizens' quality of life.

The passive attitude towards the care of alleys, with no coherent public policy on design and use, leads to alleys being treated lightly by citizens. This allows illegal parking, illegal building extension, poor garbage system and improper food stalls lining up in the alleys; obstructing the path, making the service lanes no longer usable and efficient. Since it is not subjected to any scrutiny regulations (Wolch, 2010), unlike the front façade, alleys are facing problems in regards to the aesthetic treatments, hygiene and safety aspects.

This highlights the importance of involvement by the authority and local councils in revitalizing and maintaining alleys. From the observation, it is shown that most of the alleys are used as parking space, mostly illegally, with only 6 out of 24 alleys not used as such. None of the respondents mentioned this as a problem or disadvantage but it could be a problem for service planning like garbage and waste management system and possible hindrance in emergency situations (Figure 5(a)). For the alleys that have high pedestrian and vehicular use, the illegal parking forces the pedestrian to use the alley dangerously, with or without proper curbs and other amenities (Figure 6).

Figure 5(a): Alley 9 – Illegal Parkings. Figure 5(b): Alley 17 – Shading Elements.



Being a tropical country with hot and humid temperature throughout the year, weather condition plays an important factor in improving walkability in Kuala Lumpur (Wong, 2011). In the two weeks of observation, it shows that weather does affect the use of alleys, especially for pedestrians (Clark et al., 2013). Most of the alleys in Bukit Bintang provide good shading due to the average height of the buildings along the alleys being 7 – 21 meters (2 to 5 storey high), giving the streets the height-to-width ratio of 3:1 and 2:1 (Figure 7 / Table7). But when it is raining, people tend to avoid using the alleys because there are almost no shading elements for the alleys and pedestrians (Figure 5(b)).

Figure 7: Height-to-Width Ratio

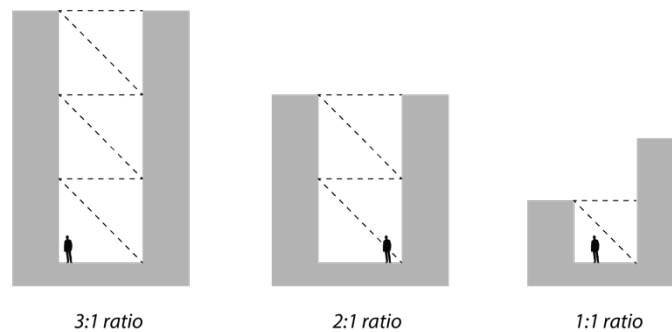


Table 7: Height-to-Width Ratio

H/W Ratio	3:1	2:1	1:1
No. of alleys	10	9	5

DISCUSSION

With the general negative notion associated to alleys in Kuala Lumpur, it is surprising to see that alleys are already seen and used as part of the city life, with people currently using it both as transitional and social space. The study shows that alleys are widely used as transient space regardless of the conditions or absence of proper curbs, safety issues and hygiene problems. Eateries are sprawling in the alleys, offering social activities and interactions in the small and hidden routes of the bustling city. They see it as beneficial even with the bad condition of alleys, but needless to say, cited improvements needed. This presents ample opportunities for future development.

Evidently, observational data shows that problems arise in the alleys are stemmed from mostly development and maintenance issues. Poor maintenance regarding waste management system and inadequate infrastructures like street lightings are the core reasons that create more problems and accumulative negative perception. Furthermore, underutilization is both a problem and the factor mentioned that prevented the respondents from using the alleys. The lack of people on streets and alleys are limiting the “eyes on the streets”, eyes and ears that are considered as ‘natural surveillance’ (Jacob, 1993), where it could be the cause of problem that invites crimes and unwanted activities that pose threats on the safety of the alleys.

The lack of regulation enforcement on these intermediate spaces could affect the efficiency of the intended function of alleys as service and emergency lane. When problems such illegal parking are overlooked, other complications could arise; the cars potentially blocking the fire escape routes, creating additional hazards or obstructing entry for police or fire trucks in time of emergency. Alleys in Kuala Lumpur have been categorized specifically to be used for service purposes, but without proper supervision from the authority and those responsible in ensuring maintenance and care, alleys could not function as it should be, and more. It is also a question to be asked if the functions of alleys should be reviewed to give more opportunities in developing the alleys in the future, and giving more power and force for the designers to treat alleys as part of city’s urban fabric.

Alleys, like all spaces, often evolve in time and unintentionally express the cultural values and needs of the surroundings (Martin, 2001), but alleys in Kuala Lumpur remain stoic and cold due to many factors. The obsession with frontage and facade is evident where main streets are vibrant with cultural references and community identity, but alleyways are left dark and unlively. Project for Public Spaces argues that aesthetic factor is essential to attract people to use the alleys and make them stay for a period of time. They proposed that details and interesting features on alleys and streets are important in aesthetic appeal, and that the physical elements and features that provided on the streets could be this stimulus, including the urban furniture. The respondents did mentioned the insufficiency of public amenities in alleys and 86% of them rated 4 to 5 on alleys’ aesthetic, which affects the ability to encourage interaction, hence it is understandable that Sinnet et al. (2011) used and proposed street

furniture as one of the strategies in reviving Britain's streets and creating high quality public realm, and Akkerman (2006) believes that the impact of infrastructures and amenities in the streets in making the space interactive and creative is profounding. These stimuli would attract activities, in which Mahdzar (2008) suggested static activities as a necessity in allowing communication, not only between people but also with built environment, the physical design. These subtle but significant activities are empirically important (Whyte, 1980) as it forms a sort of familiarity and comfort on the streets. Also, by having pedestrian friendly streets and alleys, Shimitz and Scully (2006) believe that it will help shaping citizens' lifestyle in relation to public health, sustainability, economy and social life, which in turn results to the improvement of quality of life in general.

Alleys used to be an important locus for social activities (Hess, 2008) but with the absence of identity and sense of place, it is challenging to invite social interaction, thus devaluing these spaces as an isolated entity, separated from the community (Rios, Watkins, 2015).

CONCLUSION

The usability of alleys in Kuala Lumpur is declining in time and, although the users of alleys see benefits and potentials in alleys, people in general – including the authorities – still view these liminal spaces as irrelevant. It's significance as part of the urban landscape is fading and in turn, it affects both the quality of life and the image of the city. Although the local council provides regulation for alleys, it is arguably clear that authorities are lacking proper planning and visions concerning the urban form. Some argues that challenges faced by streets and alleys in Kuala Lumpur originate from issues with city planning itself (Tedong, Aziz, Hanif, Ahmad, 2008), with uncontrolled commercial activities, poor planning and inadequate guidelines regarding alleys and its maintenance. These alleys are valuable community assets but without proper policy, the city is missing out on the potential and benefits that these urban form can offer. In particular, issues of lacking amenities and public services, improper paving and poor maintenance (Mahmoudi, Ahmad, Abbasi, 2014) contribute to the deterioration of quality of the alleys.

In line with the Kuala Lumpur City Hall vision of Greater Kuala Lumpur / Klang Valley 2020, in the chapter of Entry Point Project (EPP) 8: Creating a Comprehensive Pedestrian Network, this research hopes to provide information that would aid the urban designers in planning the metropolitan. It is worth to mention that Malaysia is seeing an increase in awareness regarding back lanes and its significance, as seen through some efforts to beautify and keeping alleys alive, as in cities like Penang and Ipoh. However the pedestrian flows have not changed much. This thesis seeks to develop a way of revitalizing alleys by understanding the pedestrian movement behavior in Malaysia.

The government also outlines the urgency of upgrading urban public transport (EPP 6) in Kuala Lumpur and this is an opportunity for the research to assist the effort. Understanding the pedestrians' pattern and behavior and how to influence them could support the study in improving the pedestrian network. And that will in turn help in achieving the EPP 6.

Furthermore, this research could provide several future research opportunities. It could be used for other Malaysian cities (e.g., Johor Bahru, Kuching, Georgetown, etc.) and lead to other founding and urban studies. Additionally, other countries in Southeast Asian region that shares similar traits and urban characteristics (e.g., Jakarta, Singapore, Bangkok, etc.) could also present interesting new perspectives when using the research in a different setting.

The aim of this thesis is to understand the reasons of current problems, both physically and socially, with the intention to improve the use of alleys in a multi-cultural context (Kuala Lumpur), through the investigation of their relative roles of transitional and social space. This will help to identify the strategies that would be the base for future development and aid policy makers, planners and architects in designing humanistic spaces in between the buildings. The study looks at physical elements, perceptions and cultural dimension as aspects that influence the use of alleys. It is acknowledged that the study

The success stories of cities like Melbourne, Toronto and Tokyo that use these residual urban spaces in improving the economic, community life and social value; demonstrate the potential of alleys in revitalizing the cities (Wolch, Newell, Seymour, Huang, Reynolds, Mapes 2010). Further studies are needed to look into the strategies and policies that would help designers, architects and planners rejuvenates the alleys into functional urban space that can significantly improve the walkability and social life of Kuala Lumpur.

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