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The Pedestrian Bridge as Everyday Place: An Urban Reference of Placemaking in High-density Cities

2017

PhD

1999–2020 THESIS SHOWCASE

Hong Kong is a city of footbridges in which pedestrian bridges accommodate diverse cultural and recreational activities and commercial urban programmes. This research reveals and examines the mechanism of everyday placemaking in Hong Kong's high-density context and develops a framework of necessity and sufficiency for placemaking. Regarding the findings from an empirical study of pedestrian bridges in the Mong Kok District of Hong Kong, the study formulates the design and management strategies of everyday placemaking. A framework on performance-based placemaking strategy is proposed that clarifies the roles of designer, planner, regulator, and ordinary everyday user in the process of placemaking. Ultimately, this thesis provides a systemic analysis of the concept of "pedestrian bridges as everyday places" in a high-density urban context.

School of Design,
The Hong Kong Polytechnic University
PhD 2020.

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THE PEDESTRIAN BRIDGE AS EVERYDAY PLACE:
AN URBAN REFERENCE OF PLACEMAKING IN HIGH-DENSITY CITIES

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Ph.D

The Hong Kong Polytechnic University

2017

The Hong Kong Polytechnic University
School of Design

The Pedestrian Bridge As Everyday Place: An Urban Reference of Placemaking in High-density Cities

WANG Weijia

A thesis submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy

June 2016

Certificate of Originality

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_____ (Signed)

WANG Weijia

Abstract

Pedestrian bridges are urban infrastructures that are primarily used to segregate pedestrians from vehicular traffic. Many pedestrian bridges have been constructed in high-density cities such as Hong Kong, where they are essential to the daily lives of the urban population and have become a new form of everyday urban place accommodating various daily activities. People from diverse backgrounds use the pedestrian bridges as everyday places that meet their specific urban needs.

The oldest pedestrian bridge in Hong Kong is Bowen Road Footbridge, constructed in 1942, and since then 1,214 pedestrian bridges have been completed, as of March 2015. Hong Kong is a bridge city, both physically and metaphorically. The bridges span different terrains and move large numbers of people. They accommodate diverse cultural and recreational activities, and/or commercial urban programs, rather than simply being segregation infrastructures for urban traffic crossing. Intuitively or intentionally, individuals consider and make pedestrian bridges their own places.

This study investigates placemaking in high-density urban contexts by examining Hong Kong pedestrian bridges. The aims of the research are to (a) reveal and examine the mechanism of everyday placemaking in a high-density context, (b) develop a framework of necessity and sufficiency for placemaking, and (c) formulate the design and management strategies of everyday placemaking.

Both quantitative and qualitative methods are used in this research, but as the dominant/less-dominant data collection approach is taken, the qualitative methods are selected as dominant and the quantitative methods make up a relatively a small component. The research consists of three phases: a literature review, an overall investigation, and a detailed case study. The review prepares a solid foundation for the theoretical discussion

while the investigation into the changing roles of urban pedestrian bridges provides guidance for the subsequent in-depth case study, which is based on a physical survey and intensive observations of daily use of the Mong Kok Pedestrian Bridge in Hong Kong, and investigations into the process of everyday placemaking in high-density cities. The frameworks of necessity and sufficiency, for placemaking and place-led development, are summarized and discussed using the concept of the pedestrian bridge as "everyday place," and an elaborate framework of everyday placemaking is generated by considering the dynamic relationship between micro-scale spatial characteristics and the everyday actions of the urban population. From this framework a performance-based placemaking strategy is proposed that clarifies the roles of designer, planner, regulator, and ordinary everyday user in the process of placemaking.

In summary, this thesis provides a systemic analysis of the concept of "pedestrian bridges as everyday places" in a high-density urban context. The nature of the pedestrian bridge space and the process of everyday placemaking are revealed and examined. A strategy of placemaking is then proposed for designers, regulators, and users. The research methodology used can then be referenced in related urban studies.

Publication, Exhibition, and Workshop Arising from the Thesis

Publications

Wang, W., Siu, K. W. M., & Wong, K. C. K. (2016). The pedestrian bridge as everyday place in high-density cities: An urban reference for necessity and sufficiency of placemaking. *URBAN DESIGN International, 21*(3), 236-253. doi: 10.1057/udi.2016.3

Wang, W., Siu, K. W. M., & Wong, K. C. K. (2015). Pedestrian Bridges and Urban Landscape: A Case Study of Hong Kong Pedestrian Bridges' Aesthetics and Their Effects on the Urban Landscape. *The International Journal of Architectonic, Spatial, and Environmental Design, 9*(4), 35-53.

Wang, W., Siu, K. W. M., & Wong, K. C. K. (2015). Loose Space, Inclusive Life: A Case Study of Mong Kok Pedestrian Bridge as an Everyday Place in a Densely Populated Urban Area. *The International Journal of Constructed Environment, 5*(2), 1-15.

Wang, W., Siu, K. W. M., & Wong, K. (2014). The Changing Role of Pedestrian Bridges in Everyday Urban Life: Case Study of Pedestrian Bridges in Hong Kong. *Proceedings: International Journal of Arts and Sciences, 7*(1), 347-356 (CD-ROM).

Exhibition

Wang, W., & Siu, K. W. M. (2014). An everyday bridge (participate in the exhibition "What is Insurgent Public Space?" curated and lead by Hou, J), video installation catalogue, 11 September - 14 September, Agora 2014: Biennale de Bordeaux architecture, urbanisme and design, Bordeaux, France.

Workshop

Wang, W., & Siu, K. W. M. (2016). New migrants of Shanghai: Place attachment in contemporary urbanization. Workshop of Urban Transitions Global Summit 2016, Shanghai, China. September 5-9, 2016.

(Above papers are generated during the Phd study. Parts of those publications are included in the thesis. Longer sentences and phases are referenced.)

Acknowledgements

My deepest gratitude goes first and foremost to my chief supervisor, Professor Kin Wai Michael SIU, for his generous support and guidance. I especially thank him for great patience on his supervision and constructive advice on my study. His profound knowledge and research experiences significantly have a great influence on my own academic career. I will be forever grateful for his guidance and encouragement not only of my academic work but also of my personal life. I would also like to deeply thank my co-supervisor Dr. Kacey Kwok Choi WONG for his guiding and support. His artistic ways of doing art work and research challenge and inspire me a lot. I will never forget the lessons he taught me to be a creative researcher.

I am sincerely grateful for School of Design, The Hong Kong Polytechnic University who awarded me the stipend of my Phd study and I also specially thank Research Institute for Sustainable Urban Development, The Hong Kong Polytechnic University who supported my workshop during my study period.

I would also like to express my gratitude to Professor Jeff HOU at Department of Landscape Architecture, College of Built Environments at University of Washington in Seattle, US. The three-month attachment and visiting study broaden horizons of my research topic and help me gain international experiences. His insightful guidance and full support enlightened me on reflecting my study in different social cultural background. My thanks also go to Research Assistant Professor Melissa Cate Christ in School of Design, The Hong Kong Polytechnic University. I learned a lot from her professional and research experiences when I worked as her part-time research associate.

Special thanks go to my colleagues in Public Design Lab in School of Design, The Hong Kong Polytechnic University. They always provided me a great and timely help.

Finally, my deepest thanks go to my parents and my wife Elaine Yi LIAN who supported me throughout my research. I cannot do anything without them and I owe them everything.

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CHAPTER 1 INTRODUCTION

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1.1 The topic

In this thesis, an empirical study of pedestrian bridges in high-density cities is undertaken. The concept of pedestrian bridges as everyday places in densely populated urban areas is explored, and their spatial settings, the various ways they are used, and how they are perceived are investigated. The concept of "pedestrian bridges as everyday places in high-density cities" is taken as an urban reference, and from it a paradigm for everyday placemaking is discussed and developed. The focus of the study is to examine the relationship between micro-scale spatial characteristics and the patterns of everyday activities in high-density cities from the perspective of a placemaking mechanism.

One misunderstanding about pedestrian bridges is that they are merely technical elements used to improve urban traffic. The placemaking of pedestrian bridges in Hong Kong is examined in this study to challenge this one-sided understanding. Hong Kong's compact urban forms, diverse public programs, and wide variety of activities make it a lively and uniquely high-density city ideal for the study of everyday placemaking.

1.2 Pedestrian bridges in a high-density city

Due to steadily increasing populations, more densely populated urban areas are emerging globally. Due to the difficulty of expanding city boundaries, the establishment of high-rise cityscapes and compact urban settings make high density urban populations unavoidable. According to Demographia World Urban Areas and Cox (2012), urban population densities range from under 400 persons per square kilometre in North American cities to more than 1,000,000 persons per square kilometre in informal settlements in some Asian cities such as Dhaka. Approximately one quarter of large urban areas have populations densities higher than 10,000 persons per square kilometre (Figure 1-1). Hence, high urban densities vary greatly in different parts of the world (Figure 1-2).

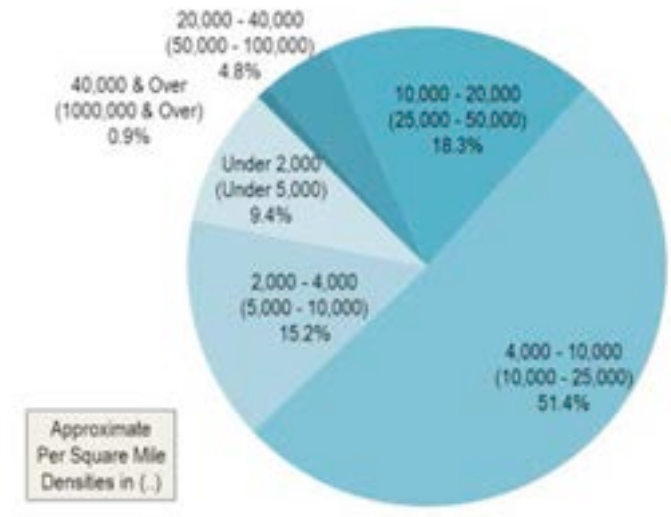


Figure 1-1 World Population by Urban Land Area Density - Per Square Kilometer: 2016

Source: Demographia World Urban Areas

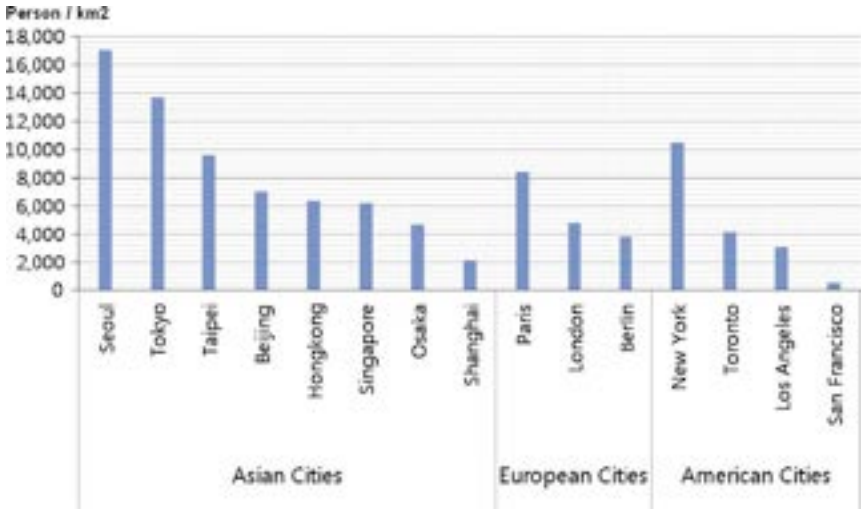


Figure 1-2 Population densities of world cities

Source: (Byun & Kim, 2008)

According to Demographia World Urban Areas and the Hong Kong Government's population fact sheet (2015), Hong Kong's population density as of mid-2014 stands at 6,690 persons per square kilometre. However, the urban population density in built-up urban areas is 25,600 persons per square kilometre, ranking it as the sixth highest densely populated city globally. Mong Kok district, in particular, has one of the

highest population densities in the world with 130,000 persons per square kilometre (Figure 1-3).

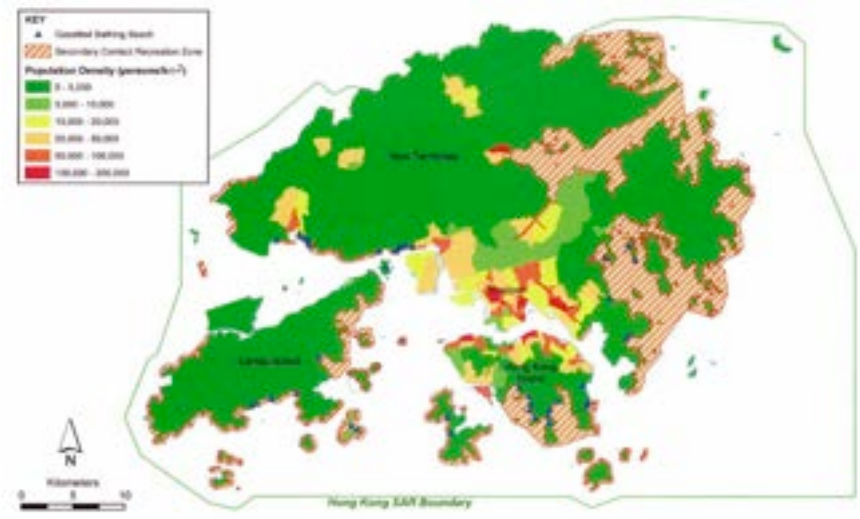


Figure 1-3 Population densities in Hong Kong
Source: Environmental Protection Department 2001, 2002; Census and Statistics Department, 1996

Pedestrian bridges are a type of urban infrastructure used to separate pedestrians from vehicular traffic. They span physical terrains and allow for a continuous flow of pedestrians, improving urban circulation and reducing traffic congestion. Urbanization has rapidly developed over the past few decades, and pedestrian bridges have been constructed in many densely populated urban areas in the Asia-Pacific region, such as Hong Kong, Singapore, Taipei, and Bangkok. Pedestrian bridges play a significant role in urban environments, particularly in high-density cities.

Some high-density cities are considered to be sustainable due to their compact form, vibrant urban activity, and comprehensive and efficient public infrastructure (Jenks, Burton, and Williams, 1996), which are critical in shaping three-dimensional urban spaces that exhibit the qualities of verticality, density, connectivity, concentration, diversity, and complexity (Miao, 2001).

With an area of 1104 km² and a population of seven million, Hong Kong is one of the most densely populated urban areas in the world. From the 1840s, Hong Kong quickly grew from a fishing village into a world-class global city. According to Yeh (2000), Hong Kong's natural topography, historical development, and land policies have led to its high density. Its urban form is mainly driven by "the explosive population growth and land scarcity, and the strategy for urban compaction is the response to the physical constraints on its urban growth" (Zhang, 2000, p. 252). More than 75% of its land comprises of mountainous slopes with no built-up areas, and only 14.3% of the land is developed (Tong, 1997). The government owns the land and controls the supply, leasing it to developers through auction and tender to ensure the highest value (Yeh, 2000; Zhang, 2000). The resulting service-oriented economy is based on the accumulation of capital through service sectors, rather than a land-rich economy based on industry and agriculture (Zhang, 2000). Thus, Hong Kong is able "to direct a higher proportion of its wealth into urban infrastructure and to facilitate the provision of quality services and management. The service-orientated economy makes compaction more feasible than in industrial cities, encouraging urban patterns with workplaces and homes in close proximity, shortening travelling time and distances" (Zhang, 2000, p. 249).

After World War II, the population of Hong Kong increased from 600,000 in 1945 (Mok, 1959) to 6,974,800 in 1999 (HKCSD, 1996, 2000) due to a high rate of natural increase and large-scale immigration. The annual growth rate from 1951 to 1961 was 4.7% (ESCAP, 1974), with a net increase of 1,160,000 in Hong Kong's population. The rapid increase in population and urbanization after the 1960s led to the concept of grade-separated vehicular and pedestrian traffic. Subways and pedestrian bridges, previously used to negotiate the steep terrain, were then developed. The first grade-separated pedestrian bridge was constructed across Leighton Road near Victoria Park in 1963 to tackle the increasingly congested urban space. Since the 1980s, pedestrian bridges have developed from single crossings into an interconnected system of elevated walkways ("Footbridge," 2014). The pedestrian bridges along Connaught Road in the Central District and the

bridges in Wanchai, Mongkok, and Tsuen Wan are all successful examples. As of December 2008, 693 pedestrian bridges ("Footbridge," 2014) had been constructed throughout the city. These are the "product of ever-deepening entanglement between commerce and circulation in a congested urban fabric" (Zheng & Xue, 2014, p. 722).

1.3 Movement spaces (streets) as urban public spaces

Movement spaces such as streets are primarily designed and planned for urban movement and circulation. However, streets and sidewalks are also used as public spaces for relaxing and socialising. Similarly, although primarily constructed for improving urban circulation, pedestrian bridges in high-density areas are also utilised as a form of public space to sustain people's various urban activities and to complement the city's urban functions. Therefore, the study on streets and public spaces lays the foundation and is treated as a reference for studying pedestrian bridges in high-density urban contexts.

Streets can be important types of urban public spaces in a city. They are significant in providing public space. Many scholars have contributed to the concept of "streets as public space" (Jacobs, 1961; Appleyard, 1981; Gehl, 1987; Crawford, 1999). "Streets and their sidewalks, the main public places of a city, are its most vital organs. Think of a city and what comes to mind? Its streets. If a city's streets look interesting, the city looks interesting; if they look dull, the city looks dull" (Jacobs, 1961, p. 29). It is on the streets that people live, travel, relax, and meet each other, and they sustain necessary, optional, and social activities (Jacobs, 1961; Appleyard, 1981; Gehl, 1987; Carr et al., 1993). In urban areas, streets are the most accessible spaces for the general public. "Accessible to all, these spaces constitute public space in its purest form" (Carmona et al., 2003, p. 111). The streets are the urban stage on which "the drama of communal life unfolds" (Carr et al., 1993, p. 3).

Land-hungry and hyperdense, Hong Kong has gradually developed elevated pedestrian streets, made up of the various pedestrian bridges around the city. The bridges are commonly regarded as merely functional technical elements that improve urban traffic flow. Taking the concept of "street as public space" (Jacobs, 1961; Appleyard, 1981; Gehl, 1987; Crawford, 1999) as a basis, it is argued in this thesis that pedestrian bridges are everyday places rather than just channels for urban movement in high-density cities, and examines the uses of pedestrian bridges and their multivariate roles in a high-density city. From this examination a rich and detailed urban reference of everyday placemaking is given.

1.4 Aims and research objectives

This thesis is an empirical investigation of the behavioral responses and attitudes to the physical settings, uses, and management of pedestrian bridges in a high-density city. Starting from the concept of "the pedestrian bridge as everyday place in a high-density city," this study aims to provide a comprehensive understanding of an everyday placemaking paradigm through the consideration of relationships among spatial settings, management, and human activity in a high-dense urban context.

By examining the everyday lives of Hong Kong residents and conducting a case study of pedestrian bridges in Hong Kong, (1) the mechanism of everyday placemaking in a high-density context is revealed and examined; (2) the frameworks of necessity and sufficiency for placemaking, and then for place-led development are developed and validated; and (3) a performance-based actionable placemaking strategy in dimensions of design and management is formulated.

Based on the abovementioned broad research aims, the specific research objectives of this study and related detailed questions can be divided into three groups, which are set out below.

The first group of objectives is to investigate pedestrian bridges in Hong Kong and to examine the concept of the "pedestrian bridge as an everyday place in a high-density city." The sub-questions related to these research objectives are: (a) What are the physical characteristics of pedestrian bridge settings with regard to people's activities at both ground and elevated levels? (b) What are the various and dynamic everyday uses of pedestrian bridges at both levels? and (c) In what ways are people's everyday activities associated with the pedestrian bridges at both levels? (d) What is the role of pedestrian bridge in a high-density context?

Using the concept of "the pedestrian bridge as everyday place" in a high-density area as an urban reference, the second group of objectives is to generate and clarify an elaborative framework of everyday placemaking with respect to the dynamic relationship between the physical environment and people's behavior. The related sub-questions contained in these research objectives are: (a) What are the necessary and sufficient conditions of placemaking in everyday urban life? (b) How does the paradigm of everyday placemaking operate and work with respect to those conditions? and (c) In what ways can this operative paradigm be used for implementing placemaking?

Following on from the concept of the pedestrian everyday places in Hong Kong, the third group of objectives is aimed at guiding the construction of urban public space in densely populated urban areas and to enhance vibrant everyday places for the general public. Thus, the sub-questions related to this group are: (a) What spatial qualities can significantly contribute to constructing urban public spaces in a high-density urban context? (b) In what ways can everyday places be effectively enhanced within a densely populated urban area?

1.5 Scope of the study

This study focuses on everyday placemaking in the context of Hong Kong's densely populated urban areas. Studies of placemaking mostly focus on a broad variety of urban public spaces, such as streets, parks, and plazas. This study examines placemaking by investigating the concept of the "pedestrian bridge as an everyday place" in a high-density context, in which pedestrian bridges are a specific, commonly built form of street.

In response to Hong Kong's extreme population density, activity intensity, and highly congested urban space, pedestrian bridges function as channels for pedestrian urban movement and hosts of various urban activities. Hong Kong can be regarded as a bridge city, and pedestrian bridges are an elevated urban space segregated from the ground-level streets (Cuthbert & McKinnell, 1997, 2001), complementing the city's functions and enriching the urban vibrancy. Hence, pedestrian bridges have been selected for our examination of the relationship between the physical environment and people's everyday actions.

1.6 Significance of the study

This study extends the scope of research into public spaces, contributes to the understanding of pedestrian bridges as everyday places in high-density cities, and emphasizes the relationship between the microscale physical characteristics of spatial settings and the patterns of the activities of the population.

This analysis and summary of the spatial characteristics of pedestrian bridges will be beneficial to the construction, development, and planning of future bridges by providing a comprehensive view of the current pedestrian bridges with regard to everyday urban life and their maintenance and management.

Taking the concept of "pedestrian bridges as everyday place in a high-density city" as an urban reference, this thesis generates an elaborative

framework of everyday placemaking to clarify the roles of designers, planners, regulators, and ordinary everyday users in the placemaking process. It also provides an actionable, performance-based strategy for the various stakeholders to collaboratively implement placemaking, so lively and effective everyday places can be created to accommodate and promote vibrant urban living. However, this research is specifically based on a high density urban context in a single Asian Pacific city, so it does not and cannot generate a universal "golden rule" for placemaking in general; rather, it aims to demonstrate a working paradigm and an urban reference for use in further investigations and discussions on placemaking issues globally.

1.7 Framework of the study

The framework of this thesis explains the specific research methods and the research design of a case study of pedestrian bridges in Hong Kong. The findings of the case study are analyzed and discussed, and the analyses are illustrated and conclusions are drawn. The study's implications and limitations are addressed in the conclusion (Figure 1-4 illustrates the framework). The thesis consists of six chapters: the introduction, a literature review, the methodology, findings and discussion, and the conclusions and limitations. Some chapters consist of several sections. The framework of the study is discussed in detail below.

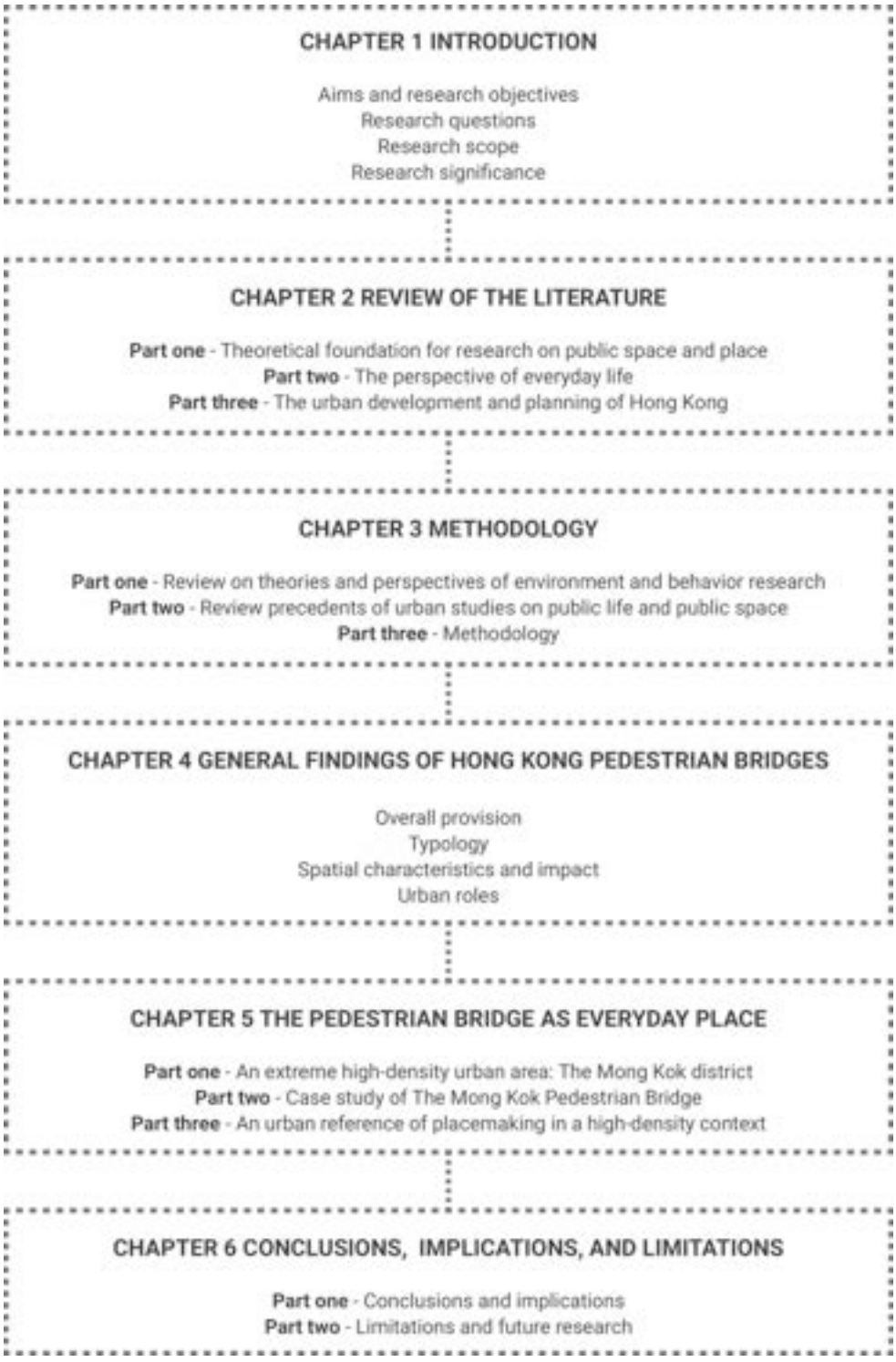


Figure 1-4 Framework of the study

Chapter 1, Introduction, presents the study and the general background of the research. The aims and objectives are discussed with the specific research questions. The scope and the significance of the research are also discussed.

Chapter 2, Review of the Literature, is divided into three parts. First, the theoretical foundation for the research on public space and place is addressed. Here, important theoretical perspectives on public space and place relevant to this study are discussed. Various definitions and theoretical models of public space and place are analyzed and summarized, building a solid theoretical foundation and providing a theoretical model of place to be used in the study. Second, the concept of everyday life and the theoretical understanding of everyday space and urbanism are reviewed. The research perspective of everyday life is taken in this study. Third, the urban development and planning of Hong Kong is reviewed, particularly the high-density urban context, the city's public space, and the planning of its multilevel pedestrian urban space. In summary, the first two parts of the review form a solid theoretical foundation for discussions on the findings of the case study. The third part directs the case selection for the case study.

Chapter 3, Methodology, is divided into three parts. First, several important theoretical foundations and standpoints of environment and behavior research are reviewed. Second, the precedents of urban studies on public life and public space, which help guide the methodology used in the study, are described and discussed. Third, based on the specific research questions and the theoretical model developed in previous chapters, the third part elaborates and discusses the research design and specific research methods used. The case study is the strategy of the research, and dominant-less dominant data collection methods are used, in which qualitative methods are selected as the primary approach, while quantitative methods are a relatively small component. The Mong Kok Pedestrian Bridge is selected for the single-case study.

Chapter 4, General Findings of Hong Kong Pedestrian Bridges, presents and discusses the overall provision and construction of Hong Kong pedestrian bridges, summarizes their typologies, and investigates and examines their spatial qualities and effects on the urban landscape. The diverse urban roles of pedestrian bridges are also identified and explained.

Chapter 5, The Pedestrian Bridge as Everyday Place, is divided into three parts. First, the land use of the Mong Kok district in Kowloon, Hong Kong, where the Mong Kok Pedestrian Bridge is located, is analyzed. The public spaces in the Mong Kok district are specifically explored and analyzed in detail, and several serious problems are identified. The comprehensive characteristics of the urban background and the problems of existing uses of urban space in the Mong Kok district are thus clearly illustrated. The second part of the case study comprehensively examines the Mong Kok Pedestrian Bridge using the theoretical place model reviewed in Chapter 2. The spatial qualities and characteristics of the bridge are examined and summarized, the bridge users are investigated and described, and the ways everyday activities are associated with the bridge are illustrated. The socio-spatial dialectic of the everyday space of the bridge and the multi-layered catalytic effects of everyday space are also studied and presented. Third, based on the concept of "the pedestrian bridge as everyday place in a high-density context," the final part elaborates on the mechanism of everyday placemaking within the proposed framework of necessity and sufficiency.

Chapter 6, Conclusions, Implications, and Limitations, consists of two parts. First, the research is concluded and the implications explained with responses to the research aims and their related objectives. The aim of revealing and examining the mechanism of everyday placemaking in high-density cities, and the questions regarding the qualities and characteristics of everyday places are addressed. Experiences and processes of everyday places elaborate their inherent publicness and collective temporary nature. An environment–behavior-based placemaking model is generated in response to the second research aim of developing the framework of everyday placemaking. The specific spatial qualities that can significantly contribute to the construction of urban public space in high-density cities are presented, in response to the third research aim of formulating the placemaking strategy, which identify the critical approaches to encouraging everyday placemaking in densely populated urban areas. A performance-based actionable strategy is also proposed to clarify the roles of designers,

planners, regulators, and ordinary users in the process of placemaking. The first part concludes with a summary and discussion of the emerging forms of public places in a high-density context. Second, the thesis concludes by addressing the limitations of the study and future work.

CHAPTER 2 REVIEW OF THE LITERATURE

2.1 Preamble

PART ONE - Theoretical foundation for research on public space and place

2.2 Conceptualizing public space

2.3 Notions of public space in Hong Kong

2.4 The historical development of public space

2.5 Contemporary public spaces

2.6 The role of contemporary public space

2.7 Streets as public spaces

2.8 Qualities of constructing streets as public spaces

2.9 Bridges as public spaces

2.10 Place and its theoretical model

2.11 Place attachment

2.12 Placemaking

PART TWO - The perspective of everyday life

2.13 Everyday life

2.14 Everyday space and everyday urbanism

PART THREE - The urban development and planning of Hong Kong

2.15 High-density and the compact urban form

2.16 Circulation space as public space in contemporary urban Hong Kong

2.17 The planning of multilevel pedestrian urban space

2.18 The development of multilevel pedestrian space in Hong Kong

2.19 Summary

2.1 Preamble

In this chapter, the literature concerning concepts of public space and place, of everyday life, and Hong Kong's urban planning and development is reviewed (Figure 2-1). "Public space" and "place" are the key concepts in this study. The first part of this chapter covers definitions from a variety of disciplines and analyzes the respective issues and models of public space and place, to enable a broader understanding of the public realm, which develops the theoretical framework of this thesis. Ideas about "streets as public spaces" and "bridges as public spaces" are specifically reviewed as references for this study.

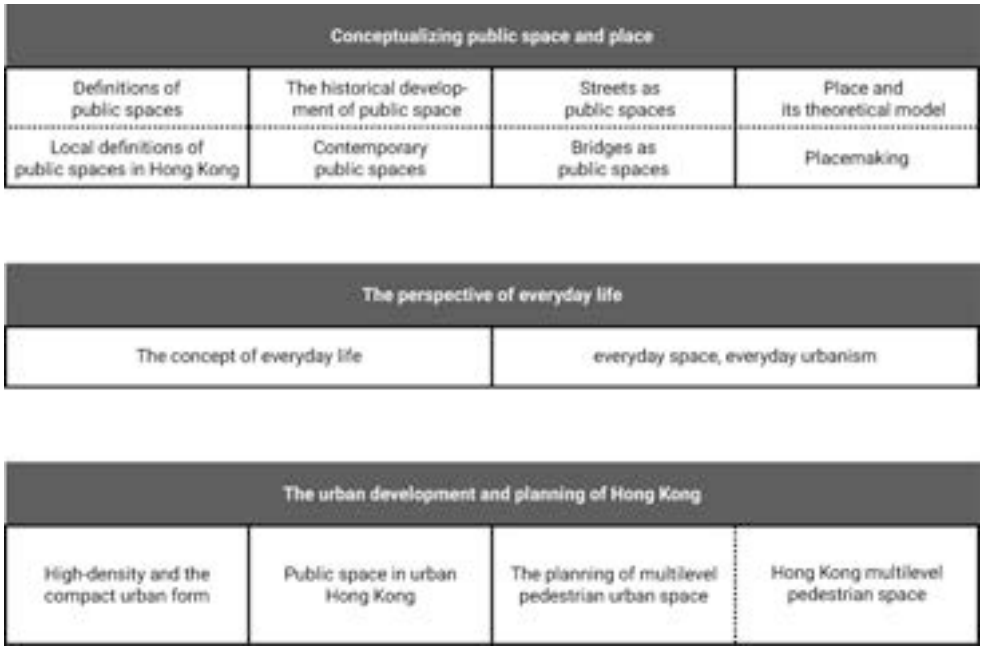


Figure 2-1

The second part reviews and discusses the concept of everyday life, which is the theoretical perspective taken in this study. Three emerging ideologies in contemporary urban design theory and practice are briefly reviewed: everyday urbanism, new urbanism, and post-urbanism. The focus of this study is on everyday urbanism. Inspired by the thoughts of French philosophers Henri Lefebvre and Michel de Certeau, the meaning of

everyday urbanism is regarded as being deeply rooted in the “practice of everyday life” of ordinary people.

The third part of the literature review focuses specifically on the development of Hong Kong and the history of planning multilevel pedestrian bridge networks in an urban environment. The central aim of this review is to provide a basic understanding of the development of Hong Kong’s urban form in its historical transformation into a high-rise, high-density, three-dimensional city, and of the evolution of multilevel pedestrian bridge networks in urban planning. This understanding elaborates the historical background and the urban context for the investigation and discussion of the empirical findings in the following chapters.

PART ONE - Theoretical foundation for research on public space and place

2.2 Conceptualizing public space

Public space has been a central issue in urban studies for centuries. Sociologists, geographers, and political scientists have focused on how public spaces are built and managed and how they function socially, economically, and politically.

“Public” can be defined as being “Of, concerning, or open to the people as a whole; involved in the affairs of the community, especially in government or entertainment; done, perceived, or existing in open view; and of or provided by the state rather than by an independent commercial company” (Oxford English Dictionary, 2004). After reviewing various dictionary definitions, Madanipour (2003) concludes public as that “These meanings of the word ‘public’, all refer to a large number of people, who are either conceptualized as society or as state, and what is associated with them. As the society, the term may refer to various demographic or territorial scales,

including a group, a local community, a nation, or in a capacity that is now rarely used, the entire human race. As the state, it may refer to the various institutional scales of nation state, local government, and even individuals who are part of the state apparatus" (p. 109). Altman and Zube (1989) state, "The term 'public' connotes the idea that these settings are accessible to everyone—people of a community, state, nation, regardless of age, gender, ethnicity, physical handicap, or other characteristics" (p. 1). The rigid understanding of public as a unified structure has been challenged in recent years, and the concept of multiple publics, as developed by Fraser (1990), has been offered as an alternative. Marginalized groups such as women, ethnic, and sexual minorities who are treated unequally have claimed their right to be included in "the public." Fraser (1990) argues that there are multiple publics, a concept which provides the space to marginal groups to clarify who they are and to engage with other publics.

Regarding the concept of public space, Orum (2010) asserts that "…the mystery and drama of public spaces begin with their very definition" (p. 3). The various definitions of public space emphasize different issues, such as ownership, control, and access. Some scholars have stressed the rights of control of public space and hence defined it as "space that is not controlled by private individuals or organizations, and hence is open to the general public. This space is characterized by the possibility of allowing different groups of people, regardless of their class, ethnicity, gender and age, to intermingle" (Madanipour, 1996, p. 144-145). Tankel (1963) regards public space is open space whose ownership is shared by the people for their common use. Other scholars have focused on the issues of public access and the right to use public space, arguing that it is "all the parts of the urban fabric to which the public has physical and visual access. Thus, it extends from the street, park, square of a town or city into the buildings which enclose and line them" (Tibbalds, 1992, p. 1). These spaces are "publicly accessible places where people go for group or individual activities" (Carr et al., 1993, p. 50). The term "relates to all those parts in the built and natural environment where the public has free access. It encompasses: all the streets, squares and other rights of way, whether predominantly in

residential, commercial or community/civic uses; the open spaces and parks; and the public/private space where public access is unrestricted (at least during daylight hours). It includes the interfaces with key internal, external and private spaces to which the public normally has free access." (Carmona et al., 2008, p. 5) Similarly, Orum (2010) identifies public space as accessible urban space that is open to all members of society (Table 2-1).

Table 2-1 Review of the concepts of public space

Author(s)	Definitions of/about public space
Gehl, J. (1987)	"... precisely the presence of other people, activities, events, inspiration, and stimulation comprise one of the most important qualities of public spaces altogether (p. 15)"
Gehl, J. & Gemzöe, L. (1999)	"Although the pattern of usage has varied in the course of history, despite differences, subtle and otherwise, **public space** has always served as meeting place, marketplace and traffic space (p. 10)."
Carr, S et al. (1992)	"We see **public space** as the common ground where people carry out the functional and ritual activities that bind a community, whether in the normal routines of daily life or in periodic festivities (p. xi)" "There are three primary values that guide the development of our perspective: We believe that **public places** should be responsive, democratic and meaningful (p. 19)."
Lofland, L. (1998)	"The **public realm** is constituted of those areas of urban settlements in which individuals in copresence tend to be personally unknown or only categorically known to one another. Put differently, the public realm is made up of those spaces in a city which tend to be inhabited by persons who are strangers to one another or who "know" one another only in terms of occupational or other nonpersonal identity categories (p. 9)." "The term "**public space**" covers a diversity of legal connections between the public and the space. (p. 8)"
Tibbalds, F. (1992)	"The **public realm** is, in my view, the most important part of our towns and cities. It is where the greatest amount of human contact and interaction takes place. It is all the parts of the urban fabric to which the public have physical and visual access. Thus, it extends from the streets, parks and squares of a town or city into the buildings which enclose and line them (p.1)." "**Public places** within a town belong to the people of that town - they do not belong to developers or investors, the police or traffic wardens. Their nature will be influenced by their scale, shape and size; the ways in which they are related one to another; the uses and activities which they contain, and the way in which traffic of all kinds is handled (p.14)"
Madanipour, A. (2003)	"I have used the term **public space** (and **public place**) to refer to that part of the physical environment which is associated with public meanings and functions. The term **public sphere** (and **public realm**), however, has been used to refer to a much broader concept: the entire range of places, people and activities that constitute the public dimension of human social life." "... public space is a component part of the public sphere (p. 4)." "Using the criteria of access, agency and interest, **a space can be considered public** if it is controlled by the public authorities, concerns the people as a whole, is open or available to them, and is used or shared by all the members of a community (p. 112)"
Carmona et al. (2008)	"**Public space** (broadly defined) relates to all those parts of the built and natural environment, public and private, internal and external, urban and rural, where the public have free, although not necessarily unrestricted access. It encompasses: all the streets, squares and other rights of way, whether predominantly in residential, commercial or community/civic uses; the open spaces and parks; the open countryside, the „public/private" spaces both internal and external where public access is welcomed – if controlled – such as private shopping centres or rail and bus stations; and the interiors of key public and civic buildings such as libraries, churches, or town halls (p.4)" "**Public space** (narrowly defined) relates to all those parts of the built and natural environment where the public has free access. It encompasses: all the streets, squares and other rights of way, whether predominantly in residential, commercial or community /civic uses; the open spaces and parks, and the „public/private" spaces where public access is unrestricted (at least during daylight hours). It includes the interfaces with key internal and external and private spaces to which the public normally has free access (p. 4)"
Orum, M. A. & Neal, Z. (2010)	"While there are many different ways to define public space, most agree that **public space** includes all areas that are open and accessible to all members of the public in a society, in principle through not necessarily in practice (p.1)."

The review of the definitions of public space presents a wide variety of definitions of public space and of closely related concepts such as public place and public realm, but a clear and cross-disciplinary definition of public space is lacking. As Staeheli and Mitchell (2008) state, despite public space having an apparently straightforward meaning, it is "a slippery, complicated and shifting kind of space" (p. 117).

In developed urban regions such as those in Europe, public spaces are broadly defined as "crossroads" where the multiple forces of politics, social culture, and individual territories converge (Madanipour et al., 2014). In urban areas in developing countries, informality must be considered when the emerging insurgent public space and contested urban space are examined and defined (Brown, 2006; Hou, 2010). Frank and Stevens (2006) address informal grassroots everyday practices, and Lehtovuori (2010) formulates an alternative theory of space, regarding public urban space as temporary and full of experiments and conflicts. In the most recent edition of *Now Urbanism: The Future City is Here*, Hou et al. (2015) assert that cities are grounded in the imperfect and messy and their public spaces are thus conceptualized as part of the rich reality of the existing city and its dwellers' purposeful everydayness. From the relational perspectives, Tornaghi and Knierbein (2015) find that public spaces reflect the social dynamics within specific political, economic, and cultural contexts, accommodating ever-changing urban routines and interacting with and facilitating everyday urban life, rather than simply functioning as a shell or container for daily urban events.

Public space can be defined and conceptualized in different ways, and various theoretical frameworks and thematic cluster models have been investigated and described by many scholars (Table 2-2). Van Melik et al. (2007) examine the design and management of public space and, by comparing "secured public space" and "themed public space," propose a new framework consisting of "surveillance, restraints on loitering, regulation, events, fun-shopping, and sidewalk cafes." Nemeth and Schmidt (2011) propose a conceptual model that considers ownership and operation

and identifies public-ness as the interaction between the ownership, management, and uses/users of a space. Varna and Tiesdell (2010) present a star model to measure the public-ness of public space with the five dimensions of ownership, control, civility, physical configuration, and animation. In *Public Places-Urban Spaces*, Carmona et al. (2003) offer a model that uses six key dimensions to access the public-ness of public space: morphological, perceptual, social, visual, functional and temporal. Specific to high-density urban contexts, Cho et al. (2015) propose an integrated urban space framework with three key aspects: "HARDware, SOFTware, and ORGware," which are further broken into 13 sub-aspects to assess public space in densely populated areas: for HARDware, accessibility, connectivity, mobility means, legibility and edges, spatial variety, environmentally friendly design, and user comfort; for SOFTware, diversity and intensity of use, social activities, and identity; and for ORGware, provisions, safety, and management and regulations.

Table 2-2 Review of the public space's theoretical frameworks and their thematic clusters

Researcher(s)	Carmona et al. (2003)	Van Melik et al. (2007)	Varna and Tiesdell. (2010)
Thematic clusters on analyzing public space	1. Morphological 2. Perceptual 3. Social 4. Visual 5. Functional 6. Temporal	Secured public space 1. Surveillance 2. Restraints on loitering 3. Regulation Themed public space 4. Events 5. Fun-shopping 6. Sidewalk cafes	1. Ownership 2. Control 3. Civility 4. Physical configuration 5. Animation

Researcher(s)	Nemeth and Schmidt. (2011)	Cho et al. (2015)
Thematic clusters on analyzing public space	1. Ownership 2. Management 3. Uses/users of a space	HARDware 1. Accessibility 2. Connectivity 3. Mobility means 4. Legibility & edges 5. Spatial variety 6. Environmentally friendly design 7. User comfort SOFTware 8. Diversity and intensity of use 9. Social activities 10. Identity ORGware 11. Provisions 12. Safety 13. Management & regulations

Neal (2010c) focuses on public space in the urban context, and defines three major perspectives. "(a) The legal–economic perspective seeks to answer the most concrete questions about public space (what is it and who pays for it?), thereby laying the definitional and institutional groundwork for other enquiries. (b) The socio-spatial perspective takes the existence of public space for granted and is more concerned with questions of design and application: what does it look like and how is it used? (c) The political perspective asks about public space's role in democracy, both abstractly as a site for discursive activities and concretely as a site of exclusion or empowerment" (p. 1). These are presented in Table 2-3, and each provides meaningful insights into public space. Carmona (2010) similarly identifies three perspectives for assessing the complexity of contemporary public spaces: a design perspective, a socio-cultural perspective, and a political-economy perspective.

Table 2-3 Summary of perspectives on public space

	Legal–economic	Socio-spatial	Political
Major topics	Public forum doctrine Public goods Business improvement districts	Design, mental maps segregation, health Civil order, identity	Power and control Exclusion Privatisation
Archetypal focal point	Public accommodation	The urban streetscape	The contested park
Attitude toward public space	Neutral	Optimistic	Critical
Future of public space	Agnostic	Evolving	Disappearing
Practical implications	Funding mechanisms	Design principles	Activism
Foundational scholars	US Supreme Court Paul Samuelson	Jane Jacobs Kevin Lynch William H. Whyte	Hannah Arendt Jürgen Habermas Henri Lefebvre

Source: Neal (2010c)

This study first examines the spatial function with the design perspective and then combines the socio-spatial and political perspectives to investigate how the form of public space interacts with the general public's participation, individuals' actions, and their expression in society (Figure 2-2). The concept of "the public" is continually redefined and the scope of public space continually changes, so it is useful to take a combined political and legal-economic perspective when investigating this concept in relation to the openness and accessibility of public space. The legal-economic perspective is, however, relatively less important to this study.

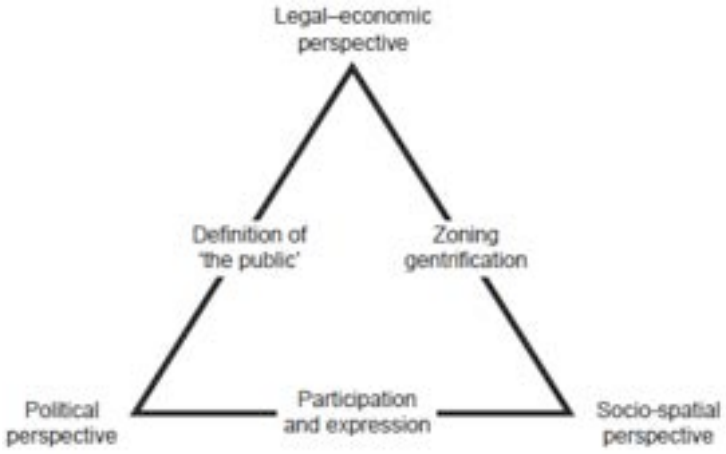


Figure 2-2 Intersections of perspectives on public space

Source: Neal (2010c)

Despite the different definitions of public space and the various frameworks used to measure it, the primary concern of this study is that public space is open and accessible to all members of the public; that is, each individual is free to come and to go and to be in and to use the public space, either as an active participant or as a passive spectator (Neal, 2009).

2.3 Notions of public space in Hong Kong

The Hong Kong Town Planning Board's outline for the zoning of uses and areas identify commercial, residential, and comprehensive development areas, government, institution, or community areas, open spaces, major roads, and urban renewal authority development scheme plan areas. They define open space as "any land with the minimum of building structure which has been reserved for either passive or active recreation and provides major or minor recreational facilities, which may be of local or district significance, which is for the use and enjoyment of the general public" ("Definitions of Terms," 2015), including parks and gardens, playground/playing fields, promenades, pavilions, sitting areas, pedestrian areas, and bathing beaches.

The Planning Department does not have a specific definition of public space, but the Hong Kong Planning Standard and Guidelines (HKPSG) indicate that the public realm includes streets and open spaces. In the HKPSG, open space is regarded as "a statutory land use zone for the provision of open space and recreation facilities for the enjoyment of the general public" ("Recreation, Open Space, and Greening," 2015). The Hong Kong Urban Design Guidelines states that it is a planning intention to provide "public open space," and depending on its function, nature, form, and intensity of development, open space in Hong Kong is given a hierarchy by Planning Department:

"(a). Urban Areas: Including the Metro Area and the New Towns, which are intensively developed. Open space and recreation facilities should be easily accessible from home and, where applicable, from the workplace.

(b). Rural Areas: Including the vast stretches of flat land and valley floors in the rural New Territories that contain dispersed settlements. Open spaces and recreation facilities may be concentrated in the more developed areas.

(c). Countryside and Coastal Areas: Including the unique natural resources of the hill slopes, country parks, and coastal areas. Recreation use should be of low intensity and compatible with the rural character and the natural environment, and should co-exist with other uses without causing adverse effects" (Planning Department, 2015, Chapter 4).

Thus, in the context of Hong Kong, the concept of open space in urban areas is interchangeable with the concept of public space in the urban context. According to the Hong Kong Department of Justice's Bilingual Laws Information System: Summary Offences Ordinance, Chapter 228, Section 2, public places include "all piers, thoroughfares, streets, roads, lanes, alleys, courts, squares, archways, waterways, passages, paths, ways, and places to which the public have access either continuously or periodically, whether the same are the property of the Government or of private persons" (Table 2-4).

Table 2-4 Review of the notions of public space from the Hong Kong Government's perspective

Hong Kong Government	Definitions and/or concepts of/about public space
Department of Justice	**Public Place** includes all piers, thoroughfares, streets, roads, lanes, alleys, courts, squares, archways, waterways, passages, paths, ways and places to which the public have access either continuously or periodically, whether the same are the property of the Government or of private persons.
Town Planning Board	The outline zoning plans' schedule of uses and areas are divided as commercial, residential, comprehensive development area, government, institution, or community, open space, major roads, and urban renewal authority development scheme plan area. **Open Space** is defined as "means any land with the minimum of building structure which has been reserved for either passive or active recreation and provides major or minor recreational facilities, which may be of local or district significance, which is for the use and enjoyment of the general public", including "park and garden, playground/playing field, promenade, pavilion, sitting out area, pedestrian area and bathing beach."
Planning Department	In Hong Kong Planning Standard and Guidelines (HKPSG), **Open Space** is defined as "a statutory land use zone for the provision of open space and recreation facilities for the enjoyment of the general public." The planning intention of open space is to provide "public open space" In consideration of its function, nature, form, and intensity of development, open space is given the hierarchy of open space in urban areas, rural areas, and countryside and coastal areas. In particular in urban areas, open space includes the Metro Area and the New Towns which are intensively developed. Open space and recreation facilities should be easily accessible from home, and, where applicable, from the workplace. "Open Space" is used interchangeably with "Recreation Open Space" which is defined as "the outdoor open-air space which is used principally for active and/or passive recreation use, developed either by the public or private sector, and is counted towards the open space standard of provision." Active open space: Recreation open space which contains outdoor recreation facilities, mainly for the core activities including games facilities. Passive open space: Recreation open space which is landscaped as parks, gardens, sitting-out areas, waterfront promenades, paved areas for informal games, children's playgrounds, jogging and fitness circuits etc., where people can enjoy the surroundings in a leisurely manner. Games facilities are normally not provided. **Public Realm** includes streets and open space. All aspects relating to urban design contributeto the public realm.

In summary, the term "public space" in this study refers to the space accessible to and used by the general public either continuously or periodically, rather than based on issues such as ownership.

2.4 The historical development of public space

Public space changes over time. The definitions of public space differ at different times in history depending on cultural, social, economic, military, or religious factors and in response to different human needs. Throughout the history of human settlement, different types of public space have been specifically associated with different periods. Their creation is generally influenced by the specific historical context involved when they are planned, designed, constructed, and managed.

Public space has always been central to public life, and histories of public spaces often look to ancient Greece for its origins. The agora served as the gathering place in Greek social life, and is considered as the earliest model for today's public spaces (Rubenstein, 1992) (Figure 2-3). It usually took a rectangular spatial form and was surrounded by various public structures, such as temples and government buildings, and was "a place of assembly and a festival place" (Mumford, 1961, p. 142). The agora functioned as a focal point of social, commercial, athletic, artistic, spiritual, and political life in the city: free-born citizens gathered in the agora to receive their military duty and orders; merchants came to the agora to set up shops and sell their goods; public speaking and education also took place in the agora. These multi-roles of political gathering place, marketplace, and performance and festival stage meant that the agora "…was a place in which economic, political and cultural activities were performed alongside each other, acting as an integrative platform for the social life of the city" (Madanipour, 2003; p. 194). Today's public space inherits characteristics from the ancient Greek agora: the notion that it should be provided for socializing, gathering, and interacting, and that it involves the presence of other people and mixed activities. However, the publicness of the agora was not fully democratic, as women, foreigners, and slaves were all denied access to the political agora. Only a small part of the population, the male Greek citizens, could participate in political affairs.

Figure 2-3 The Agora of Athens

Source: http://ancient-greece.org/archaeology/agora.html

In ancient Rome, the forum was the most important public space (Figure 2-4). Like the ancient Greek agora, the forum hosted a variety of activities such as trading, public gatherings, political discussions, festival celebrations, and religious functions. The Roman forum was usually adjacent to temples and other buildings that enhanced the dignity of the place (Madanipour, 2003). Thus, it was not only a form of public space hosting diverse activities but also a symbolic center of the Roman Empire (Watkin, 2009). The forum was planned and built with the intention that it would be integrated into the urban fabric, emphasizing the community function. Its open space was used for trading, its nearby temple for worshiping, and the adjoining senate house was for government administrative functions. In this sense, The Roman forum therefore had multiple functions and a planned approach. Just as in the planning and designing of contemporary public spaces, the well-planned integration of public space with the surrounding buildings and urban fabric is key to its urban function. The Roman forum also demonstrated the symbolic potential of public space, as a manifestation of authority and power. As Carmona et al. (2008) assert “Examples of this are the strong symbolism of the state and religion in Roman piazzas, where surrounding buildings contained the senate and temple, accompanied by monuments and

statues. This is a tradition that continued in towns and cities through to today" (p. 25).

Figure 2-4 The Roman Forum

Source:

https://upload.wikimedia.org/wikipedia/en/f/fd/Roman_forum_cropped.jpg

After the collapse and destruction of the Roman Empire and throughout the Middle Ages, religion was central to public life. Public spaces were transformed into religious spaces (Wickham, 2005), as public life was closely associated with churches and religious events. Many public spaces were in front of churches (Carmona et al., 2008). The Piazza San Marco in Venice, Italy is an example of this kind of medieval public space (Figure 2-5). The public space adjacent to the churches of the Middle Ages later developed into the urban civic squares of the Renaissance period. Alongside these archetypal urban squares, streets were also a fundamental form of public space in medieval urban settlements. As Jackson (1984) states "In the Middle Ages it was the street – tortuous, dirty, crowded – and not the public space identified with the church or the castle or market, that was the center of economic and social life. The street was the place of work, the place of buying and selling, the meeting and negotiating, and the scene of the important religious and civic ceremonies and processions" (p. 289). Commons were, as Neal (2010b) points out, another important type of

public space in the Middle Ages. Often owned by a king or a lord, the commons were open to all, enabling subsistence agriculture such as cattle grazing or fishing. The accessibility and openness of commons sustained public gatherings and facilitated different individual needs. These medieval commons evolved into modern public urban parks, providing spaces for shared interests.

Figure 2-5 The Piazza San Marco

Source:

https://upload.wikimedia.org/wikipedia/commons/4/46/Venice_Piazza_San_Marco.JPG

Compared to the ancient Greek agora and the Roman forum, streets and commons in the Middle Ages were much more inclusive, enabling more universal access. Women frequented the marketplaces of the Middle Ages, and as Peacork (2009) asserts, the medieval marketplace was “a physical space of female enjoyment, variety, and excitement, not just dreary utility” (p. 687). Another quality of the medieval public space was that increasingly, unexpected and informal urban experiences emerged. As people could only experience the space within the range of their vision, small and unpredictable urban programs often occupied urban places. Today, these self-initiated spaces are rare, eliminated over time by the increased measures of control imposed by contemporary urban planning schemes. As Sitte

(1889) argues “It is strange that the really wildly irregular plazas of old towns often do not look bad at all, while an irregular corner in a modern layout invariably appears very unattractive. This is due to the fact that the irregularity of old planning is almost always of a kind that one notices only on paper, overlooking it in reality; and the reason for this is that old planning was not conceived on the drafting board, but instead developed gradually in natura, allowing for all that the eye notices in natura and treating with indifference that which would be apparent only on paper…” (p. 58).

In Renaissance Europe, a revival of the ancient Greek and Roman classical principles of beauty and symmetry reshaped the city and its architecture. Emphasizing proportion and geometry, Renaissance cities and architecture consciously restored classical elements. One of the most important types of public space developed at this time was the urban square. Leith (1991) states “As authorities in the seventeenth and eighteenth centuries became increasingly conscious of the possibility of planning urban space, a number of spacious public squares were created, often with the surrounding buildings planned to provide a uniform frame for the monument in the center” (p. 6). Renaissance European squares were usually large and open spaces with various spatial forms located in the city centers. According to Neal (2010b), the Renaissance square functioned not only as a place for public gathering but also as an important public space with strong symbolic value. Ceremonial events were hosted and strong political statements on the authority of the State were made. Authoritarian power had a huge effect on the planning and designing of public spaces, which were ideal for showing off the extent of the authority’s rule. In contemporary times, these urban squares are often used as venues for protests and demonstrations (Leith, 1991).

In the 17th century, as Neal (2010b) points out, the coffeehouse became an important form of public space. After coffee was introduced to Europe, coffeehouses became popular, and “offered a more exotic and refined alternative to the pub for individuals to gather and talk about a range of

issues, but it came to be a key location for activity in several domains of public life" (p. 8). Even today, the coffee house is a very important public space and "third place" (Oldenburg, 1989). The modern coffee shop is a social space where people gather, and in terms of globalization effects, chain coffee stores such as Starbucks have become key public spaces globally, in contrast to the local public role played in traditional coffee culture countries in the West.

The nineteenth century public space was the street. Haussmann's design for the pedestrian-friendly boulevards of Paris provided spaces for sidewalks and trees, facilitating commercial activities and both military and civic urban movement. The streets of this time were thus important public spaces in which people from all classes could gather (Girouard, 1985). According to Neal (2010b), covered iron and glass shopping arcades were a special form of street, which also significantly facilitated people's public social activities. These were new forms of street public spaces located in the interiors of urban blocks. They fostered a distinct people-watching street culture and public life, which is still an important goal when today's public spaces are constructed, to encourage people's passive social communication. In contemporary cities, great streets such as the Michigan Avenue in Chicago and Fifth Avenue in New York still functions as key public urban spaces to sustain a range of urban activities (Figure 2-6).

Figure 2-6 Michigan Avenue, Chicago

Source:

https://upload.wikimedia.org/wikipedia/commons/3/3e/Michigan_Avenue_-_Chicago.jpg

Streets, bridges, and pedestrian bridges are all primary urban spaces of movement but function as public spaces where people spend time in various activities. The concept of “streets as public spaces” and the very similar notion of “bridges as public spaces” will be discussed in details in later sections, laying an important foundation for examining the idea of “pedestrian bridges as everyday places” in this study.

2.5 Contemporary public spaces

The industrial revolution had a significant effect on modern urban life. With the development of technology and rapid urbanization, cities become overly populated. The unhealthy living conditions and the rapid increase of the urban population reduced the quality of daily lives. Responding to these major urban changes, one of the most obvious solutions is to reconnect the urban built environment with nature, bringing greenness back to the city with public urban parks, providing healthy and sustainable urban environments to the citizens. The predecessors of modern urban parks are the various royal parks, which first appeared in the 1820s in Germany (Carr

et al., 1992). To improve the quality of life and health of urban dwellers, American landscape architect Frederick Law Olmsted (1870) promoted the creation of public city parks. His conception of public urban parks was that "what we want most is a simple, broad, open space of clean greensward, with sufficient play of surface and a sufficient number of trees about it to supply a variety of light and shade" (p. 245). His designs of urban public spaces such as Central Park were part of the larger "City Beautiful" movement that emerged at the end of the 19th century, which to a certain degree effectively improved urban living conditions both aesthetically and functionally.

The unhealthy urban living conditions caused by the industrial age and the popularity of the automobile led many visionaries such as LeCorbusier to propose a comprehensive rational top-down approach, which laid the foundations of modern planning and had a profound effect on the post-second World War rebuilding of cities. The rational, effectiveness-driven top-down planning approach was, however, criticized after the 1960s, as this modern approach to city planning neglected the human factors of needs and scale. As Taylor (1998) asserts, "What planners lacked and what planning theory had failed to provide, was an adequate empirical understanding of the world they were seeking to manipulate. More than anything, this explained the failures of planning in practice in the two decades following the Second World War, and it also explained the deficiencies in the planning theories which guided this practice" (p. 55). The lack of consideration for human factors in modernist planning will be discussed next in the methodology chapter, where it is analyzed through a review of how scholars conducted research and studies for human-centered urban spaces, in response to the effectiveness-led modern urban planning that neglected the human dimension.

In the 1970s, urban planning was considered as more than simply an aesthetic discipline or a physical approach for spatial configuration, but as a political activity. The general public's participation in the urban planning process was key to the success of projects, and had a profound effect on

today's participatory urban planning. In the 1980s and 90s, the concept of the sustainable city, designed with environmental impact in mind, emphasized minimizing the consumption of natural resources and influenced contemporary urban planning and today's public spaces.

In summary, many types of contemporary public spaces such as urban parks and civic squares evolved from earlier eras in the history of human settlement, which are specifically built for public gathering and socializing. However, many more new forms of more mundane public spaces have emerged, which must be identified and examined.

2.6 The role of contemporary public space

Public spaces have historically been used for various purposes that no longer occur, such as public displays of punishment and the collection of water (Lofland, 1998). In contemporary society, public space plays a critical role in people's daily lives (Low, 2000). According to Crowhurst-Lennard and Lennard (1987, 1995), public space can be used to promote the exchange of information, facilitate social dialogue, and enhance social integrity, generating and sustaining a sense of community (Boyer, 1994; Hayden, 1995).

A successful public space can support and sustain public life to satisfy the needs of contact, communication, and relaxation. Arendit (1985) states that public space allows people to come together and get to know each other. Thomas (1991) asserts "public space is an essential arena which provides opportunities for individuals and communities to develop and enrich their lives" (p. 222). He identifies four roles in public space: (a) an arena for public life; (b) a meeting place for different social groups; (c) a space for the display of symbols and images in society; and (d) a part of the communication system between urban activities (p. 210).

Public space offers various possibilities for members of society to interact and experience diversity. It is “the stage upon which the drama of communal life unfolds” (Carr et al., 1993, p. 3) and “the single most important element in establishing a city’s livability” (Crowhurst-Lennard & Lennard, 1995, p. 25). Whyte (1988) describes the role of public space in the city center as the “place for news and gossip, for the creation of ideas, for marketing them and swiping them, for hatching deals, for starting parades. This is the stuff of the public life of the city-by no means wholly admirable, often abrasive, noisy, contentious, without apparent purpose. But this human congress is the genius of the place, its reason for being, its great marginal edge. This is the engine, the city’s true export” (p. 341).

2.7 Streets as public spaces

Streets are important public space in a city. “Streets and their sidewalks, the main public places of a city, are its most vital organs. Think of a city and what comes to mind? Its streets. If city’s streets look interesting, the city looks interesting; if they look dull, the city looks dull.” (Jacobs, 1961, p. 39) Streets are the “river of life of the city, the place where we come together, the pathway to the center. It is the primary place” (Whyte, 1988, p. 7). In the city, people use streets for necessary, optional, and social activities, for daily commuting, shopping, playing, and meeting with others (Jacobs, 1961; Gehl, 1987; Hass-Klau, 1990; Carr et al., 1992). Rapoport (1987, p. 81) states that “streets are the more or less narrow, linear spaces lined between buildings found in settlements and used for circulation and, sometimes, other activities.” Southworth and Ben-Joseph (1997) agree that the street is both a spatial and a social constituent of a living environment. In urban areas, streets dominate the public space (Jacobs, 1993).

In the past, streets commonly served basic urban needs such as communication and entertainment, and had political, religious, civic, and commercial functions (Rudofsky, 1969; Lofland, 1973, 1998). Some of these basic functions of streets in contemporary cities are no longer needed

or have changed dramatically (Brill, 1989, 1990; Banerjee, 2001), but in densely populated urban areas people still depend very much on streets for traveling, playing, and interacting with others (Jacobs, 1961; Appletard, 1981; Gehl, 1987; Carr et al., 1992; Southworth and Ben-Joseph, 1996; Lofland, 1998; Hass-Klau et al., 1999; Carmona et al., 2003). Many scholars argue that streets are a significant form of social space in the city, rather than simply being urban channels for movement (Jacobs, 1961; Appleyard, 1981; Gehl, 1987; Loukaitou-Sederis & Banerjee, 1998; Hass-Klau et al., 1999). According to Jacobs (1961) and Gehl (1987), it is the city streets that significantly sustain short-term passive and active interactions, and provide opportunities for deeper and long-term social integration and communication. "The sum of such casual, public contact at a local level—most of it fortuitous, most of it associated with errands, all of it metered by the person concerned and not thrust upon him by anyone—is a feeling for the public identity of people, a web of public respect and trust, and a resource in time of personal or neighborhood need… Lowly, un-purposeful and random as they may appear, sidewalk contacts are the small change from which a city's wealth of public life may grow" (Jacobs, 1961, pp. 56 & 72). Hence, streets as social spaces in the city play multiple roles in the urban environment, offering many opportunities for social integration and cohesion (Mehta, 2006).

In the densely populated urban areas of Asia such as Hong Kong, Japan, Indonesia, Thailand, Malaysia, and Vietnam, the streets may appear crowded, disorganized, and even conflicting, but they effectively sustain the population's various everyday activities and serve their diverse needs (Drummond, 2000). They are a critical part of the informal public space. "Accessible to all, these spaces constitute public space in its purest form" (Carmona et al., 2003, p. 111). Oranratmanee (2012) identifies the functions of streets in Southeast Asia as societal and cultural, rather than purely conduits for urban traffic. Oranratmanee and Sachakul (2014) summarize the street as "a permanent and temporary trading space, a stage for political and religious discourse, a common place for public expression of opinions, a gathering space for families and friends, and sometimes a living room or a

dining room for city dwellers" (p. 213). In Indonesia, the typically 1-2 meters-wide pathways create a dynamic space for not only urban circulation but also for social interaction (Rahmi et al, 2001). Streets in Vietnam are an extension of indoor space outdoors, and operate as "an extension of domestic space, an annexation of commercial space and a space for personal expression" (Drummond, 2000, p. 2389).

2.8 Qualities of constructing streets as public spaces

The key qualities that make streets function as urban public spaces have been previously examined and analyzed. People initially need a reason to use a public space. A street that is primarily planned for people to pass through must offer features that draw people come and sustain their activities, for it to become a viable public space. The more attractions there are, the more likely people are to stay on the streets, and a vibrant and dynamic public space emerges. The three-block long 25th Street in downtown Ogden, Utah draws large crowds as it has an impressive amount of cafes, restaurants, bar, and vendors selling their wares. Weekly and annual special events successfully attract people to spend time on the street. Second, once people have a reason and a desire to spend time on these streets, the streets must be spatially accessible to all. If streets are accessible by various modes of transport, such as walking, cycling, and vehicular traffic, a wider variety of people will be attracted, though multi-mode transit access may raise safety concerns. Streets that prioritize pedestrians and segregate them from vehicular traffic can encourage more people to stay longer, potentially transforming them into vital and vibrant public spaces. If streets spaces have a high degree of flexibility, they then can have the capacity to meet various urban needs. Changes in street layout on different days or at different times can accommodate and sustain a variety of informal and temporary urban programs. For example, every afternoon after 2pm Temple Street in Hong Kong is closed to vehicular traffic. Vendors set up their stalls, and by the evening the street is transformed into a lively night market, where food, clothes, and crafts are sold. A high degree of flexibility

of street spaces can therefore enable quick responses to short-term and temporary urban programs.

Safety and security are important issues on streets and other public spaces. Before spending time in a public space, people need to be sure it is safe. On streets, vehicular traffic, including cyclists, are the main threat to pedestrians. To ensure all street user groups are safe, planning should include features such as protected bike lanes and pedestrian buffer zones. Crime is also a major concern for street safety. As Jacob (1961) notes, more "eyes on the street" help to prevent crime, when more people are out enjoying themselves and taking part in various activities. Streets with numerous attractions thus have more "eyes," which keep them safer.

From a design perspective, streets that are quality public spaces are very rich in designed details. The building facades, landscaping, street facilities, and sidewalk signage together attract people, and encourage them to stay on the streets. Dover and Massengale (2014) suggest that great streets that are public spaces are like public outdoor rooms. Features such as architectural details of the surrounding buildings, lighting design at night, or graffiti art can all make streets lively and vibrant urban public spaces. Street spaces can be designed for people to linger in, encouraging them to stay rather than simply pass through. The more features to entice people and the more their needs can be met, the more time they will spend on streets, which leads to more social exchange and street-scale economic activities. Fa Yuen Street in Mong Kok, Hong Kong, for example, is a very dynamic and charming pedestrian street that is always crowded, due to its vibrant street shops, hawkers' stalls, and the local snack vendors at each crossing. Many people are drawn to and linger on the street, spending time and enjoying the urban environment.

According to Jacobs (1993), successful streets promote participation and encourage people to come together in urban street life. Streets that are planned and designed as movement spaces inherently facilitate urban traffic and movement, and have the potential to sustain the various urban

interactions between different individuals and the streets. In this process, the attachments of place and human relations are formed and built. It is “a process by which some external stimulus provides a linkage between people and prompts strangers to talk to other strangers as if they knew each other” (Whyte, 1988, p. 154). As Jacobs (1961) asserts “The trust of a city street is formed over time from many, many little public sidewalk contacts. It grows out of people stopping by the bar for a beer, getting advice from the grocer and giving advice to the newsstand man…” (p. 56). Streets that can initiate interactions between people are lively public spaces in the city. The best streets as public spaces are different and unique, with their own distinct place identities. Grand boulevards, like the Champs-Élysées in France, The Walk of Fame along Hollywood Boulevard in Los Angeles, the always busy and lively La Rambla in Barcelona, Spain, and the perpetually crowded streets in Lan Kwai Fong, Hong Kong all have their own unique sense of place, and each is highly memorable. They either communicate the history and culture of the place, or tell the local stories to tourists and outsiders. Fundamentally, these great streets are loaded with the places’ spirits, which creates unique street places.

2.9 Bridges as public spaces

Primarily a functional infrastructure, a bridge is a physical connector that assists in the movement of people. In most cases, bridges are part of, and integrated into, the street grid. As with streets, bridges can considered as public spaces to stay in rather than simply passed over or crossed. Centuries-old or recently built, these multifunctional bridges all serve as social and even emotional, rather than merely physical, connectors. They may be architectural marvels, cultural icons, tourist attractions, or visual icons (Burke, 2015).

There is a long tradition of European bridge-building. The 118 small islands that constitute Venice are separated by canals and linked by bridges. It is the bridges that connect each separate part of the city and make it an organic

whole. The Rialto Bridge was completed in 1591, and has since enabled locals and a huge number of tourists to cross the Grand Canal (Figures 2-7, 2-8). A well-built and soundly engineered bridge, it is lined with shops on both sides. Those crossing the bridge, particularly tourists, can stay and spend time on it, talking and shopping, rather than simply using it to get somewhere else. The bridge is one of Venice's cultural and visual icons, and often found on the city's postcards. Ponte Vecchio in Florence, Italy, and the Pulteney Bridge in Bath, England are other exceptional bridges noted for the shops built along them. Butchers initially occupied the shops on Ponte Vecchio, but the present tenants are jewelers, art dealers, and souvenir sellers. These three bridges are not only functional, enabling the movement of people, but also vibrant public spaces that both local residents and tourists want to spend time in.

Figure 2-7 The Rialto Bridge, Venice, Italy

Source:

https://upload.wikimedia.org/wikipedia/commons/8/83/Rialto_bridge_2011.jpg

Figure 2-8 The Rialto Bridge, Venice, Italy

Unlike the Rialto Bridge, Ponte Vecchio, and the Pulteney Bridge, which were originally designed with commercial shops built along them, the Charles Bridge in Prague, Czech Republic was constructed at the beginning of the 15th century to solely accommodate pedestrians and horses. In the 19th century it was modified to take electric trams and buses ("Charles Bridge," 2015). It was damaged in World War II, and when repaired in the 1960s and 70s it was changed to only accommodate pedestrians. Today, the bridge is always packed with tourists and souvenir vendors, and serves both as a functional pedestrian bridge and a vibrant tourist spot.

The Galata Bridge in Istanbul, Turkey spans the Golden Horn, an inlet of the Bosphorus. The current bridge is the fifth, completed in 1994, as the four previous bridges were damaged or pulled upstream to replace others. The Galata Bridge is a vibrant public place due to its two-layered deck structure (Figure 2-9). Bars, eating-places, a wet market, and numerous other shops occupy the lower deck, which is just above the sea. The upper level is a standard utilitarian bridge deck for both pedestrian and vehicular traffic. A particular reason why the Galata Bridge is an ideal destination is its fishing spot on the upper level, and it is well known that those who choose to fish on the Bridge do it much more for fun than to make money. It is both a real and culturally symbolic link that brings the city together,

connecting the shores of the traditional Istanbul of royal palaces with those of the modern city, full of traders and diplomats.

Figure 2-9 The Galata Bridge, Istanbul, Turkey
Source: http://www.rahlat.com/blog/wp-content/uploads/2015/08/virginia-duran-blog-10-sites-to-take-the-best-skyline-pictures-in-istanbul-galata-bridge-1.jpg

In Columbus, Ohio, the High Street Cap opened in 2004, lining a traditional road bridge with shops along both sides, somewhat like a modern Rialto in miniature (Figures 2-10, 2-11). Covering and spanning a sunken interstate highway, the High Street Cap was built to “reconnect neighborhoods that were torn apart by the national highway” (Kamin, 2011). The pedestrian-friendly “cap” creates a public space on the bridge, and the shops and restaurants benefit from the increased pedestrian traffic. The pedestrians themselves may even forget they are walking over a bridge.

Figure 2-10 The High Street Cap, Columbus, Ohio

Source: http://featuresblogs.chicagotribune.com/theskyline/2011/10/ohio-highway-cap-at-forefront-of-urban-design-trend-retail-complex-atop-columbus-expressway-offers-m.html

Figure 2-11 The High Street Cap, Columbus, Ohio

Source: https://www.flickr.com/photos/paytonc/141259755/

Finally, comparing the ideas of ‘streets as public space’ vs ‘bridges as public space’, both streets and bridges are primarily constructed for the purpose of urban movement, which are generally planned and designed with linear form and with only essential public facilities installed, such as rubbish bins. Nevertheless, individuals are capable of appropriating both streets and

bridges as public space to meet their diverse urban needs. However, unlike streets, bridges contain multilevel space at the ground level, elevated level and intermediate level between the bridge and its surroundings. In addition, some bridges are designed with covers or are even fully enclosed interior spaces, whereas the degree of enclosure for streets depends on the surrounding buildings that are built along it.

2.10 Place and its theoretical model

The concept of "place" is widely used in many disciplines, such as urban design, architecture, geography, anthropology, and environmental psychology. Each field defines it differently, some elaborating in detail while others are more vague.

The concept of "place" has been discussed in the field of geography since the subject first emerged as a discipline. The notion of place has been conceptualized "as a particular location that has acquired a set of meanings and attachments… a combination of materiality, meaning, and practice…" (Cresswell, 2009, p. 169). A mere location becomes a "place" when it becomes meaningful, and the most obvious establishment of places are through notable historical events, such as wars, "but more mundane practices are, perhaps, a more significant ingredient in place. Places are continuously enacted as people go about their everyday lives—going to work, doing the shopping, spending leisure time, and hanging out on street corners. The sense we get of a place is heavily dependent on practice and, particularly, the reiteration of practice on a regular basis" (Cresswell, 2009, p. 170).

The origins of the philosophy of place can be traced back to ancient Greece. Plato (428-348 BC) developed the notions of "chora" and "topos" to refer to a place in the process of becoming and to an established place, respectively. Plato's student, Aristotle (384-332 BC) believed that the place "takes precedence over all other things" (Casey, 1997, p. 71) because everyday

existence requires a location. Hence, “that without which nothing else can exist, while it can exist without the others, must needs be first” (Casey, 1997, p. 52). Compared to other philosophers, Aristotle attached greater importance to thinking about a place than to the notion of space. It was not until the late nineteenth century that place again became a central concept in philosophy, particularly in the work of Martin Heidegger, who discussed the nature of “being.” He believed that to “be” was to be “somewhere;” “being there” is not simply “being” in an abstract sense. Rather, a human exists “in the world,” and is thus “dwelling” in the world. For Heidegger, a place is perceived and appreciated through human experiences. He believed that space is the context in which people can identify place, and emphasized that the empirical methods used to perceive places offer a richer method of describing the world than mathematical abstractions. His views strongly influenced the works of the humanistic geographers who developed the notion of place in the 1970s.

The humanistic geographers of the 1970s believed that people should be thought of as knowing and feeling subjects, rather than simply as rational beings, in contrast to spatial scientists who treat people as rational actors in a rational world. These geographers argued that emphasis should be placed on the means by which people inhabit and experience the world. “It is this notion of experience that lies at the heart of the humanistic approach to place” (Cresswell, 2009, p. 172). Hence, the concept of place is a way of relating to the world through experience. It is experience that “transforms a scientific notion of space into a relatively lived and meaningful notion of place. Namely, space endowed with human meaning is transformed into place. What begins as undifferentiated space becomes place as we get to know it better and endow it with value … the ideas ‘space’ and ‘place’ require each other for definition. From the security and stability of place we are aware of the openness, freedom and threat of space, and vice versa. Furthermore, if we think of space as that which allows movement, then place is pause; each pause in movement makes it possible for location to be transformed into place” (Tuan, 1977, p. 6). Similarly, Relph (1976) argues that space and place are dialectically structured in human environmental

experiences, as space has a close relationship with the places we inhabit, which in turn generate meanings from their spatial context. For Low and Altman (1992), places are spaces endowed with meaning in cultural, individual, and social processes.

In the 1980s, inspired by humanism and by the radical approaches of Marxism, Harvey and colleagues developed a critical approach to the study and analysis of place. They argued that the social process (particularly under capitalism) is deeply involved in the construction of place. For them, "…place in whatever guise, is like space and time, a social construct. The only interesting question that can be asked is, by what social process(es) is place constructed?" (Harvey, 1993, p. 5). The humanistic geographers believed that different places are developed from different experiences. They treated people and places in isolation, sustained by the minutiae of local attachment and local experiences, whereas the Marxist geographers argued that places are not only interconnected but also interdependent. Different people and places are connected and united by common processes in a truly global economy (Clifford et al., 2009).

Relph (1976) examines place in detail in his influential book *Place and Placelessness*, focusing on people's identity of and with place. He refers to its "persistent sameness and unity, which allows that (place) to be differentiated from others" (Relph, 1976, p. 45). He identifies three basic elements of place identity: the physical setting of the place, people's activities and actions in that place, and the meanings that are created through people's experiences in that place. In his seminal book *Psychology of Place*, Canter (1977) similarly adds a new dimension to the concept of behavior setting in environmental psychology, arguing that a place is defined and understood as the juxtaposition of physical attributes, actions, and concepts it represents, which makes "available a unit of study that encapsulates a mixture of processes that create our experience of our socio-physical surroundings" (p. 118). Canter (1988, p. 10) considers place to be a more "technical term," from a psychological viewpoint, while from the standpoint of human geography taken by Relph (1978) is more "romantic."

Both identify the basic elements of place, and agree on a similar theoretical model (Sime, 1986; Groat, 1995). Based on these studies, and applying the very similar three-part theoretical models of place in Relph (1976) and Canter (1977), in this study a "place" is regarded as being composed of physical spatial attributes, people's activities, and their perceptions (Figure 2-12), depending on what people do in the place and how they feel about the place. Pedestrian bridges are considered as everyday places in densely populated urban areas in terms of their spatial forms, everyday urban activities, and their meaning for the city's population. Attention is focused on the activities carried out in these places (pedestrian bridges in Hong Kong), as these activities are primary components of the psychology of a place, both in the theory of place and in the theoretical models (Canter, 1976; Parkes & Thrift, 1980).

Figure 2-12 Canter's place model

Source: Canter (1977)

2.11 Place attachment

Place attachment is a bond that people develop with a place (Giuliani, 2003; Hidalgo & Hernandez, 2001; Low & Altman, 1992; Manzo, 2003). Humanistic geographers such as Relph (1976) and Tuan (1974) argue that this bond is a universal affective tie that fulfills a human need. In general,

the interaction between humans and places has three dimensions: cognitive, behavioral, and emotional (Jorgensen & Stedman, 2001; Kyle, Mowen, & Tarrant, 2004; Low & Altman, 1992). The cognitive aspect of the interaction leads to the recognition and perception of the environment and its elements, which relates to the formal aspects of the physical environment. The behavioral aspect pertains to the functional relationships between the environment and the people (Amdur & Epstein-Pliouchtch, 2009). Emotional interactions are those of a place point to an attachment to the place (Low & Altman, 1992), which considers the meaning of the place to people. The basic elements of a place as form, function, and meaning therefore correspond to the cognitive, behavioral, and emotional dimension of place attachment (Figure 2-13).

Figure 2-13 Dimensions of place attachment in placemaking

2.12 Placemaking

A survey conducted in 2006 by the Project for Public Spaces (PPS) asked for participants' definitions of placemaking. Over 750 responses were collected, and answers cover topics such as living space, space for everyone, sense of belonging, spaces that serve the public, and the space of democracy,

which demonstrated a surprising diversity and gave hundreds of definitions, demonstrating no single or shared definition of placemaking.

The idea of making human-scale vibrant social places is not new. The Greek agora with its role as market place and the plazas of the Renaissance were places for public gatherings. In the history of human settlement, public places reflect human needs and the identity of the community, and accommodate and link people with their community. With the advent and development of the industrial revolution in the 19th century, the industrial age focused on machine efficiency. The celebration of cars and the construction of highways changed the appearance of cities, but more importantly how cities were planned. Effectiveness-driven modernist urban planning eliminated the diversity of community and destroyed human-scale walkable urban spaces. The outcome of modernism urban planning was placelessness. Places were generic and looked very much alike. The function-driven, effectiveness-led rational top-down planning by design professionals and government officials shaped thousands of cities in a single image, and deconstructed the human-centered community-led spaces in the early 20th century.

The human-centered concept of placemaking originated in the 1960s, when Kevin Lynch presented extensive empirical research in his book *The Image of City* and investigated the human perception of the city and how individuals navigated cities with their perceived images of them, raising the awareness of the importance of human-centered urban design. A year later, Jane Jacobs' book *The Death and Life of Great American Cities* questioned the clearing of human-scale city blocks to create clean and neat urban environments, and encouraged people to fully use the streets in their everyday life. William Whyte takes a more analytical approach than Jacobs, using video recorded observations to investigate the key elements for creating vibrant social life and lively public urban spaces. Human-centered placemaking was increasingly recognized and adopted by urban designers, landscape architects, architects, and urban planners from the 1970s in the construction of urban public spaces. The understanding of place by

humanistic geographers was also developed in the 1970s, as reviewed in the previous section of this chapter, a concept extremely relevant to the human-centered placemaking movement. In his book and accompanying film *The Social Life of Small Urban Spaces*, Whyte demonstrates what makes effective urban public spaces. Influenced by Jacobs' and Whyte's ideas of everyday social life and urban public space, the nonprofit organization Project for Public Spaces (PPS) was founded by Fred Kent in 1975, and a comprehensive placemaking approach to creating public places and to build communities was developed. In the PPS, placemaking is "both an overarching idea and a hands-on approach for improving a neighborhood, city, or region, placemaking inspires people to collectively reimagine and reinvent public spaces as the heart of every community … placemaking refers to a collaborative process by which we can shape our public realm in order to maximize shared value … placemaking facilitates creative patterns of use, paying particular attention to the physical, cultural, and social identities that define a place and support its ongoing evolution" ("What is Placemaking?" 2015).

Christopher Alexander celebrates designs for and by people in his 1977 book *A Pattern Language*, in which he questions the top-down urban design and planning process. He argues that the modernism approach ignored human needs and was against human scale cities. He asserts that people should design their own houses, streets, and communities themselves, as he and his team observed that most of the wonderful places of the world were not made by professional designers or architects, but by ordinary people. Philosophers such as Henri Lefebvre and David Harvey also developed key theories with their works on urbanism and city space; specifically, the fundamental concept of the "right to the city." David Harvey (2008) states that "The right to the city is far more than the individual liberty to access urban resources: it is a right to change ourselves by changing the city. It is, moreover, a common rather than an individual right because this transformation inevitably depends upon the exercise of a collective power to reshape the processes of urbanization. The freedom to make and remake our

cities and ourselves is, I want to argue, one of the most precious yet most neglected of our human rights" (p. 23).

People's rights to the city are particularly significant with regard the movement of placemaking when in public rather than in private or personal spaces. Ray Oldenburg calls these "third places;" places of social gathering where both new and familiar people are met. According to Oldenburg (1989), the third places are neutral ground where people play equally and are not distinguished by their economic or social status. Public spaces such as street corners, community centers, and parks are all third places. Thus, placemaking in public spaces has great potential in offering the community social capital. Robert Putnam (2001) defines social capital in his book *Bowling Alone* as "the connections among individuals-social networks and the norms of reciprocity and trustworthiness that arise from them" (p. 19). The movement of placemaking in public spaces encourages social activities and collective actions, which increases the community's social capital and civic engagement.

The abovementioned theorists laid a solid and comprehensive foundation for the perception of placemaking. The rapid development of technology in recent decades, particularly the improvements in physical and virtual communications, has seriously accelerated the homogenizing effect of globalization. Placeless places are again increasing. Transnational corporations and the globalization of economic activities has led to an increasingly placeless world, creating problems in the relationships between local and global dimensions of places. Castells (1989) describes the effects of information technology in the creation of "space of flow" that "dominates the historically constructed space of places" (p. 6). Zukin (1991) argues that there is a tension between "global capital" that can move and "local capital" that cannot (p. 15). Harvey (1997) observes that "capital need fewer workers and much of it can move all over the world, deserting problematic places and populations at will" (p. 20). Places are more determined by economic forces. In the face of these issues, the movement of placemaking has grown in complexity, and attempts to find multiple ways of transforming

contemporary urban spaces with a human-centered approach. The contemporary placemaking movement advocates people's rights to the city, in terms of building as much as social capital, and sustaining local community identities.

In this study, placemaking is set in an individual/pedestrian scale, as this "allows people to interact in a variety of mostly unplanned ways, on the street or in business establishments among other spaces of habitual encounter" (Friedmann, 2010, p. 154). According to Marcus (1995), placemaking is defined from this perspective as "a mirror of self." When new spaces are inhabited, changes and appropriations such as moving furniture and decorating are considered as reflections of placemakings; people mirror themselves in their everyday experiences. Friedmann (2007) asserts that placemaking occurs through appropriating an already existing place by learning the physical place and by knowing and becoming involved with local people and activities. Lombard (2014) regards placemaking as an analytical lens, through which all types of activities are viewed equally in the construction of a particular place. This acknowledges activities across various scales, which can involve individuals, families, or governments. In placemaking, instead of seeing places as static unities, places are viewed as constantly dynamic and evolving. In this study placemaking is used to capture the dimensions of vitality and livability invested by ordinary everyday users of places, focusing on the micro-level activities of individuals in making places.

PART TWO - The perspective of everyday life

2.13 Everyday life

The concept of everyday life can be vague and complicated, and has been researched by many scholars in different fields. From a sociological perspective, everyday life includes all people equally with no class

distinctions, embraces all types of religious, ritual, or ceremonial practices, and comprises individuals' public and private lives (Sztompka, 2008). It occurs in a social context, "which connects and coordinates diverse activities, movements, and actions" (Dempster, 2008, p. 23).

From the beginning of the 20th century, Modernist urbanists have taken the approaches of rational functionalism and scientific analysis to manage urban development and solve complex urban problems. They upheld the principles of "the functional city" and believed that social problems could be resolved by strict functional segregation. This failed to account for the complexity and variety of urban spaces, and also for the emotion and spirit of the inhabitants. Le Corbusier, one of the most influential modernist architects and urban planners, concentrated exclusively on large areas, neglecting the living spaces of the people and thereby denying their everyday practices (Le Corbusier, 1967). To the modernist urbanists, all things could be standardized, and even human beings could be categorized and quantified (Guiton, 1981; Le Corbusier, 1991). In his *Writing on Cities* (1996), Lefebvre criticizes Le Corbusier's neglect of the everyday urban spaces where collective gatherings can take place. He remarks that the "plan by Le Corbusier which gets rid of the city and replaces it by gigantic houses where everything is given over to circulation. Le Corbusier was a good architect but a catastrophic urbanist, who prevented us from thinking about the city as a place where different groups can meet, where they may be in conflict but also form alliances" (p. 207).

Since the 1960s, scholars and urban researchers have questioned the ideology of modernist urban planning by emphasizing the importance of humanistic dimensions in the planning paradigm. Alexander (1965) queries the rationalistic functional planning approach and suggested that cities embody "the ideas of overlap, ambiguity [and] multiplicity of aspect" (p. 9). Jacob (1961) also criticizes rationalism and argues that urban planning should pay more attention to the interrelationships between the urban environment and everyday life.

From the perspective of the social systems of the eighteenth and nineteenth centuries, everyday life was considered to involve the domination and exploitation of individuals. In the late nineteenth century, social theorists such as Max Weber argued that individuals were self-motivated subjects rather than simply passive. As everyday life evolved in the twentieth and twenty-first centuries, it became conceptualized as a highly pluralistic and dynamic domain, closely mediating between active individuals and the social structure (Bennett, 2005).

This environmental and behavioural study takes a sociological perspective on everyday life. Henri Lefebvre was one of the first philosophers to consider the details of everyday life. He believed that apparently trivial everyday activities constituted the basis of all social experience and described everyday life as the "the screen on which society projects its light and its shadow, its hollows and its planes, its power and its weakness" (Lefebvre, 1991, p. 18). In his *Critique of Everyday Life* (1991a), Lefebvre interprets the phrase as "banal and meaningless life." This referred to the organization of repetitive and ordinary routine daily events and activities (Lefebvre and Regulier, 1985; Shields, 1999). "They were the more strikingly ordinary in the first half of the twentieth century because common, everyday activities were generally ignored by both philosophers and the social theorists. The focus was on great events or institutions" (Shields, 1999, p. 69). Unlike other philosophers and social theorists who focused only on unusual or grand-scale events or activities, Lefebvre was interested in micro-level, ordinary activities. He believed everyday life was "a work of art" and "the joy that man gives to himself" (Lefebvre, 1991, p. 199), and considered each individual as a potential artist to be encouraged through "a radical reorganization of modern life" (Lefebvre, 1984, p. xvi). For Lefebvre, the city was "a place where different groups can meet, where they may be in conflict but also form alliances, and where they participate in a collective *oeuvre*" (Lefebvre, 1996, p. 207). Thus, the city and its qualities exist in each individual's everyday activities that take place in common places, which can often go unnoticed.

Michel de Certeau (1998) defines everyday life in his book *The Practice of Everyday Life* as "what we are given every day (or what is willed to us), what presses us, even oppresses us" (p. 3). He points out that the temporal is just as significant as the spatial in everyday life, and develops a theory of everyday spatial practice involving "strategies" and "tactics." According to de Certeau (1984), strategies represent the practices of institutions and structures with the power to "postulate a place that can be delimited as its own and serve as the base from which relations with an exteriority composed of targets or threats… can be managed" (pp. 35-36). Thus, strategies are a "triumph of place over time" (p. 36) and seek to establish their own place. In contrast, individual acts in a place are regulated by the use of tactics. "A tactic is an art of the weak … is determined by the absence of power, just as a strategy is organised by the postulation of power" (pp. 37-38). Tactics rely on the "chance offerings of the moment" and "constantly manipulate events in order to turn them into opportunities" (p. xix). They are performed by "consumers" on the terrain of everyday life. "It operates in isolated actions, blow by blow. It takes advantage of 'opportunities' and depends on them; being without any base where it could stockpile its winnings, build up its position, and plan raids … It poaches them [spaces]. It creates surprises in them" (p. 37). In Siu's (2007) research on Hong Kong's Chun Yeung Street, ordinary individuals use tactics such as re-defining functions or re-territorializing spatial boundaries, enabling them to successfully live in the urban environment and that support their everyday lives. Siu's study also concretely illustrates that everyday life works by integrating the existing rules rather than being simply determined by those rules.

Therefore, everyday life is the medium through which social existence is formed and is assigned meanings by ordinary individuals. It is made up of repeated, ritualized, and temporal experiences and practices, which occur within a social context and are then socially constructed (Sztompka, 2008). In the urban context, the everyday life of the city refers to "the relatively routine functioning of those spaces in the city, to those patterns and routines that performatively emerge from their regular usage" (Simpson, 2011, p.

417). The routines are more than regular occurrences, they also accommodate great potential. These extremely interactive everyday mechanisms can be viewed in terms of Lefebvre's (1991) spatial triad. His "representations of space" defined by regulations are affected by users' "spatial practices," which (re)produce a spatial order and then generate "lived spaces;" the space of everyday. The micro-scale individual practices of interventions, appropriation, and changes of the space are engaged in "processes of heterogenesis," and release everyday potentials (Guattari, 2008, p. 34; Simpson, 2011).

This study takes the perspective of everyday life and focuses on the everyday urban lives of ordinary people. The individuals studied are not a particular social class or a small elite group, but are individuals who ceaselessly perform their "practice of everyday life" in the city and who are the city's users. The study analyses at the microlevel rather than a macrolevel, to investigate the spatial practices and everyday tactics used by ordinary people when adapting to the strategies and regulations of urban authorities.

2.14 Everyday space and everyday urbanism

Inspired by French philosophers Henri Lefebvre and Michel de Certeau, urbanists can find rich meanings and significant actions in the ordinary routines of daily life. According to Lefebvre (1980), the city is "a place where different groups can meet, where they may be in conflict but also form alliances, and where they participate in a collective *oeuvre*" (Lefebvre, 1996, p. 207). Urbanists such as Crawford focus the importance of the public realm as a place for the everyday activities of the city. The connections between everyday life and the design, planning, and management of a city are established through various forms of everyday space: a space that is "between an individual or defined group and the rest of the city … the site of multiple social and economic transactions, where multiple experiences accumulate in a single location … where differences

collide or interact" (Crawford, 2008, p. 6). It is the space in which each individual's "everyday life" is carried out (Lynch, 1960; Whtye, 1988; Snedcof, 1985; Kurokawa, 1988). Hsia (1993b), focusing on grassroots, argues that "everyday space" is the "reality." Eley (1995) refers to "the space where everyday lives (and sufferings) of those who are frequently labeled as the 'small people' live" (p. ix). It is the space that illustrates the "everyday, ordinary people" who are uninvolved but affected by political decisions about their everyday lives, such as "housing and homelessness, clothing and nakedness, eating habits and hunger, people's loves and hates, their quarrels and cooperation, memories, anxieties, hopes for the future" (Ludtke, 1995, p. 3).

In *Writing Urbanism: A Design Reader*, Kelbaugh (2008) identifies three contemporary paradigms of urbanism: new urbanism, everyday urbanism, and posturbanism. New urbanism is a deterministic view that envisions a structural relationship between social behavior and physical form and stresses that good design leads to positive effects on sense of place and community. Posturbanism, championed by architects such as Rem Koolhaas, is sensational and poststructuralist, ignores context, and downplays shared value. Unlike the other paradigms, everyday urbanism is conversational and nonstructuralist. It is based on and celebrates ordinary everyday life and downplays the direct relationship between social behavior and physical design. It is particularly focused on the street level, and is egalitarian as it encompasses all city dwellers (Figure 2-14). Mehrotra (2004) defines everyday urbanism as an approach that finds meaning in everyday life and its experiences. Crawford (2008) claims that everyday urbanism is a new means by which to connect urban research and design with ordinary human and social meanings that is informal and bottom-up.

EVERYDAY URBANISM	It is non-structuralist. It celebrates and builds on ordinary, everyday life and downplays the direct relationship between social behavior and physical design.
NEW URBANISM	It is structuralist and believes the direct relationship between the physical form and social behavior.
POST URBANISM	It is sensational and poststructuralist. It ignores the context and downplays shared values.

Figure 2-14 Three urbanisms

Everyday urbanists consider everyday space as a zone of possibilities and transformations, although the term is highly generic. The simple observation of people—a research strategy of this study—can yield the situational and specific qualities of everyday urban experience. To capture the informal and spontaneous use of space alongside formal and planned functions, it is essential to take the point of view of its users, and examine their everyday activities.

PART THREE – The urban development and planning of Hong Kong

2.15 High-density and the compact urban form

Originally a small fishing village, Hong Kong first became a British colony in 1841, and more recently a Special Administrative Region of China. It is located on the southern coast of China in the South China Sea at the mouth of the Pearl River Delta. It has evolved into one of Asia's premier global cities. The forces that shape urban forms are complex (Newman, 1992), and according to Yeh (2000) and Zhang (2000), the dense, highly compact urban form of Hong Kong is the result of the rapid growth of the urban population, the scarcity of land, and land policies.

2.15.1 Topography and the scarcity of land (for development)

Hong Kong has a land area of 1078 km², and only 14.3% of the territory's landmass is developed due to the steep mountains and hills that dominate its natural terrain. It is therefore both small and also spatially constrained for human settlement. Government policies have ensured that nearly 40% of the remaining land area is reserved for parks and nature reserves, water catchment, and recreation ("Hong Kong 1994," 1994). In 1958, development accounted for 5% of Hong Kong's total land area (Table 2-5), but by 2014, the proportion of built-up land had risen to 24.1% ("Land Utilization in Hong Kong 2014," 2015) (Figure 2-15), and around 66.5% of the undeveloped land area is woodland, shrubland, grassland, and wetland, which is currently unsuitable for future development. Land for urban growth and development in Hong Kong is therefore extremely scarce. Thus, its compact urban form can be seen as predetermined, rather than shaped and built by design.

Table 2-5 Land-use types and distribution in Hong Kong in 1958

Land-Use Types	Approximate Area in Square Kilometres[1]	% of the Total Land Area	Remarks
Built-up (urban areas)	57	5	Includes roads and railways
Steep country	287	28	Rocky, precipitous hillsides incapable of plant establishment
Woodlands	34	3	Natural and established woodlands
Grass and scrub lands	448	44	Natural grass and scrub
Eroded lands	59	5	Stripped of cover, granite country, capable of regeneration
Swamp and mangrove	21	2	Capable of reclamation
Arable	132	13	Includes orchards and market gardens
Total	1,038	100	

Source: Gregory (1964)

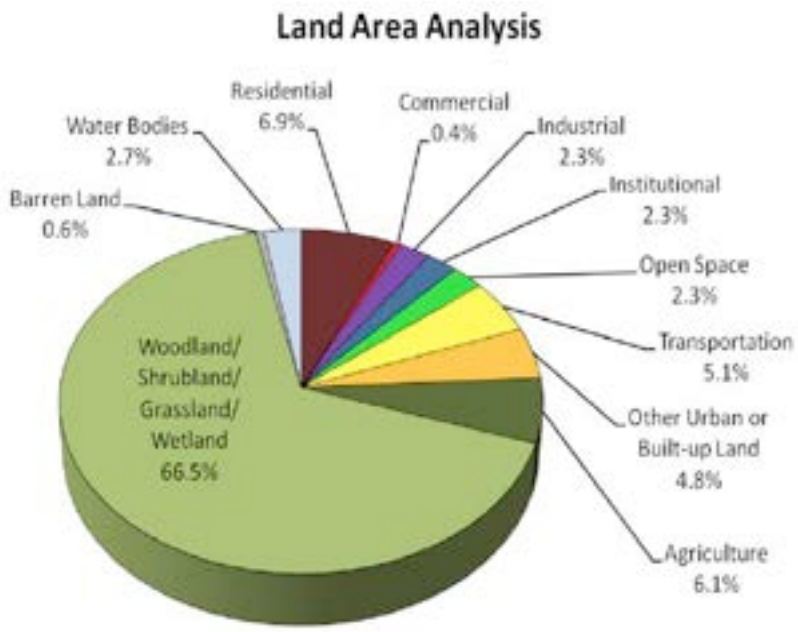


Figure 2-15 Land use in Hong Kong 2014

(Source: Planning Department, Government of the Hong Kong SAR)

2.15.2 Rapid growth of urban population

According to Fan (1974), the Government Gazette reported the first population figure for Hong Kong Island as 7,450 in May 1841. As foreign merchants and Chinese laborers moved in, the population increased rapidly to 23,817 by 1845, rising to 86,941 in 1859, largely due to the Tai Ping War, which resulted in a large number of refugees entering Hong Kong. Over the first 3 decades of the twentieth century, Hong Kong's population steadily grew from 456,739 in 1911 to 840,473 in 1931, an increase of almost 84% in just 20 years (Table 2-6).

Table 2-6 Population growth of Hong Kong 1872-1971

Year	Total Population	Annual Growth Rate (%)
1872 (December 1)	121,985	–
1881 (April 3)	160,402	3.1%
1891 (May 20)	221,441	3.3%
1901 (January 20)	368,987	2.5%
1911 (May 20)	456,739	2.2%
1921 (April 24)	625,166	3.1%
1931 (March 7)	840,473	3.0%
1961 (March 7)	3,129,648	4.5%
1971 (March 9)	3,936,630	2.3%

Notes: (1) Figures prior to 1901 excluded New Territories.
(2) The date shown within brackets was the census date of that year.
(3) The annual growth rate between 1891 and 1901 was computed from the population totals, excluding residents of New Territories, of the two years.

Source: Fan. (1974).

Hong Kong experienced an extremely rapid rate of urban population growth from the late 1930s, due to unsettled and difficult living conditions in China resulting from the Japanese invasion in World War II and the Chinese Civil War from 1945 to 1949. Numbers rose from 840,473 in 1931 to around 2,100,000 in 1950 (Table 2-7), and in a single year (1945 to 1946) the population increased by 55% to 1,400,000. Most were refugees fleeing from war.

Table 2-7 Population growth in Hong Kong 1945-1957

Year	Natural Increase	Migration Movement	Total Population
1945			900,000
1946	+14,000	+486,000	1,400,000
1947	+29,000	+371,000	1,800,000
1948	+34,000	+166,000	2,000,000
1949	+38,000	+252,000	2,300,000
1950	+42,000	-242,000	2,100,000
1951	+48,000	+27,000	2,175,000
1952	+53,000	+22,000	2,250,000
1953	+57,000	-57,000	2,250,000
1954	+64,000	+186,000	2,500,000
1955	+71,500	-171,000	2,400,000
1956	+77,500	+57,000	2,535,000
1957	+78,500	+63,500	2,677,000

Source: Mok. (1959).

The population again grew from 2,175,000 in 1951 to more than 3,000,000 in 1961, with an average annual growth rate of 4.7% (“The Demographic Situation in Hong Kong,” 1974). Between 1961 and 1981, though population growth slowed, the average annual growth rate remained at 2% (Table 2-8). From 1961 to 2013, the overall population increase was more than three million, which pushed the total population to 7,187,500 by mid-2013 (“Hong Kong: The Facts—population,” 2015) (Table 2-9). The rapid increase in population and the economic development after the 1960’s led to the need for vehicular and pedestrian traffic to be segregated, improving road safety and traffic capacity. In 1963, the first grade separated pedestrian bridge across Leighton and near Victoria Park was constructed.

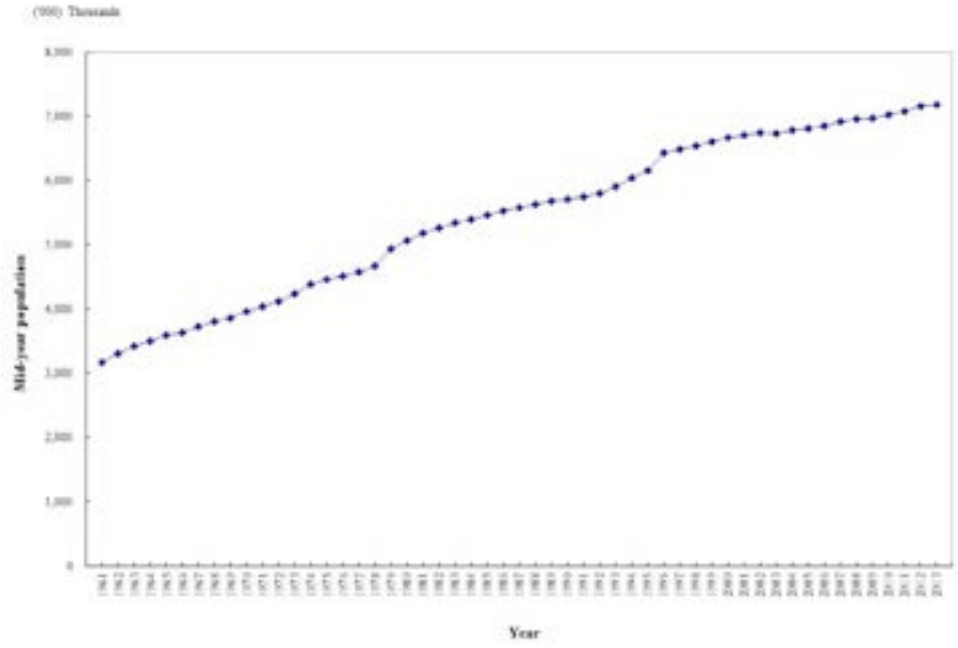
Table 2-8 Average annual growth rate of Hong Kong population

Years	Average Annual Growth Rate (%)
1951-1956	5.3
1956-1961	3.9
1961-1966	2.8
1966-1971	2.2
1971-1976	2.2
1976-1981	2.8
1981-1986	1.3
1986-1991	0.8
1991-1996	1.9
1996-2001	0.9

Source: Demographic Statistics Section, Census and Statistics Department, The Government of the Hong Kong SAR

(The average annual growth rate between 1991 and 1996 is based on the mid-1996 population estimate of 6.31 million, using the extended de facto method.)

Table 2-9. Mid-year population in Hong Kong 1961-2013



Source: Department of Health, The Government of the Hong Kong SAR

2.15.3 Policies for a compact city

Land in Hong Kong is a very limited and valuable resource, and land use and its management is a critical issue in urban development (Lai, 1997). The government owns all land in Hong Kong, so it controls the land supply and its uses. It is both the biggest landlord and the urban development administrator. The land is allocated as private residential, commercial, and industrial uses by auction or tender, and for public use through free allocation (Lai, 1993). Thus, it is ensured that the land can attain the highest value, and as a result it is used as intensively as possible by the developers. Efficiency then becomes a major concern in urban development, and the government gives priority to “economic space” rather than “life space” (Friedmann, 1988), which is also the focus of land use planning (Ng & Cook, 1996). Most land in the metropolitan area is developed with the primary considerations of economic benefits and efficiency, which initially caused the high land prices and made Hong Kong’s property market one of the most expensive in the world (Zhang, 2000). According to property consultants Knight Frank, office rents in Hong Kong’s skyscrapers remain

the worlds' highest at US$250.50 a square foot per year in 2014. These extremely high land prices were a major reason for the high-rise and high-density compact urban development that followed.

The scarcity of land and the topographic constraints to urban development mean that Hong Kong's economy is service-orientated and based on trade, finance, and tourism rather than on industry or agriculture as in a land-rich economy. Most of its industrial activities have accordingly been moved to neighboring provinces in mainland China, where land and labor resources are much cheaper. Hong Kong's wealth is invested in its own urban infrastructure to facilitate the service-orientated economy, which then forms the compact city, "encouraging urban patterns with workplaces and homes in close proximity, shortening travelling time and distances" (Zhang, 2000, p. 249). Thus, the development of high-rise buildings has made property development in Hong Kong one of the most profitable businesses in the world (Cartier, 1999). The developers' desire to maximize profits from the limited land stock has steadily contributed to and increased the high level of density in metropolitan areas.

In Hong Kong's free market economy, house prices are determined by the location, quality, and demand. The closer house units are to the town centers, the higher their prices and the better their quality. Demand has led to increased population densities in convenient locations. Hence, the high prices of the metropolitan areas have displaced those on low incomes to the rural areas (Tse, 1995). Hong Kong developed a coherent housing policy in the 1950s, when it experienced extremely rapid urban population growth, due to the unsettled and difficult living conditions in China resulting from the Japanese invasion in World War II and the Chinese Civil War. The refugees sought shelter in the suburban and rural areas, to reduce their living costs, and many lived there illegally. According to Choi and Chan (1978), the number of squatters increased from 300,000 in 1953 to about 500,000 in 1959. To control this increase and to address the unhealthy living conditions and the unplanned settlement of refugees, the government began to provide affordable housing to low-income households. After nearly 65 years of

public housing development, in 2014 45.8% of 7.235 million people lived in public housing ("Housing in figures," 2014), which is extremely significant in urban development and planning. The government also implemented a high-rise and high-density strategy in developing public housing for low-income residents, who had previously lived in overcrowded and unhealthy conditions as squatters. They only paid around 20-47% of the market value in rent. High-rise and high-density housing development is economically beneficial, as the government can incorporate commercial facilities into high rises, which compensate for the financial shortfall from the very low rent of public housing.

2.16 Circulation space as public space in contemporary urban Hong Kong

Before 1842 Hong Kong had not yet become a British colony, and its public space was mainly open village ground used for gatherings and celebrations. The initial urbanization of Hong Kong Island in 1841 resulted in the Possession Point of Sai Wan changing into a bazaar for Chinese peddlers in 1844. In 1896, the royalist colonials constructed of Royal Square (Bard, 2002), which was converted into Statue Square in 1996. In 1948, Sir Patrick Abercrombie initiated the planning of Hong Kong, and focused on improving the urban infrastructure and developing new towns, with little regard for the issue of urban public space. The designing and planning ordinance that followed still neglected to fully address the issue of public space, and lacked any comprehensive planning for the existing city and its future development (Xue & Manuel, 2001), resulting in "fragmented development, incompatible land use, lack of public spaces, and absence of a hierarchy in the public realm" (p. 173).

Kinoshita (2001) and Xue and Manuel (2001) describe public space in urban Hong Kong as primarily consisting of streets, public (pocket) parks, public squares, and the waterfront. Streets in Hong Kong play a significant role in people's everyday urban life, and are used for multiple purposes,

such as living and dining spaces. The informal uses of streets complement the city's urban function and sustain the local lifestyle (Kinoshita, 2001). Public parks in Hong Kong, such as Victoria Park, provide free social and recreational spaces for public debates, demonstrations, and other gatherings. Pocket parks of different sizes and forms are scattered throughout the urban areas, and mainly act as "living-rooms" for local residents. Public squares, such as Golden Bauhinia Square, are mainly located at government institutions and corporation headquarters, and have more formal and geometric designs, usually for ceremonial purposes. The waterfront of Hong Kong, a harbor city, enhances the quality of everyday recreational urban space and beautifies the cityscape (Xue & Manuel, 2001).

It is therefore apparent that Hong Kong has various forms of public space in its urban areas, but the city is seriously lacking in public space, due to its high density and compact urban form. There is no systematic hierarchy of public space in Hong Kong's hyper-dense environment, but in response to the lack of traditional public spaces such as parks and plazas, potential new forms of public space are increasingly being investigated and examined. Within its specific high-density and high-rise urban context, public space in Hong Kong is thus re-conceptualized, re-defined, and reformed.

Shelton et al. (2010) conclude that Hong Kong is volumetric, accommodating mixed activities with multiple-level urban space and 3D movement networks that incorporate urban traffic tunnels as public spaces, rather than linking traditional public squares. Frampton et al. (2012) claim that Hong Kong is a city without ground in that the three-dimensional circulation networks, public or privately owned and adjacent to numerous urban activities and uses, form a continuous urban space that functions as a fundamental public resource for the city. Hence, in Hong Kong's hyper-dense context, the primary urban circulation space is seen as a potential new form of urban public space. Considered an important type of urban conduit of the city's three-dimensional circulation space, the elevated pedestrian bridge has been the subject of various scholars' research. Rotmeyer (2010) examines the publicness of elevated public space in Central, Hong Kong,

and finds that a transition of publicness can occur in such a circulation space. Woo and Malone-Lee (2013) demonstrate that closely transit-integrated pedestrian bridges not only successfully improve urban connectivity and pedestrians' safety but also respond to Hong Kong's high density, acting as pedestrian corridors and surrogate public spaces. Similarly, Spurr and Kwok (2013) claim that the pedestrian bridge in Hong Kong is a form of public realm, providing the capacity for a community of difference, particularly to people such as domestic helpers, in this multi-temporal and multi-spatial contemporary city. Tan and Xue (2014) select two case studies of elevated pedestrian systems in Sha Tin and in Central to argue that these bridges are administratively and economically successful models for urban development but lack consideration for the environment quality that is perceived through complex human experiences. Kinoshita and Nishiie (2014) and Tan and Xue (2015) study and explore the historical process of elevated bridge construction in Central and the development of multilevel pedestrian networks between 1965 and 1977 in Hong Kong, respectively, arguing that the private sector and developers are essential and critical in pedestrian bridges development and construction, as the city adopts a consumer-oriented economy for economic effectiveness and its value is maximized. Chan (2015) investigates pedestrian bridges system in Tsuen Wan and finds that it effects a residential community by improving accessibility and connectivity and by affecting retail and residents' shopping on both ground and elevated levels. However, unlike these architectonic studies or historical or social surveys, this research conducts an empirical study between the pedestrian bridge and its users, emphasizing human actions and the experiences associated with a specific physical context, namely the pedestrian bridge.

2.17 The planning of multilevel pedestrian urban space

The idea of allocating pedestrians and vehicular traffic into different layers was first proposed by Europeans (Hass-Klau, 1990), and the concept of segregating pedestrians from vehicular traffic was mainly put into practice

in North America (Robertson, 1994). With the development and application of the modern engineering in the 20th century, construction of escalators, subways, high ways, and moving walkways renders pedestrians' spatial movement a controlled, repeated, and passive urban activity (Sennett, 1992; 1994; Urry, 2007). As a part of the whole system of urban circulation, the multilevel pedestrian space primarily channels the pedestrian flow and thus pedestrian movement becomes a part of urban production and consumption (Tan & Xue, 2014).

From the early 20th century, the imaginative changing modes of pedestrians' daily travel and highly efficient multilayered urban circulation began appearing in visions of future cities. In the famous New York fantasy *King's View of New York*, King (1911) demonstrates the multilevel circulated Grand Central, where the bottom level streets are built with low-level bridges and elevated railroads running along them, while in the higher level skyscrapers are connected by bridges above with trains running across them, demonstrating a city with a variety of elevated streets and of densely built skyscrapers connected by bridges at different levels (Figure 2-16). Similarly, in Eugène Hénard's cities of future, the multilayered city is planned so various urban activities are distributed over different layers to meet diverse urban needs. Antonio Sant'Elia's drawings of the Futurist City and Harvey Wiley Corbett's view of the City of the Future in 1913 also illustrate a vast, multi-level, interconnected, and integrated highly industrialized and mechanized city (Figures 2-17 and 2-18). Although these future cities were never built, they expressed the concepts and thoughts of planning multilevel pedestrian space. Their urban visions have had a significant influence on modern urban planning. The Grand Central Terminal in New York City is considered as a successful model of multilevel planning; a "super efficient enclave and hub … a multi-layered microcosm of the larger City Machine of mass consumption and production" (Shane, 2002, p. 228). In Calgary, Canada, the Plus 15 pedestrian walkway system consisted of more than 62 bridges and 18km of walkways linking buildings throughout downtown Calgary, providing pedestrians with alternative routes to numerous destinations ("Calgary's

Plus15 Skywalk," 2015). In Minneapolis, U.S., the first pedestrian bridge was completed on August 27 in 1962 as protection from the extreme winter cold, and it soon became a scenic spot attracting many people, increasing the area's property's value. Minneapolis has since continued to develop its system, connecting buildings in 69 full city blocks, which form a traffic network in the downtown area (Larson and Kaufman, 1985). Pedestrian bridges have continued to be developed, connecting blocks in the downtown areas of cities, providing climate-controlled walking spaces, blurring the boundary between outdoor and indoor space, and weaving them into organized multilevel pedestrian spaces, which also significantly encourage economic development (Robertson, 1994; Pai, Lee, & Cheng, 2007).

Figure 2-16 King's view of New York

(Source: The cover of Moses King's "King's Views of New York")

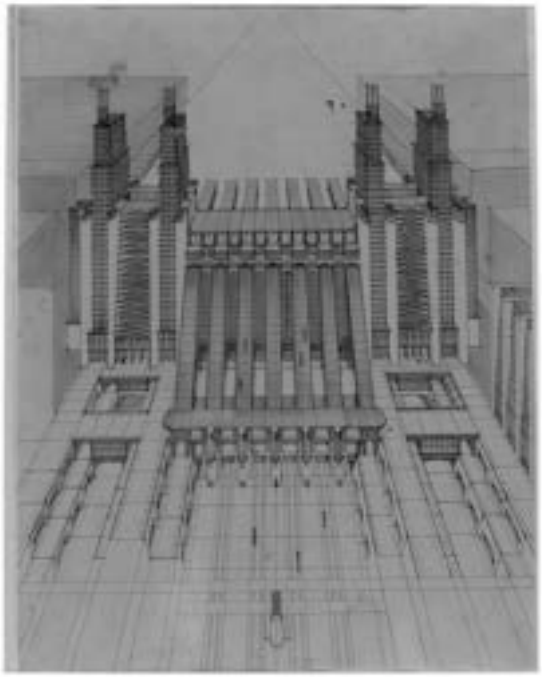


Figure 2-17 Perspective drawing of a Futurist City

(Source: *La Città Nuova* by Sant'Elia, 1914)

Figure 2-18 City of the Future by Harvey Wiley Corbett in 1913

(Source: http://metropolisoftomorrow.tumblr.com/post/609777496/city-of-the-future-by-harvey-wiley-corbett-1913)

Unlike Western cities, Asian cities are usually not planned within a structured grid urban system (Miao, 2001). Streets in Asian cities are not only tubes for transporting urban traffic, but also a form of public space to sustain various urban activities. Hack (2001) points out that in the 1950s the majority of the world's 20 largest cities were in North America and Europe, while now, almost 60 years later, 14 out of the 20 largest cities are in Asia. They include the densest cities in the world, such as Hong Kong, Singapore, Kuala Lumpur, Tokyo, Bangkok, Jakarta, and Manila. The high-density population and compact urban form of these cities favor the strategy of multi-layered urban development in their urban infrastructure (Hack, 2001). Several Asian cities introduced and planned pedestrian walkways to layer and improve pedestrian mobility. In the 1980s, the local government of Chiba Prefecture, Japan, funded an elevated pedestrian walkway system in the Makuhari District (Lin, 1995). The project was initiated by the public sector to strengthen the public transit system, and private developers then linked up the system to increase their profits. Hence, the elevated walkway system, supported by public sector and the private developers, boosted the development of the whole are, though the government and developers supported the pedestrian bridge project for different reasons (Pai, Lee, & Cheng, 2007). In Singapore, the Urban Redevelopment Authority encouraged the development of the pedestrian bridge system to link buildings in the commercial area along Orchard Road and Scotts Road, aiming to revitalize economic development (Huang, 2001). Similarly, in 2003, Taipei began to build its skyway system in Shin-Yi Planning District to create a pedestrian-friendly environment and to stimulate commercial development. Taipei County also planned to construct a similar system in the Particular Area for Xin Ban Qiao Station (Pai, Lee, & Cheng, 2007).

2.18 The development of multilevel pedestrian space in Hong Kong

The multilevel pedestrian space in Hong Kong evolved from the idea of the car-free zone in urban centers (Tan and Xue, 2014). The oldest pedestrian bridge was the Bowen Road Bridge that was built along the hillside and

completed in 1942 (“Footbridges and subways of Hong Kong,” 2014). In the 1940s, Abercrombie (1948) proposed a comprehensive redevelopment to establish a car-free urban center after he found that ground-level shopping crowds disrupted the upper floors of Central’s offices. Hence, Hong Kong’s new town planning was dominated by the idea of a car-free activity urban center. In the *City of Victoria: Hong Kong: Central Area Redevelopment* (1961), the pedestrian bridge link between Central and Admiralty was proposed, suggesting that an elevated pedestrian district to cover Central and the Dockyard (now Admiralty) should be built.

The rapid increase in economic development and urban population after the 1960s led to increasingly serious conflicts between human-scale spatiality and significant urban transformation, and between pedestrian and vehicular traffic, and required grading to separate vehicular and pedestrian traffic by pedestrian bridges, to improve road safety and increase the roads’ traffic capacity. In 1963, the first grade-separated pedestrian bridge across Leighton Road near Victoria Park was constructed; In the early 1970s, the first private-public coordinated pedestrian bridge between Blake Pier and Union House, an integral component of Connaught Center was built (“Footbridges and subways of Hong Kong,” 2014). In reaction to the increasingly congested urban space, grade-separated pedestrian networks provide multilevel access to everyday urban activities, channeling the flow of pedestrians and sustaining urban circulation. Simultaneously, the New Town development in the New Territories began in 1973, and elevated-level pedestrian bridges constructed by both private developers and the government appeared in each new town center to network pedestrian space in the elevated level. From the 1980s, pedestrian bridges evolved from simple crossings to pedestrian bridge systems. The elevated walkway along Connaught Road in Central district is a successful example, and the government has constructed similar walkway systems in the busiest districts of Hong Kong, such as Mong Kok and Tsuen Wan. In the 1990 *Metroplan*, it was suggested that pedestrian networks were constructed in densely populated commercial areas, to create a three-dimensional urban form, which aimed at constructing continuous, high capacity, multilevel

pedestrian systems to serve diverse urban needs and which constituted a multilevel urban space (Planning Department, 1990). According to reports from the Hong Kong Government, as of May 2015 Hong Kong contained 1214 pedestrian bridges ("Hong Kong: The facts-highways," 2015), spanning the physical terrain, aiding daily commuting, reducing traffic congestion, and sustaining urban circulation (Figure 2-19).

Figure 2-19 Aerial photographs of pedestrian bridges in Hong Kong
(Source: This figure is modified based on Google Maps)

From the perspective of the historical development of pedestrian networks in Hong Kong, the city's elevated pedestrian bridge systems are thus the outcomes of planning and administrative practices (Tan & Xue, 2014). Developing such a space in densely populated urban areas usually involves multiple arrangements of different stakeholders' spatial components, which

is not simply guided by an overall master plan but is instead driven by the stakeholders' joint interests.

2.19 Summary

This chapter reviews the literature on public spaces and places, the perspective of everyday life and the urban development of Hong Kong, which helps determine the research scope and gives the background for the research area.

Specifically, the first two parts of this chapter review public spaces and places, and the daily perspective on this topic. It demonstrates the various conceptions and notions of public spaces and places from the perspectives of scholars and local government departments, the historical development of public spaces with its various physical forms, the theoretical model, and the everyday understanding of these places. The detailed descriptions and frameworks of these key terms provide concrete research directions and themes for the study.

The third part of this chapter reviews urban development in Hong Kong, demonstrating how the high-density and compact urban form of Hong Kong is the result of land scarcity for development, rapid population growth and the policies promoting a compact city. In particular, by reviewing the designing and planning of multilevel urban spaces and the development of pedestrian bridges, the chapter illustrates the importance, potentials and prospects of researching pedestrian bridges in high-density cities.

CHAPTER 3 METHODOLOGY

3.1 Preamble

PART ONE

3.2 Review of theories and perspectives in environment and behavior research

PART TWO

3.3 Review precedents of urban studies on public life and public space

PART THREE - Methodology

3.4 Research procedures

3.4.1 Phase One: Literature review

3.4.2 Phase Two: An overall investigation

3.4.3 Phase Three: An in-depth case study of the Mong Kok Pedestrian Bridge

3.5 Data collection

3.6 Validity and reliability

3.7 Data analysis

3.9 Summary

3.1 Preamble

The methodology is designed to capture the everyday life of ordinary people on pedestrian bridges in the densely populated urban area of Hong Kong. Humanistic approaches of environment and behavior are taken in this study, in which Baker's (1968) theory of behavior settings and Gibson's (1979) theory of environmental affordance, developed in the fields of environment and ecological psychology respectively, are recognized as the foundations of environmental and behavior research (Lang, 1987) and environment-behavior studies (Rapoport, 1990). The first part of this chapter reviews the theories and perspectives of environment and behavior research, and the second examines previous studies on urban public space and public life, which provides examples and references supporting the research design of this study, enabling a suitable research design, overall strategies, and specific research tactics to be selected. The third part introduces and elaborates the research methodology used in this study.

PART ONE

3.2 Review on theories and perspectives of environment and behavior research

The "visual-aesthetic tradition" is the dominant urban design paradigm (Jarvis, 1980; Carmona et al., 2003), as "it is almost entirely through vision that environment is apprehended" (Cullen, 1961, p. 8). When "buildings have been put together in a group so that one can get inside the group, then the space created between the buildings is seen to have a life of its own over and above the buildings which created it" (p. 7). Following this artistic and formal tradition in urban design, many studies have focused on analyzing space from the perspective of form rather than of everyday uses and meanings for the people using these spaces. Until the mid-twentieth century, architects and designers working with researchers and scholars from various

social science fields, such as environmental psychology and behavioral science. They realized that the study and analysis of human behavior could provide a much richer and more reliable view of human needs than the traditionally intuitive visual-aesthetic approach to the planning and designing of the environment (Lynch, 1960; 1984; Jacobs, 1961; Alexander, 1965; Lang, 1987). According to Liang (1987), with this new scientific social ecological approach, Barker's (1968) theory of behavior settings and Gibson's (1979) theory of environmental affordances are recognized as the foundations of environment and behavior research.

Barker's (1968) theory of behavior settings focuses on the everyday human behavior and its relation to physical settings, examining the relationship between physical environment and the patterns of behavior that may possibly take place within it (Lang, 1987). According to Barker (1968) and Lang (1987), a behavior setting consists of a *milieu* (a particular physical environment), a *standing pattern of behavior* (a recurrent activity), and a *synomorphy* (a congruent relationship between the two). Hence, the greater the congruent relationship between the physical environment and everyday human behavior, the more capable the particular physical setting is to afford everyday behavior and needs. Similarly, environment supportiveness (Sugiyama, Ward, & Thompson, 2007) conceptualizes the environmental factors and qualities of space such as access and safety that can either facilitate or impede people in conducting activities.

Further developing Barker's (1968) work on behavior settings, Gibson (1979) proposes that the physical properties of an object or environmental context enable them to be used for specific activities. For the physical environment, "the affordances of the environment are what is offers … what it provides or furnishes, either for good or for ill" (Gibson, 1979, p. 129), indicating that affordances may either support or limit people's activities. These affordances can be changed by physically altering the object or the setting, and the object's or the setting's usefulness and meaning can also change with people's needs and individual backgrounds, even if the affordances themselves remain unchanged.

This study of pedestrian bridges takes the concept of a behavior setting and identifies each pedestrian bridge as the *milieu*. The relationship between the bridges' physical attributes and the actions taking place there is examined, to determine how well the pedestrian bridge is able to support everyday urban activities and how it is transformed into an everyday urban place by ordinary people.

PART TWO

3.3 Review precedents of urban studies on public life and public space

In 1889, Camillo Sitte, writing about cities from an intuitive and aesthetic perspective (1889), criticized the urbanism of the end of the nineteenth century. In 1923, Le Corbusier published a modernist manifesto on the city from a pure functionalist viewpoint (1946), in which he used the term "average people" to refer to many different men and women (McLanughlin, 1993, p. 600), and standardized all things, including human beings, in urban planning.

Cars began appearing on the streets at the beginning of the 20th century, and their numbers grew markedly from the 1960s, becoming an integral part of daily life and the street scene (Tables 3-1 and 3-2). With rapid economic development and the growth of the automobile industry, urban expansion and increasing vehicular traffic have broken and invaded traditional cities. Public life and public space began to be challenged, raising awareness in everyday urban life of public space.

Table 3-1 Car registrations for selected countries, 1960–2012 (thousands)

Country	1960	1970	1980	1990	2000	2005	2008	2010	2012	Average annual percentage change 1990-2012
Argentina	474	1,482	3,112	4,284	5,060	5,340	6,244	7,605	9,100	3.5%
Brazil	*	*	*	12,127	15,393	18,370	21,884	25,541	29,566	4.1%
Canada[b]	4,104	6,602	10,256	12,622	16,832	18,124	19,613	20,121	20,750	2.5%
China	*	*	351	1,897	3,750	8,900	18,270	34,430	52,165	16.3%
France	4,950	11,860	18,440	23,550	28,060	30,100	30,850	31,300	31,600	1.3%
Germany[c]	4,856	14,376	23,236	35,512	43,772	46,090	41,321	42,302	43,431	0.9%
India	*	*	*	2,300	5,150	7,654	9,400	13,300	18,796	10.0%
Indonesia	*	*	*	1,200	*	3,850	4,750	8,891	10,494	10.4%
Japan	457	8,779	23,660	34,924	52,437	57,091	57,865	58,347	58,421	2.4%
Malaysia	*	*	*	1,811	4,213	6,402	7,190	9,115	9,833	8.0%
Pakistan	*	*	*	738	375	411	445	1,726	1,997	4.6%
Russia	*	*	*	*	20,353	25,285	32,021	34,350	38,482	5.5%[d]
South Korea	*	*	*	2,075	8,084	11,122	12,484	13,632	14,577	9.9%
United Kingdom	5,650	11,802	15,438	22,528	27,185	30,652	31,252	31,258	31,482	1.5%
United States	61,671	89,244	121,601	143,550	127,721	132,909	135,882	129,053	120,902	-0.8%
U.S. percentage of world	62.7%	46.1%	38.0%	32.3%	23.3%	21.5%	20.4%	17.8%	15.6%	
World total	98,305	193,479	320,390	444,900	548,558	617,914	667,630	723,567	773,325	2.5%

Source: Ward's Communications, Ward's World Motor Vehicle Data, 2013 Edition, Southfield, MI, 2013, pp. 308-311 and annual (Additional resources: www.wardsauto.com)

a. Data are not available.

b. Data from 2000 and later are not comparable to prior data. Canada reclassified autos and trucks before 2000.

c. Data for 1990 and before include West Germany only. Kraftwagens are included with automobiles.

d. Data for earliest year available.

Table 3-2 Truck and bus registrations for selected countries, 1960–2012 (thousands)

Country	1960	1970	1980	1990	2000	2005	2010	2012	Average annual percentage change 1990-2012
Argentina	392	788	1,217	1,501	1,554	1,730	2,511	3,000	3.2%
Brazil	*	*	*	936	3,917	4,653	6,524	7,705	10.1%
Canada[b]	1,056	1,481	2,955	3,951	739	786	933	995	-6.1%
China	*	*	1,480	4,314	9,650	21,750	43,590	57,275	12.5%
France	1,650	1,850	2,550	4,910	5,733	6,196	6,444	6,538	1.3%
Germany[c]	786	1,228	1,617	2,764	3,534	3,133	2,960	3,107	0.5%
India	*	*	*	2,050	2,390	4,145	9,500	10,558	7.7%
Indonesia	*	*	*	1,391	2,373	2,950	6,938	7,510	8.0%
Japan	896	8,803	14,197	22,773	20,211	16,734	15,512	15,061	-1.9%
Malaysia	*	*	*	616	1,030	1,323	1,138	1,171	3.0%
Pakistan	*	*	*	172	385	414	538	588	5.7%
Russia	*	*	*	7,200	5,041	5,705	6,304	6,901	-0.2%
South Korea	*	*	*	1,320	3,956	4,275	4,310	4,293	5.5%
United Kingdom	1,534	1,769	1,920	3,774	3,361	3,943	4,220	4,279	0.6%
United States	12,186	19,175	34,195	45,106	85,579	104,788	119,179	130,595	5.0%
U.S. percentage of world	42.6%	36.2%	37.7%	32.7%	42.1%	42.6%	38.5%	38.3%	
World total	28,583	52,899	90,592	138,082	203,272	245,798	309,395	341,235	4.2%

Source: Ward's Communications, Ward's World Motor Vehicle Data, 2013 Edition, Southfield, MI, 2013, pp. 308-311 and annual (Additional resources: www.wardsauto.com)

a. Data are not available.

b. Data from 2000 and later are not comparable to prior data. Canada reclassified autos and trucks before 2000.

c. Data for 1990 and before include West Germany only. Kraftwagens are included with automobiles.

Studies on public life and urban public space grew in number after the 1960s (Table 3-3). Public life and interactions with public space began to be carefully studied. "Knowledge needed to be gathered, tools for working with the synergy of life and space needed to be developed. This was the start of establishing public life studies as a specialized field" (Gehl, 2013, p. 45). Aldo Rossi's rediscovery of the qualities of traditional European cities was published in 1966 (The Architecture of the City, 1966). In *Learning From Las Vegas*, Venturi et al. (1972) calls for architects to respect and learn the tastes and values of "common" people. In her influential book *The Death and Life of Great American Cities* (1961), Jacobs relies on her own primary observations and common sense, going against the modernist

planning by arguing that modernist urban planning rejected the city, as it rejects ordinary human beings' living.

Table 3-3 Research precedents on public space and public life since the 1960s

Researcher(s)	Key writings on public space and public life
Lynch, K. (1960)	The image of city
Jacobs, J. (1961)	The death and life of great American cities
Gehl, J. (1971)	Life between buildings: Using public space
Venturi et al. (1972)	Learning from Las Vegas
Lefebvre, H. (1974)	The production of space
Relph, E. (1976)	Place and placelessness
Tuan, Y. F. (1977)	Space and place: The perspective of experience
Alexander et al. (1977)	A pattern language: Towns, buildings, construction
Whyte, W. H. (1980)	The social life of small urban spaces
Appleyard, D. (1981)	Livable streets
Carr et al. (1993)	Public space
Jacobs, A. B. (1993)	Great streets
Banerjee, T. (2001)	The future of public space - Beyond invented streets and reinvented places
Orum et al. (2009)	Common ground?: Readings and reflections on public space
Gehl, J. (2013)	How to study public life

In New York City at the end of the 1960s an increasing number of squares and parks were established. To build higher buildings, developers needed many new public spaces at ground level. William H. Whyte, Jacobs' mentor, thus had an ideal opportunity to begin his pioneering project The Street Life Project, in New York City in 1971. Later, in *The Social Life of Small Urban Spaces* (2005), he describes and elaborates on the studies of the use of New York's new city space. Whyte spent his days collecting data for his street-life studies, mainly through direct observation or with a camera, which he placed on top of buildings to watch how people use public spaces. Thus, data were collected through first-hand observations of everyday behavior, to find out how public life and public space interact.

Published in 1971, with its first English translation in 1987, the highly influential book *Life Between Buildings* by the Danish architect Jan Gehl examines the relationship between patterns of space uses and the spatial properties of the physical environment. Using the human dimension as the starting point, through systematic and intensive empirical observations Gehl documents the performance of urban space, analyzing the factors that affect people's everyday uses of it, and measuring the lively urban space by quantifying the level and length of people stationary and active activities. According to Gehl (1987), there are three types of outdoor activities in public space: necessary, optional, and social activities (p. 9). Necessary activities are more or less compulsory and include everyday tasks such as going to school or work, or waiting for a bus to return home. Optional activities occur when people wish to participate and when the physical environment make it a possibility, such as sitting in the park or sunbathing on the beach. Social activities are supported directly and indirectly by necessary and/or optional activities, which closely depend on the presence of others in public spaces. Thus, these three types of activities require very different demands on the physical environment. Necessary activities are hardly affected by the physical environment, optional activities only take place when the environment is suitable and favorable by certain groups of people, and social activities occur spontaneously, resulting from the other two types (Gehl, 1987).

In *The Image of the City*, Kevin Lynch (1960) argues that people orient themselves in the city by mental maps, and addressed how urban people read, navigate, and experience the city. Alexander (1977) suggests that users know more and better about their living environment than professional designers and planners. By simply observing that the most attractive and harmonious places were made by ordinary people rather than professionals, he describes and demonstrates 253 spatial qualities in his seminal book *A Pattern Language: Towns, Buildings, Construction*, providing important sources and inspiration for do-it-yourself environmental design.

Several key philosophical works on space and place were published in the 1970s. The French philosopher Henri Lefebvre's *The Social Production of Space* (1974), Canadian geographer Edward Relph's *Place and Placelesness* (1976), and humanistic geographer Yi-Fu Tuan's *Space and Place* (1977) all put ordinary people at the center of space and place studies, and gave central and active roles to human awareness, agency, consciousness, and creativity, regarding the world and the people in it as subjects rather than objects. The 1970s are often considered as the turning point in reconsidering the importance of public space in urban studies. "… The tide began to turn around the year 1970. Modernism began to be challenged and public debate took up the issue of urban quality and the conditions for life in the city, pollution and the car's rapid encroachment of urban streets and squares. Public space and public life were reintroduced as significant objects of architectural debate and treatment, among others. Public space architecture has been under constant development ever since and a very great number of new or renovated public spaces were created in the last quarter of the 20th century" (Gehl & Gemzøe, 2000, p. 7). The decline of traditional industries in many important developed cities led to the increase in interest in public space studies. "Since the 1970s, the public's attention has shifted from factory workers, school teachers, and engineers to media stars and profiteers in real estate, finance, and culture industries. These are the true imagineers of the symbolic economy. In cities from New York to North Adams, from Orlando to Los Angeles, economic growth has been thematized and envisioned as an image of collective leisure and consumption. As part of the process, collective space—public space—has been represented as a consumable good. Even when it is not bought and paid for, as at Disney World, public space has been joined with retail space, promoting privatized, corporate values" (Zukin, 1995, p. 260).

As perhaps one of the most important form of public space, urban streets have attracted much attention from public life scholars. Appleyard (1981) conducts a comparative study of three residential streets in San Francisco with heavy, medium, and light traffic, to study the social and psychological effects of traffic and neighborhood, focusing particularly on the livability of

the streets. By using models and video, he tested and compared different environments and designs, enabling people to fully experience simulated environments. He was also an early adopter of image mapping, which he used to capture and compare perceptions of various streets. Similarly, Jacobs (1993) attempts to identify what makes streets outstanding. He observed and measured numerous urban streets, and surveyed their users and design professionals. Instead of researching the design of the public space based on assumptions and speculation, Jacobs uses direct observation to build the foundation for his research. Along with direct observation, he prepared plans, sections, and maps for each street for comparison.

In the 21st century, studies on urban public life and public space become increasingly critical and complex. American urban theorist Tridib Banerjee (2001) states that "In recent years the concern for public space has extended beyond the question of adequacy and distributive equity of parks and open spaces. They are now subsumed under a broader narrative of loss that emphasizes an overall decline of the public realm and public space" (p. 12). In his conclusion on the future of public space, he identifies several trends to "represent fundamental shifts in the way public life and public space are conceptualized and in the values associated with them" (p. 10), which are that "the distinction of public and private will continue to blur" (p. 18), and the effect of globalization and the rapid development of information technology will change the conception and perception of public space. He finally suggests several important future areas for planners to address regarding public space, such as mediating between public and private, to "focus on the concept of public life rather than public space" (p. 19), and to "respond to the changing demands of increasing diversity of the urban population" (p. 21). Neal (2010b) asserts that unlike in the public space that previously existed, such as the agora, the plaza, the coffeehouse, or the streets, in the 20th century public space generally refers to public accommodation; "some public spaces-ordinary public accommodations like schools or libraries – are such mundane parts of everyday life that they can be overlooked as public spaces… Certainly, they do not provide a space to chat with old friends or to hold a grand parade, but they do provide relief

that is open and accessible to all, and in doing so make public life possible" (p. 10).

According to the World Health Organization, the urban population in 2014 accounted for 54% of the total global population, up from 34% in 1960, and continues to grow ("Urban population growth," 2015), making the study of the interactions of public life and urban space in cities extremely relevant and significant. As science and technology rapidly develop, new methods of studying the interaction between public life and space emerge, providing more choices for research.

The Global Positioning System (GPS) was initially developed by the U.S. military, and was made available for civilian use in the mid-1990s, albeit in a lower resolution. In environment and behavior studies, instead of physically following people, they can be equipped with GPS devices. GPS-tracking devices collect the data of people's movements, and the durations of movement and/or stationary activities. GPS-tracking is particularly useful in mapping large areas over a long period of time, as physical following is impossible in many situations as it requires too much manpower.

Since the 1990s, the growth of the Internet has significantly increased the accessibility of global data. Google Maps and Google Street View, launched in 2005 and 2007 respectively, provide cartographic maps with satellite imagery and three-dimensional, 360° eye-level panoramic imagery. The programs can be used by almost anyone, and more importantly, they are free, providing convenient research tools and reducing the costs and expertise needed to conduct research.

Space syntax is an abstract, logical, and mathematical method, introduced by and developed by introduced by Bill Hillier, Julienne Hanson and colleagues at University College London. It describes and quantitatively measures the relational properties of urban space (Hillier and Hanson, 1984), encompassing a set of theories and techniques to analyze spatial configurations. Considered the space syntax textbook, *The Social Logic of*

Space (1984) discusses the reflexive relationship between social processes and spatial form. According to Hillier (1996), a key outcome is the concept of "spatial configuration," defined as "relations, which take account of other relations within a complex system" (p. 3). In the theory of natural movement, it is argued that the urban configuration is the primary generator of pedestrian movement (Hillier et al., 1993). The configuration of the physical layout of an environment creates a pattern of encounters/movement among people, which is closely connected to their activities in public spaces. Space syntax is thus designed to characterize and measure the logic and pattern of the urban grid, evaluating the local and global configuration of movement, and is an application of computer-based techniques in spatial configuration analysis (Hillier et al., 1993). Integration is a common method for analyzing a street network, and can be used to evaluate the properties of the connections and accessibility of a place within its urban context. Based on this theory, Turner et al. (2001) developed the visibility graph analysis, which can be used to analyze the inter-visibility connections within buildings or urban networks.

As reviewed in Chapter 2, the main research approaches for Hong Kong elevated pedestrian bridges are architectonic or historical, and take a top-down perspective. Very few systematic empirical studies have been conducted. Shelton et al. (2010) and Frampton et al. (2012) analyze and highlight the physical formation and characteristics of pedestrian bridges, through extremely detailed architectonic mapping and drawing. However, information on how these spaces are actually used by ordinary individuals is absent. Woo and Malone-Lee (2013) and Spurr and Kwok (2013) use the observation method to record the uses of these spaces with photographs, but do not consider the physical context of elevated walkways. Kinoshita and Nishiie (2014) and Tan and Xue (2015) take a historical approach to examine the development of elevated walkway, but do not consider the importance of understanding human experiences. Rotmeyer (2010) uses physical surveys, observation, and interviews to examine the publicness of the Central Elevated Walkway, but her study lacks any investigation into the effects of publicness between the ground and elevated levels. The current

research attempts to obtain relational data of the relationship between ordinary daily life and the physical attributes of pedestrian bridges. The perspective of everyday life is taken in this study, focusing on the everyday uses of the bridges through intensive systematic observation incorporating a physical survey of the bridge, to collect a large amount of real-time field data. Relational data between the bridge and the users are gathered and their effect on ground-level street life is addressed. The research methodology and methods are elaborated below.

PART THREE - Methodology

3.4 Research procedures

This study investigates the concept of pedestrian bridges as everyday places by examining their spatial properties and the everyday actions and opinions of their users, and aims to answer specific research questions. The study consists of three phases: a literature review, an overall investigation, and a detailed case study (Figure 3-1).

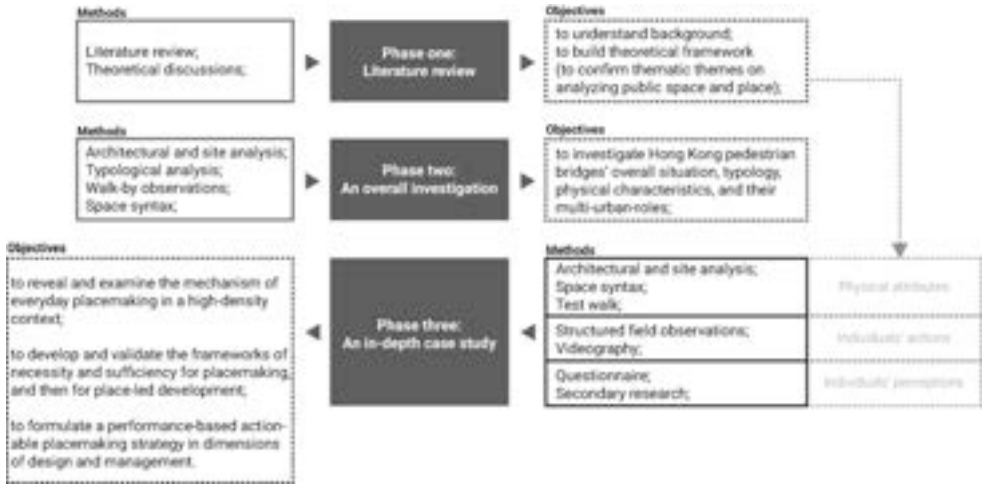


Figure 3-1 Framework of research design

3.4.1 Phase One: Literature review

The literature review of the research terms such as public space, theories on place and its framework, the historical development of urban Hong Kong, and previous environment and behavior research are presented in Chapter Two and in the first two parts of this chapter, providing a solid foundation for the study. The review first defines the research terms of public space and its related concepts, place and its theoretical model, and the concept of everyday life, which narrows the research areas and takes everyday life as the research perspective.

Phase Three consists of an in-depth detailed case study. Yin (1994), suggests that the purpose of selecting a specific case study as the research strategy is to develop or test a theory. The theory development is reviewed as part of the design phase, which is essential for the case study approach in this research, as it facilitates "a sufficient blueprint for your study, and this requires propositions. Then, the complete research design will provide surprisingly strong guidance in determining what data to collect and the strategies for analyzing the data" (p. 28). The reviewed theory can help guide the development of the research questions, select case(s), refine the research design, define the data to be collected, organize the initial data analysis, and/or generalize the findings—different from other methods such as ethnography (Van Maanen et al., 1988) and grounded theory (Strauss & Corbin, 2007).

By building on Canter's (1977) theory of place reviewed in Chapter Two and inspired by Barker's (1968) theory of behavior settings and Gibson's theory of environment affordance, this study builds a rich and solid theoretical framework for investigation. It describes a place as the juxtaposition of three constituent elements: physical setting, the activities of people, and their perceptions. The reviews of the abovementioned theories therefore identify these three variables for examining the concept of the pedestrian bridge as an everyday place. Physical attributes, according to van

der Voordt et al. (1997), can be identified by analyzing the physical setting at three levels: the room level (internal spatial organization), the building level, and the site (relation to urban structure). The urban form, according to Moudon (1997), can be divided into three further fundamental physical elements for analysis: the buildings and their related open spaces, plots/lots, and streets.

The historical reviews of Hong Kong's urban development and of planning multilevel pedestrian urban space conducted in Chapter Two enable the current research to be interpreted from a comprehensive viewpoint with a historical perspective, and to study the past and the present comparatively. The review of previous urban studies research into public space in this chapter discusses the strengths and weaknesses of various environmental and behavior studies, helping and guiding the selecting of suitable research designs, strategies, and specific methods.

3.4.2 Phase Two: An overall investigation

The literature review provides a solid theoretical framework for this study, helps develop research questions, and guides the research design. As of May 2015, Hong Kong has a total of 1214 pedestrian bridges. Although the case study approach in Phase Three is a highly efficient research strategy, it is necessary to conduct an overall investigation of Hong Kong pedestrian bridges before the case study is carried out, to provide clear guidance when selecting the case for Phase Three.

The spatial attributes of Hong Kong pedestrian bridges are first investigated in this phase, such as their architectonic properties and typology. Their everyday urban functions and changing roles are also examined.

3.4.3 Phase Three: An in-depth case study of the Mong Kok Pedestrian Bridge

To achieve the research objectives, facilitate a comprehensive and in-depth understanding of the real-life urban phenomenon, and to consider the practical constraints, the case study approach is taken as the research strategy in this phase. The purpose of the case study approach is to "retain the holistic and meaningful characteristics of real-life events" (Yin, 1994, p. 3), so the perspective of everyday life (Lefebvre, 1991; de Certeau, 1998) is taken in the investigation and examination.

According to Groat and Wang (2002), a case study is defined as "an empirical inquiry that investigates a phenomenon or setting" (p. 346). It should "(a) focus on cases in their contexts, (b) patterns of relationships, (c) theory development, (d) use of multiple sources of evidence, and (e) the potential generalization to theory" (Adhya, 2008, p. 46). In *Case Study Research* (1988), Merriam argues that "case study is an ideal design for understanding and interpreting observations of social phenomena…case study is a design particularly suited to situations where it is impossible to separate the phenomenon's variables from their context" (pp. 2, 10). It can "investigate a contemporary phenomenon within its real-life context, especially the boundaries between phenomenon and context are not clearly evident" (Yin, 1994, p. 12). In urban research, the case study is an applied strategy that can "investigate different cases in ambiguous urban case" (Andranovich & Riposa, 1993, pp. 1-14). More importantly, the case study strategy is ideally suited to forming generalized theories, though single or small numbers of case studies cannot represent the much wider overall phenomena (Yin, 1994). The in-depth analysis required in a case study enables the development of a theory that can then be tested elsewhere by other case studies or empirical investigations. Hong Kong forms the case study in this phase, from which a wider theory is postulated by relating it to other places. The necessary consideration and concerns when applying

findings from one context (in this case Hong Kong) to other contexts is discussed at the end of the thesis.

In consideration of why a single case study was used in this research, the research aims to examine the concept of ‘pedestrian bridges as public space in densely populated urban areas’, to reveal the mechanism of everyday placemaking and to develop a framework in a high-density urban context. The strategy of using a single critical case study is desirable for exploring an issue in depth and case studies are known for their descriptive power and attention to context (Yin, 1994). They can also generate a particular set of results in line with a broader theory. The case selection of the Mong Kok Pedestrian Bridge, which is located in one of the most densely populated areas of Hong Kong, well represents the concept being explored and matches the research purposes. In other words, the case selection was determined by the above-mentioned research aims, questions and hypotheses, and the Mong Kok Pedestrian Bridge was chosen as the most representative. Additionally, few studies have looked at the Mong Kok Bridge, most selecting other bridges such as the bridge system in Central Hong Kong. Finally, the accessibility and convenient location of Mong Kok also contributes to the case selection, as it increases the efficiency of the research work. Hence, this phase uses the single-case design, and the Mong Kok Pedestrian Bridge is selected as the case study. Supplementary investigations into other pedestrian bridges in different districts are carried out and relevant data collected for testing and evaluating the generalized findings/theory from the single-case study.

A sequence of multiple procedures is used. After initially exploring and presenting the characteristics of Hong Kong pedestrian bridges in densely populated urban areas with the single case-study of the Mong Kok Pedestrian Bridge in Phase Two, this phase first analyzes the physical properties of the Mong Kong Pedestrian Bridge at room, building, and site levels. Everyday practices and the actions of people are then examined to understand how the everyday place is created by people. The perceptual

constructs of the concept of the pedestrian bridge as an everyday place and of everyday placemaking are then investigated.

Reasons for selecting the Mong Kok district

Hong Kong is separated into three distinct areas: Hong Kong Island, Kowloon peninsula, and the New Territories. Mong Kok is located in the Yau Tsim Mong district in Kowloon West. According to the Planning Department's latest Mong Kok Outline Zoning Plan, released in May 2013, Mong Kok district is determined by the boundaries of Boundary Street to the north, the MTR East Rail Line to the east, Dundas Street to the south, and Sham Mong Road and Ferry Street to the west, and covers about 147 hectares of land.

Mong Kok district is one of the oldest urban areas in the city, dating from the 18th century, when its residents were mainly farmers. In the 20th century it rapidly expanded, as Nathan Road was developed northwards from Tsim Sha Tsui. In 1909, the government began to reclaim land in Mong Kok, but this was soon discontinued. Shanghai Street used to be the coastline of Mong Kok district. The land on the west side of Nathan Road is all reclaimed. After the land reclamation separated Mong Kok from the waterfront, the area was developed into a commercial center (Figure 3-2). The primary strategy for accommodating the increasing population was from then on high-rise and high-density urban development.

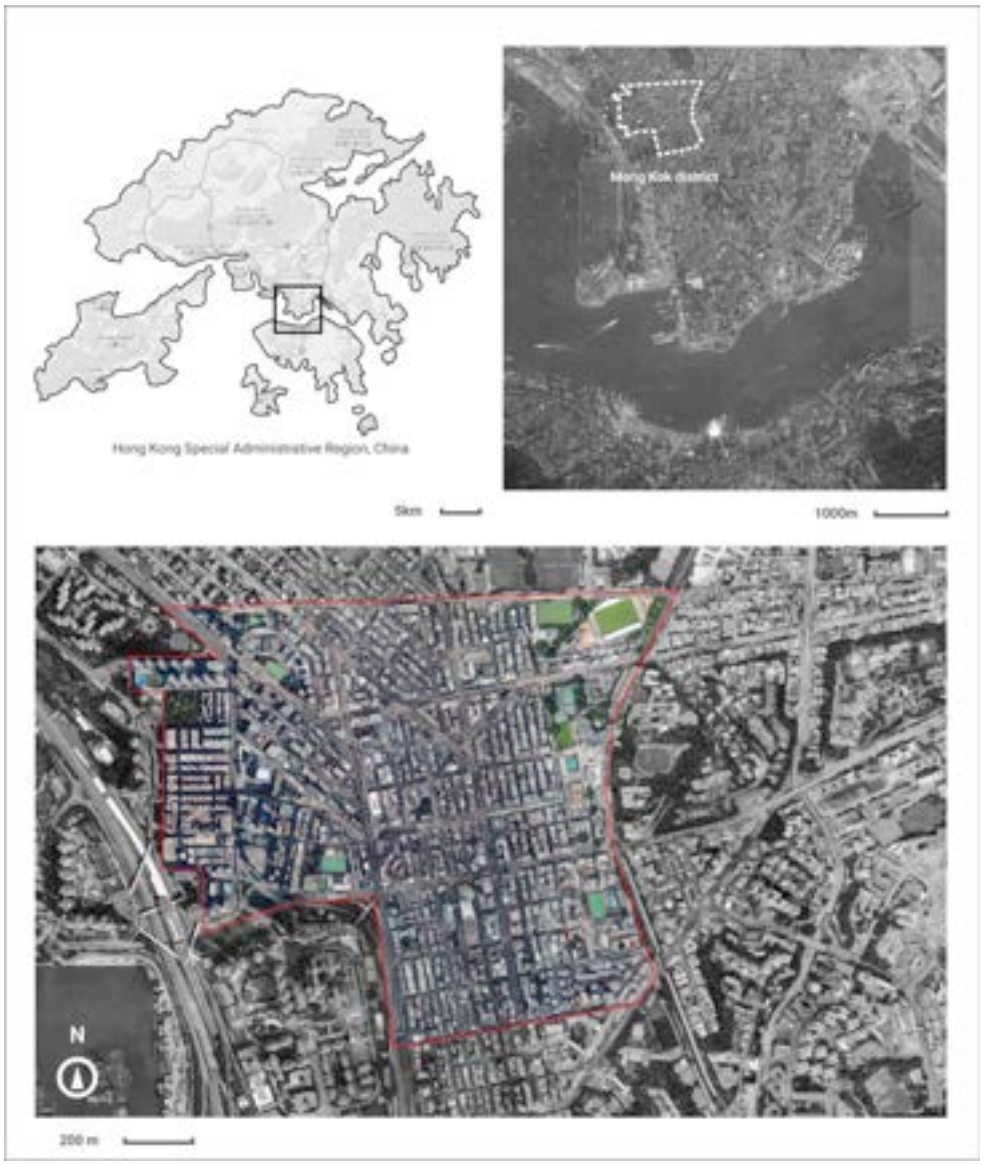


Figure 3-2

(Source: Google Maps, DigitalGlobe)

Mong Kok is a popular destination for both locals and tourists, and has become a unique vibrant urban space. It is now one of the busiest commercial and shopping districts in Hong Kong, with heavy vehicular traffic and pedestrian flow, and an extremely high population density of 130,000 people per square kilometer (“The world's most crowded place,” 2015). Mong Kok includes numerous shopping streets, many “shop houses” defined as “a narrow wrought iron rack creating a garden, and some balconies are enclosures for additional rooms” (Shelton, Karakiewicz & Kvan, 2010, p. 31), and numerous recent multi-story buildings, which are all

concentrated at street level to take advantage of the heavy pedestrian traffic. It is “a unique, high-density urban district with diverse public programs, densely built public transport connections, compact urban forms of highly concentrated shops and restaurants, and a wide variety of activities and attractions” (Wang, Siu & Wong, 2016, p. 238) (Figure 3-3).

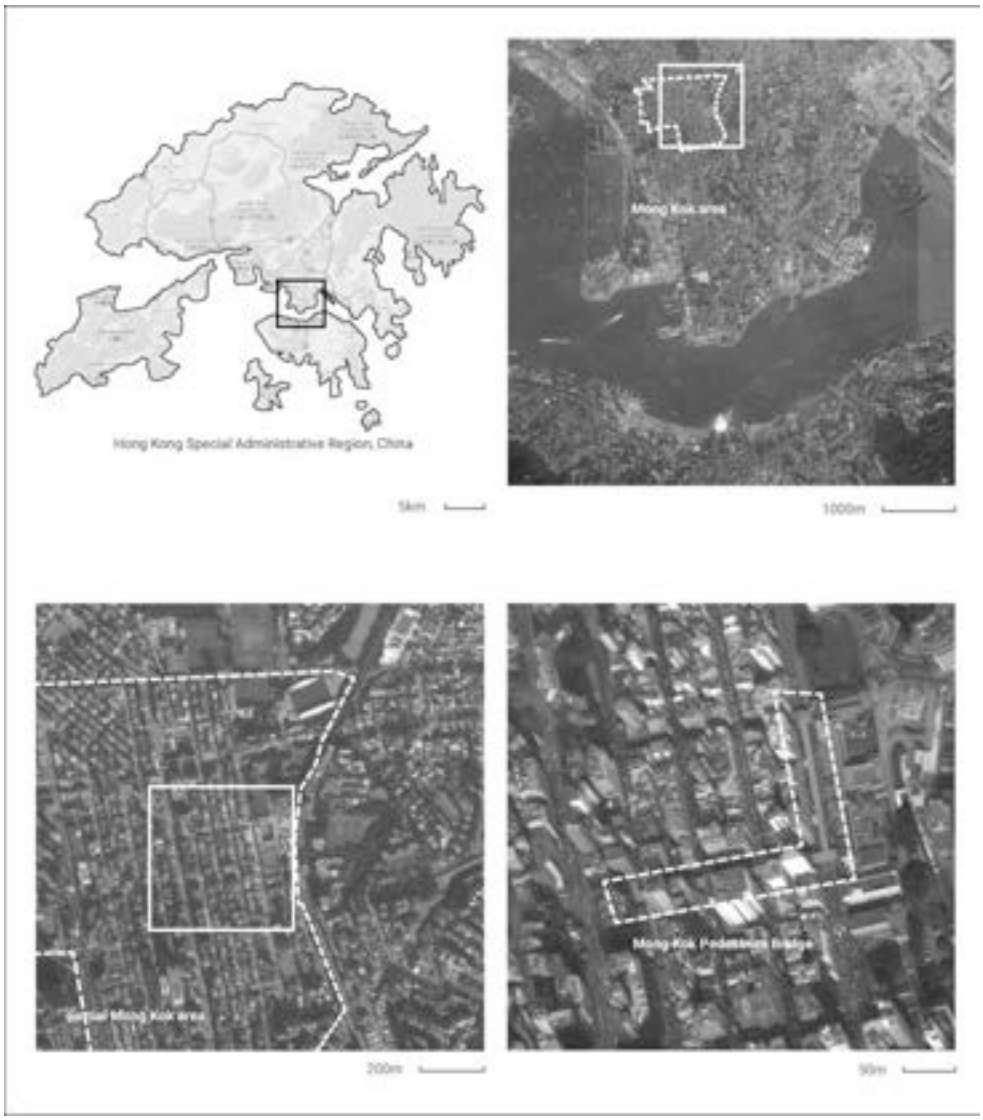


Figure 3-3 Urban context and location of the Mong Kok Pedestrian Bridge
(Source: The figures are modified Google Maps images)

In terms of the physical environment, the solid urban grid and densely built road network have led to the development of cluster zones and various themed streets, which are critical to the urban and economic development of Mong Kok district. As it is located at the center of Kowloon, it contains

many different transportation interchanges. Buses, minibuses, the Mass Transit Railway of Tsuen Wan Line, and the East Rail Line all pass through Mong Kok and have stations within the area, making it an extremely accessible urban area and a transitory location, along with one of the most air-polluted areas of Hong Kong (Figure 3-4). Both local residents and tourists heavily use this area.

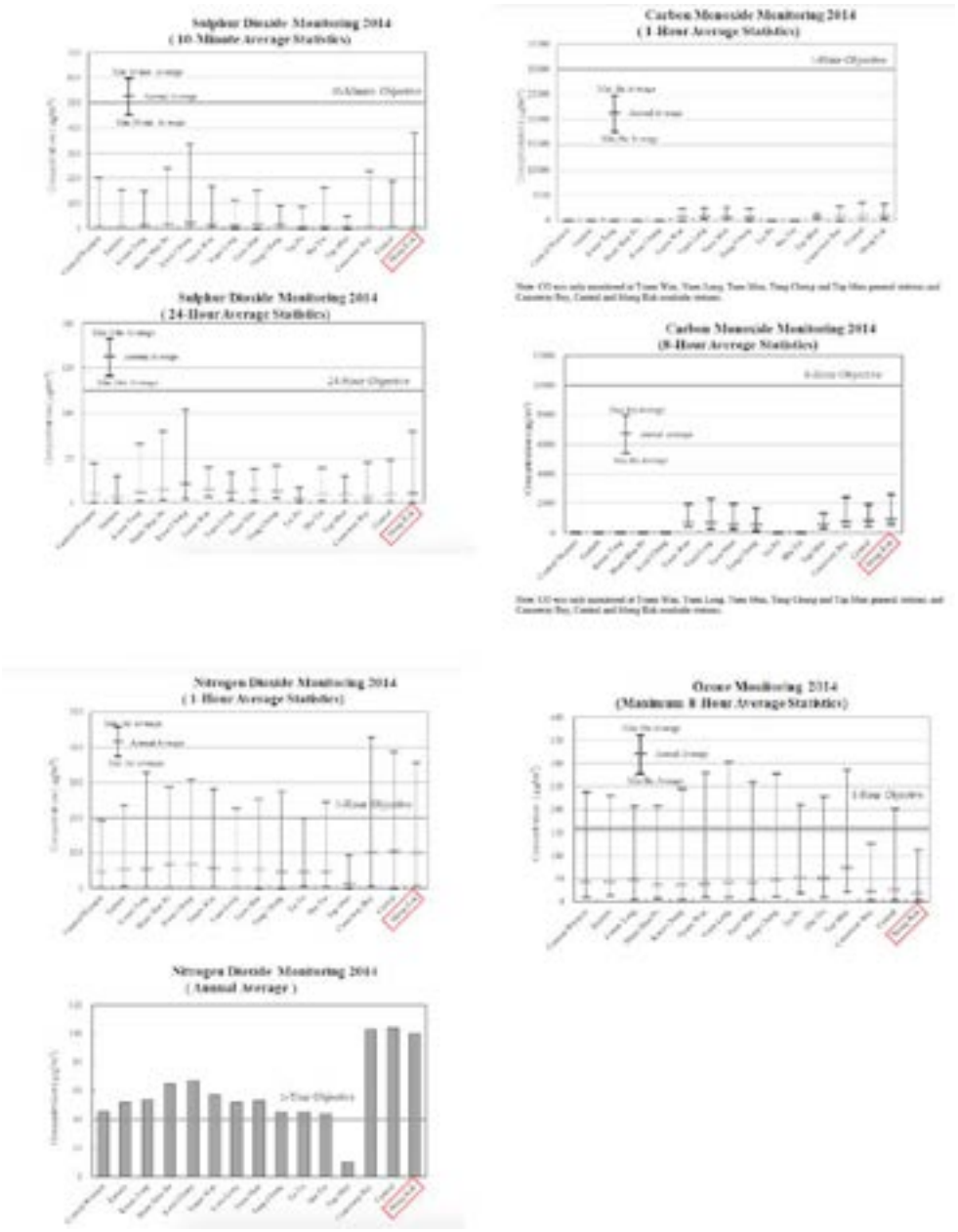


Figure 3-4

(Source: Air Quality in Hong Kong 2014, Environment Protection Department)

The population of Mong Kok was about 136,650 in 2011, according to the Hong Kong 2011 Population Census. This is projected to increase to around 149,200. Most people are Chinese, with a significant Indonesian and Filipino population. The proportion of over-65s in Hong Kong Island, Kowloon, and the New Territories are 11.9%, 14.5%, and 8.8%, respectively; in Mong Kok East, Mong Kok West, Mong Kok South, and Mong Kok North they are 14.7%, 14.1%, 14.4%, and 15.2%, respectively. The monthly income of 41.66% of the working population of Mong Kok is less that HK$10,000, and 35.59% of the working population's monthly income is between HK$10,000 and HK$20,000 (Table 3-4). The median monthly incomes from the main employment of the working population of Hong Kong Island, Kowloon, and the New Territories are HK$12,000, HK$10,000, and HK$10,000, respectively, whereas for Mong Kok East, Mong Kok West, Mong Kok South, and Mong Kok North they are HK$11,000, HK$9000, HK$9300, and HK$9500, respectively.

Table 3-4

Year		2011
Monthly Income from Main Employment	District Council / Constituency Area	Working Population
< 10,000	Yau Tsim Mong - Mong Kok West	4 332
	Yau Tsim Mong - Mong Kok North	3 594
	Yau Tsim Mong - Mong Kok East	2 765
	Yau Tsim Mong - Mong Kok South	2 542
	Subtotal	13 233
10,000 - < 20,000	Yau Tsim Mong - Mong Kok West	3 816
	Yau Tsim Mong - Mong Kok North	2 909
	Yau Tsim Mong - Mong Kok East	2 259
	Yau Tsim Mong - Mong Kok South	2 322
	Subtotal	11 306
20,000 and over	Yau Tsim Mong - Mong Kok West	1 194
	Yau Tsim Mong - Mong Kok North	1 521
	Yau Tsim Mong - Mong Kok East	2 770
	Yau Tsim Mong - Mong Kok South	1 740
	Subtotal	7 225
Total	Yau Tsim Mong - Mong Kok West	9 342
	Yau Tsim Mong - Mong Kok North	8 024
	Yau Tsim Mong - Mong Kok East	7 794
	Yau Tsim Mong - Mong Kok South	6 604
	Subtotal	31 764

(Source: Hong Kong 2011 Population Census)

In summary, Mong Kok District is an extremely densely populated urban area with very limited land, serious environment pollution, and an aging community, making it an urban area of "extreme living conditions" (Tsui,

2000). It is therefore an ideal case to illustrate issues of public space and placemaking in a high-density urban context.

The Mong Kok Pedestrian Bridge

Mong Kok district is one of the busiest commercial and shopping urban areas in Hong Kong, with extremely heavy vehicular and pedestrian flow. According to the Transport Department, the substantial economic activities create a flow of about 20,000 pedestrians per hour during peak hours on Sai Yeung Choi Street South. Traffic congestion and accidents are thus serious problems in Mong Kok. To ease traffic congestion and improve the environment of the area, Sun Hung Kai Properties began constructing the Mong Kok Pedestrian Bridge, a covered footbridge system, in 2000. The project was completed in 2003 and the pedestrian bridge is now managed and maintained by the Hong Kong Government. Built within and integrated with the existing urban fabric, the bridge runs along Mong Kok Road and Sai Yee Street to the east of Nathan Road, providing a direct and convenient elevated walkway link, successfully relieving the heavy pedestrian flow at ground level (Figure 3-5). However, the continual pedestrian needs and substantial traffic and have rapidly grown in recent years, so a study carried out by a consultant appointed by Highways Department for the western extension of the bridge across Nathan Road (Phase 2 of the Mong Kok Pedestrian Bridge) commenced in October 2013, to be completed within two years.

Figure 3-5

(Source: Google Maps)

3.5 Data collection

Both quantitative and qualitative methods are combined in this research. The "quantitative adequacy is the elementary aspect of fit" (Lynch, 1981, p. 152), and "the qualitative basis of these numbers is often neglected" (Lynch, 1981, p. 153), and "the amount of something is one of its important characteristics…but the key test is the behavioral fit. There are two ways of observing that fit. The first is to watch people acting in a place…the second method is to ask to users themselves, whose sense of appropriateness of a place is the final measure of its fit" (Lynch, 1981, pp. 152-153). Thus, the dominant/less-dominant data collection approach is used (Creswell, 1994), and qualitative methods are chosen as the dominant approach, while the quantitative methods are a relatively small component of this study.

The specific environment-behavior research methods previously reviewed, such as those of Jan Jacobs, William H. Whyte, and Jan Gehl significantly influence this research. Their research strategies and study methods for urban research include intensive observations to capture the daily dynamics using various recording devices, which minimizes external interference and enables the data to be collected in a natural setting. The data collection methods are also selected on the basis of my design expertise. The following is a brief description of each method used in this study.

Architectural and site analysis

The overall architectural and site analysis of pedestrian bridges in densely populated urban areas in Hong Kong is conducted in Phase Two of this research. Examined from the levels of room, building, and sites (van der Voordt et al., 1997), the pedestrian bridges' floor plans, locations, their typological characteristics, and their spatial properties are analyzed and presented, as these are the primary physical settings that support or limit people's activities (Barker, 1968; Gibson, 1979), which provides basic information about their actions and the urban context. In the analysis of the

case study of the Mong Kok Pedestrian Bridge, the area's land uses and its public space are specifically investigated and analyzed.

This form-based analysis is conducted using several resources. Aerial and street photographs from Google Maps are used to collect the current design and planning later implemented in the architectural and site analysis of the pedestrian bridges. Historic maps and the existing master plan document are used to identify and illustrate issues such as land use and public space. Information from archival research such as public records from Hong Kong governmental agencies is a supplementary resource for data collection in this phase.

Typological analysis

In the Encyclopedia Britannica, typology is defined as "…a system of groupings, usually called types, the members of which are identified by postulating specified attributes that are mutually exclusive and collectively exhaustive-groupings set to aid demonstration or inquiry by establishing relationship among phenomena. A type may represent one kind of attribute or several and need include those features that are significant for the problem at hand." Typology provides various means for classifying and categorizing objects, which are contingent on the research purpose or the characteristics of the investigation.

In architectural studies, the notion of typology is used to describe and analyze the characteristics of buildings. Vidler (1977) describes type as a suggestive and generative interpretation of form. It is the formal and spatial characteristics of buildings. The characteristics shared by a series of buildings in function and form make up the type (Petroccioli, 1998). "The birth of a type is conditioned by the fact that a series of buildings share an obvious functional and formal analogy among themselves. In the process of comparing or selectively superimposing individual forms for the determination of the type, the identifying characteristics of specific buildings is eliminated and only the common elements remain which then

appear in the whole series. Type is depicted as a scheme deduced through a process of distillation from a group of formal variants to a basic form or common scheme (Petruccioli, 1998, p. 11).” Form is therefore critical in the typological analysis of architecture and urban space. In terms of building form, van der Voordt et al. (1997), identify three levels of characteristics: the room level (internal spatial organization), the building level, and site (relation to urban structure). Moudon (1997) identifies three further levels of fundamental physical elements for analyzing urban form: the buildings and their related open spaces, plots/lots, and streets. Thus, focusing on the building/urban form and its internal/external spatial structures constitutes a typo-morphological approach (Petruccioli, 1998), which emphasizes fundamental physical forms and spatial structures when classifying buildings and cities.

In Phase Two, the general investigation of the typology of Hong Kong’s pedestrian bridges is hierarchical, ranging from their internal spatial organization, to their external spatial relation, to the urban fabric (Figure 3-6). The spatial and morphological aspects are examined, based on the forms of architectural elements and spatial organization.

<table>
<tr><th>Levels of Building Form Analysis
(van der Voordt et al., 1997)</th><th>Levels of Urban Form Analysis
(Moudon, 1997)</th><th>Hong Kong Pedestrian Bridges Typological Analysis Hierarchy</th></tr>
<tr><td>room
(internal spatial organization)</td><td rowspan="2"></td><td>deck and access</td></tr>
<tr><td>building</td><td>pedestrian bridges</td></tr>
<tr><td rowspan="3">site
(relation to urban structure)</td><td>buildings and their related open spaces</td><td>pedestrian bridges and their connected buildings</td></tr>
<tr><td>plots/lots</td><td rowspan="2">pedestrian bridges system</td></tr>
<tr><td>streets</td></tr>
</table>

Figure 3-6 Typological analysis hierarchy

Space syntax

Space syntax, introduced by Bill Hillier, Julienne Hanson, and colleagues at University College, London, describes and quantitatively measures the relational properties of urban space (Hillier & Hanson, 1984). Based on an understanding of the inherent interrelationships between spatial and 62 social systems, space syntax offers a set of theories and methods for analyzing spatial configurations. Built on the theory of space syntax and isovist analysis, Turner et al. (2001) developed the application of visibility graphs to analyze the extent to which any point in a spatial network is visible from any other. In Phase Three of the case study, global integration as a measure of accessibility is analyzed, as this indicates the depth of a location and ease with which it is reached from all other points within the urban system. It is used to examine the distribution of open spaces in Mong Kok district, and an isovist analysis is conducted to analyze the inter-visibility of the floor plan of the Mong Kok Pedestrian Bridge. Combined with the data collected through field observations, the activities associated with special locations, such as the location of the highest inter-visibility, can then be identified and analyzed.

Walk-by observations

Walk-by observations are mainly used in the Phase Two study to collect the data of the various everyday urban activities on different bridges in the densely populated urban areas of Hong Kong. The researcher slowly walks past and around pedestrian bridges to record people's uses and to explore the bridges' diverse roles in the compact urban context.

Structured field observations

Observers find data. Everyday actions are a critical aspect of this urban research, so the most effective, natural technique is to see what people do, then record, describe, and analyze it to finally conclude what have been

observed (Robson, 2002). Observation, accord to Webb et al. (1966), focuses on "situations in which the observer has no control over the behavior or sign in question, and plays an unobserved, passive and nonintrusive role in the research situation" (p. 112). Observations can "obtain a better understanding about people's behavior in the environment as it is a method of looking at action between people and their environment" (Sanoff, 1992, p. 33) and also "cover events in real time and covers context of event" (Yin, 1994, p. 80).

Observation enables the researcher to observe the phenomenon of everyday life (Miller & Dingwall, 1997; Siu, 2003). Webb et al. (1966) identify five different types of effective methods of observing: exterior signs, expressive movement, physical location, "in situ conversation," and behavior dealing with time. In this study, people's everyday actions and the physical traces they leave are the main areas for field observation. Observing behavior means systematically watching people use their environment (Zeisel, 1981): What do people do in the space? How does space affect people? How do physical environments and people interact and communicate to each other? Jacobs (1961), Hall (1966), Gehl (1987), and Whyte (1988) all describe how people behave and use behavior by observation them in natural settings, to ascertain human interaction and communication with the environment. Zeisel (1981) describes that "observing behavior in physical settings generates data about people's activities and the relationship needed to sustain them…about the expected uses, new uses and misuses of a place; and about the behavioral opportunities and constraints that the environment provide" (p. 111). Zeisel (1981) also introduces the following, which must be carefully attended to during the observation: (1) "Who: Actor," (2) "Doing What: Act," (3) "With Whom: Significant others," as people are sometimes defined by others who are with them, which is indicative and significant, (4) "Relationships" between "actor" and "significant others" that must be described and analyzed, and (5) the "Context" in which people and environment interact and communicate." Observing the physical traces is "systematically looking at physical surroundings to find reflections of previous activity that was not produced in order to be measured by

researchers" (Zeisel, 1981, p. 89). These traces are consciously or unconsciously "left," and from them the researcher can find out how the environment changes to them, what designers and planners did to that space, and how the people use it and feel about it, and in general how the environment and people interact.

In Phase Three of the in-depth case study, intensive observation is used to understand how the Mong Kok Pedestrian Bridges are used (the relationship between spatial forms and everyday behavior), particularly people's purposive actions and spatial appropriations. The observations are conducted on weekdays, weekends, and special days such as public holidays. The observation periods are divided as follows: 7am-8am (early morning), 8am-10am (morning rush-hour), 10am-12noon (mid-morning period), 12noon-2pm (lunchtime peak), 2pm-4pm (mid-afternoon period), 4pm-6pm (late afternoon), 6pm-8pm (evening rush-hour), 8pm-10pm (early evening), 10pm-11pm (late evening). To focus on how the wide range of purposive activities and appropriations on these bridges are supported, the activity categories used in the observations follow Gehl's (1987) idea of necessary, optional, and social activities.

Videography

Although recording field observations with cameras offers many compelling visual images of what activities are distributed, they are not capable of revealing the inner dynamics and subtleties within people's everyday interactions. The videography technique is used to achieve this, following the tradition of the environment-behavior research pioneer Whyte, who recorded the dynamic uses of plazas in New York City.

In the case study of Phase Three, a normal Sunday is selected for videography recording as Sundays are much livelier and more actives than weekdays in Hong Kong. The inner dynamics and subtleties of people's actions are then relatively easily and obviously to captured and investigated. Recording in 5-minute periods once an hour from early morning (7am) to

late at night (11pm) rather than a professional camera with a tripod, a smartphone is used to shot the video, as it minimizes external interference and enables the data to be collected in a natural setting.

Test walk

"To make test walks, the observer walks selected important routes, noting waiting times, possible hindrances and/or diversions on the way" (Gehl, 2013, p. 34). Gehl uses this method to study pedestrian travel times in Perth and Sydney in 1994 and 2007, respectively. In the case study of Phase Three, to examine the efficiency of the routes in terms of travel time and distance, several test walks are conducted on a weekday morning in April 2014 on different routes between Mong Kok MTR station and Mong Kok East MTR station, which includes the Mong Kok Pedestrian Bridge and its four closest routes at ground level. A recording app—MapMyRun—is installed on an iPhone to track the tested routes and to record the travel times and distances.

Questionnaire

The questionnaire survey method is used for understanding people's opinions of pedestrian bridges, as it is a very practical and efficient method that can be quickly and easily quantified, and then compared to other research findings. According to Tuan (1977) "… if we think of space as that which allows movement, then place is pause; each pause in movement makes it possible for location to be transformed into place …" (p. 6), thus in Phase Three, an open-ended questionnaire is designed with only one question, to establish people's perception of their own actions on the pedestrian bridges; "When you are using footbridges in Hong Kong, what will make you slow down your pace? Or even stop/stay for a while on the bridges?" Through Internet-based services and applications such as Gmail, WeChat, and WhatsApp, the questionnaire is distributed to 40 everyday users of pedestrian bridges who is studying, working, and living in Hong Kong.

Secondary research: Internet-based research and document analysis

Internet-based research and document analysis are the secondary research methods used in this study. According to Krantz (2014), "Internet-based research method refers to any research method that uses the Internet to collect data". The two main types of Internet-based research are via the Internet, such as online surveys and questionnaires, and about the Internet, such as data mining. In Phase Two, the latter is primarily used for visual data collection. Google Street View is a technology featured in Google Maps and Google Earth that provides multiple panoramic views of many streets throughout the world. This technology is thus highly effective for collecting visual data of pedestrian bridges in the overall investigation of Phase Two, and is also very flexible with regards to scheduling.

The document analysis accesses general information mainly via government reports and mass media articles, to supplement the data of the perceptions and opinions on pedestrian bridges in Hong Kong.

3.6 Validity and reliability

According to Yin (1994), three principles are involved in constructing a valid and reliable case study: (1) using multiple sources of evidence, (2) creating a case study database, and (3) maintaining a chain of evidence.

This study follows principles (1) and (3). The data collected are not sample representations but are examined for what they are; observations of pedestrian bridges' spatial properties and people's everyday actions, which can also be observed by others. The multiple research methods are suitable for the nature of the data collected and enable the triangulation of information. The observations data are collected first hand in naturalistic settings and are supplemented by videography and questionnaires, and data are collected by multiple methods with triangulation.

3.7 Data analysis

The general strategy for data analysis in this study is “relying on theoretical propositions” (Yin, 1994, p. 103), which is appropriate as the research objectives and the case study design are guided by and based on such propositions. Canter’s place model (1977), Barker’s (1968) theory of behavior settings, and Gibson’s (1979) theory of environmental affordances together help to focus the attention of the analysis on the data of physical settings and people’s actions and their perceptions.

The data collection approach is primarily qualitative, and so the qualitative visual data collected from observations provide most of the information on human-environment interactions through immediate data analysis. The collected images and videos are compared for similarities and differences, and processed to identify meaningful themes and patterns. The textual data collected from the questionnaires is similarly processed, and also sorted and examined for themes and patterns. The quantitative data via questionnaires is processed through basic counting. The quantitative data collected from space syntax and the test walks are analyzed with the space syntax software DepthmapX and the smartphone application MapMyRun.

3.8 Summary

The first two parts of this chapter review theories in environmental and behavioural research and then discuss precedents of urban studies on public life and public space, which inspires and guides the research design of this study.

The third part provides a comprehensive description of how this research is conducted, which includes three phases. The first phase is a literature review where the theoretical foundation of public spaces and places, the

perspective of everyday life, and the urban development of Hong Kong are examined. In the second phase, general investigations are conducted for researching pedestrian bridges' physical characteristics and urban roles. The third phase, which is the most important part of the study, is an in-depth case study of the Mong Kok Bridge, examining the idea of pedestrian bridges as everyday places in a high-density urban context.

Various qualitative and quantitative approaches are used for collecting data to obtain valid and reliable findings, qualitative methods being the dominant approach.

CHAPTER 4 GENERAL FINDINGS OF HONG KONG PEDESTRIAN BRIDGES

4.1 Preamble

This chapter introduces the overall situation of Hong Kong pedestrian bridges in terms of their provision and construction. It explores the typology of various bridges based on their spatial priorities and discusses the physical characteristics of Hong Kong pedestrian bridges in terms of space and their effect on urban space and image. It also summarises the roles that pedestrian bridges play in the city. Hence, it provides an overview of pedestrian bridges in Hong Kong.

4.2 The overall situation of Hong Kong pedestrian bridges provision and construction

The report of May 2015 from the Hong Kong Government stated that Hong Kong contained 1214 pedestrian bridges ("Hong Kong: The facts-highways," 2015). These bridges span the physical terrain, aid daily commuting, reducing traffic congestion, and sustaining urban circulation. The rapid economic development and population growth since the 1960s means it has become increasingly necessary to grade-separate vehicular and pedestrian traffic through the use of pedestrian bridges in high-density urban areas. In 1963, the first grade-separated pedestrian bridge was constructed across Leighton Road near Victoria Park. In the increasingly congested urban space, grade-separated pedestrian networks provide multilevel access to everyday urban activities, channel the flow of pedestrians, and sustain urban circulation., Pedestrian bridges have evolved since the 1980s from simple crossings to pedestrian bridge systems. The elevated walkway along Connaught Road in Central district is a successful example, and the government has constructed similar pedestrian bridge systems in the densely populated urban areas of Hong Kong, such as Mong Kok and Tsuen Wan Districts.

In Hong Kong, both vehicular and pedestrian road traffic is extremely heavy, so to avoid conflicts between vehicles and pedestrians and to reduce

accidents, footbridges and subways are both used as grade-separated crossing facilities, to maximize pedestrian safety when crossing roads and to minimize disruption to vehicular traffic. According to report no. 49 from the Hong Kong government audit director in October 2007, the number of pedestrian accidents per year decreased from 1986 to 2006 by 39%, from 6,699 to 4,116. In the same period, the population in Hong Kong increased by 25% from 5.5 million to 6.9 million, and the number of vehicles doubled from 267,000 to 553,000. Pedestrian bridges are usually located on roads with heavy vehicular and pedestrian traffic, and most have protective covers in case of extreme weather conditions. Ramps, escalators, and/or lifts facilitate convenient elderly and disabled access. The 2003 Census and Statistics Department survey clearly indicated that the convenient access of escalators was critical in determining the people's use of the pedestrian bridges (Figure 4-1).

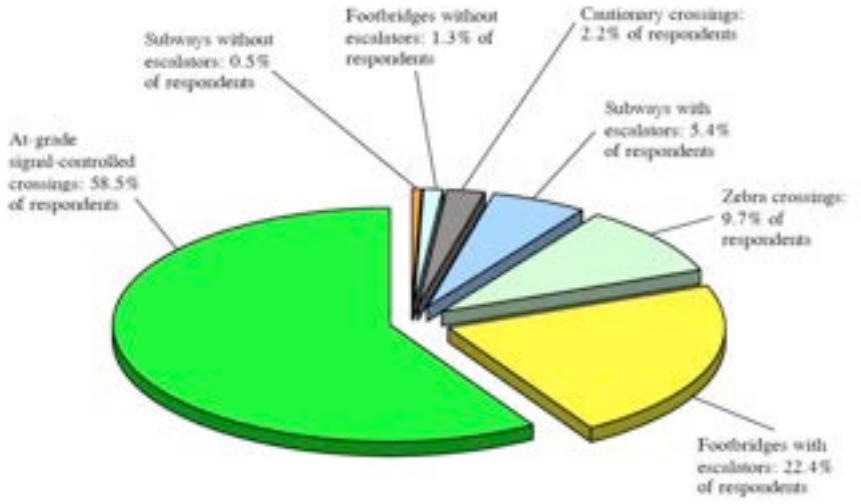


Figure 4-1 Respondents' preferred types of pedestrian crossing
Source: Census and Statistics Department

Hong Kong is a very high-density city with conflicting vehicle and pedestrian demands. The Hong Kong Planning Department's Urban Design Guidelines identifies the following aspects when planning pedestrian bridges: "(1) The footbridge should be as short as possible, ideally perpendicular to the street. It should aim to reinforce the spatial structure

rather than cutting across it; (2) The provision of freestanding footbridges for crossing roads should be avoided. The origin and destination of footbridges both at upper level should be encouraged to allow direct connection between the two points. Where the origin and destination are required at ground level, lifts and escalators should be provided wherever possible. The aesthetics of footbridge structures should be considered; (3) Provision of footbridges should be properly coordinated to cater for the convenient movement of pedestrians; (4) Design of soft landscape should be considered in the provision of footbridges" ("Urban Design Guidelines," 2015).

In Hong Kong, the Highways Department (HyD) has overall responsibility for the planning and provision of pedestrian bridges. In certain new development or redevelopment projects, the Planning Department and the Civil Engineering and Development Department (CEDD) are also involved. The HyD and the CEDD implement capital works projects for constructing pedestrian bridges. After completion, the bridges are usually handed over to the HyD for maintenance. Pedestrian bridges are either constructed as part of a large-scale development project funded under the Capital Works Reserve Fund (CWRF), or under a separate capital works projects funded by the CWRF.

4.3 Typology of Hong Kong pedestrian bridges

Hong Kong pedestrian bridges take various forms, and have evolved from the original single-crossing structures into complex pedestrian systems of interconnected elevated walkways and bridges ("Footbridges and subways of Hong Kong," 2014) (Figure 4-2). In the general investigation of the provision and construction of Hong Kong pedestrian bridges, features and designs critical to planning and design are identified, including location (context), access, floor plan design, and hard architectural elements or soft landscape elements, i.e., the factors of what are linked and how. Rotmeyer (2010) develops and proposes a similar set of indicators and design

properties when investigating the physicality of pedestrian bridges, such as the width of the bridge decks, different types of access, connectivity, and connected buildings.

Figure 4-2 Aerial photographs of various pedestrian bridges in Hong Kong
Source: Modified based on Google Maps

When considering fundamental physical forms and spatial structures, no matter how complex pedestrian bridges are, the deck and access are the two basic architectural elements from spatial planning and design perspectives. The bridges in Hong Kong have three different access types: stairs, ramps, and elevators. The stairs are often escalators that mechanically move people

from ground level to the deck. Ramps and elevators are for the benefit of the disabled, the elderly, and parents with strollers or buggies. They may or may not have roofs and windows, may be supported by columns in the middle or at the sides, and may be open or enclosed, but all Hong Kong's pedestrian bridges define the daily commuting space of thousands of people (Figure 4-3). Access is the key element when deciding whether or not to use a bridge and when considering the design, so Hong Kong's pedestrian bridges are categorized as independent or attached, depending on whether or not they have independent access to the ground level. Independent bridges in Hong Kong are usually also accessible through the connected buildings on the elevated level, so attached pedestrian bridges can therefore be regarded as only accessible through their linked buildings on the elevated level.

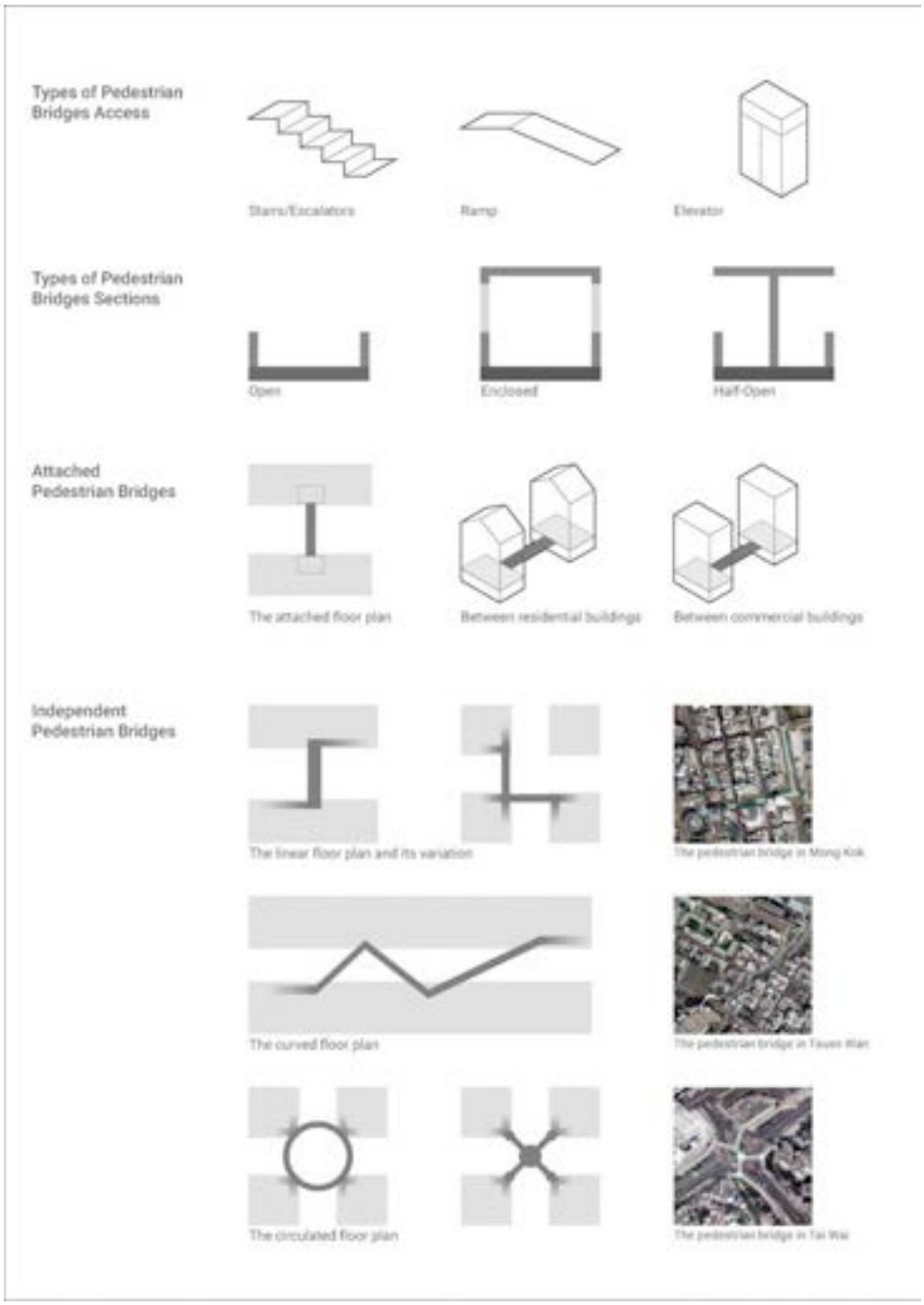


Figure 4-3 Typologies of pedestrian bridges in Hong Kong

As the attached pedestrian bridges in Hong Kong are connected and share the interior corridors of their linked buildings, they can be regarded as extended elevated corridors between buildings. The attached pedestrian bridges are generally much shorter than independent bridges, and their design is influenced by their linked architectures, using similar colors, materials, and pattern designs. Aesthetically, they are “a mixed bag”

(Whyte, 1988, p. 200), with some poorly designed and others unified. Their interior concourses all, however, spatially establish connections between the buildings on the elevated level. The bridges have been the primary types of pedestrian separation infrastructure in Hong Kong since the 1960s, and the sub-categories used to classify them are based on their forms and their spatial relationships with their surroundings. The types of attached pedestrian bridges in Hong Kong are (i) those linking residential buildings, (ii) those linking commercial buildings, and (iii) those linking residential and commercial buildings (Figure 4-3). Context and location are the main determinants of what attached bridges link, which to a great extent then defines their nature.

The Hong Kong Planning Department recommends that pedestrian bridges should be as short as possible, but independent pedestrian bridges are relatively much longer and larger than the attached bridges. Some connect residential and/or commercial buildings while others exist independently, spanning streets. Chen (2004) summarizes the various ways the connected buildings in Central are linked when analyzing the Central Elevated Walkway in Hong Kong. From walk-by observations and Internet-based research on various pedestrian bridges in densely populated urban areas in Hong Kong, the independent pedestrian bridges in this study are classified as follows, based on form and the spatial relation with their surroundings. (1) The linear pedestrian bridge links locations in a straightforward, linear form that allows people to cross city streets. This is the most common form in Hong Kong and represents the city's efficiency and pace of life. It is also the elementary unit from which the more complex independent pedestrian bridges are constructed. Several (usually two or three) linear bridge units form "L"-, "U"- or "H"-shaped systems that span two or three road crossings as necessary. (2) The curved pedestrian bridge commonly links several locations simultaneously with the shortest deck. The curved design can also be due to planning regulations specifying the distance the bridge must be from surrounding buildings, to protect residents' privacy. (3) The circulated pedestrian bridge is located at street intersections in downtown areas. It is a very efficient type of independent pedestrian bridge that

enables people to travel to and from numerous different areas in any direction at any time. It illustrates the concept of micro-scale urban public circulation in specific locations (Figure 4-3). (4) Escalator bridges traverse Hong Kong's hilly terrain, carrying people between the city's different levels. In addition, with the use of Google Earth, a hundred pedestrian bridges in various locations in Hong Kong Island, Kowloon and New Territories (places such as Aberdeen, Ap Lei Chau, Causeway Bay, Central, Fanling, Hung Hom, Kowloon Tong, Kwai Chung, Kwun Tong, Ma On Shan, Mong Kok, Pok Fu Lam, Quarry Bay, Sha Tin, Sham Shui Po, Tai Wai, Tin Shui Wai, Tsing Yi, Tsuen Wan, Tuen Mun, Wan Chai and Yuen Long) were selected for analysis. Among the 100 bridges, 84% are independent, which is the dominant bridge type in Hong Kong. The remaining 16% are attached bridges, which are mostly located in densely populated and high compact urban areas such as Central and Wan Chai, and in town centres in new towns such as Sha Tin, Yuen Long and Tuen Mun.

Hong Kong's pedestrian bridges are usually considered and designed separately by developers or governments. They are types of intervened urban infrastructures that complement the functions of the city and its inhabitants. Each pedestrian bridge connects its surroundings differently, and a variety of attached or independent bridges have been built at different times to be connected in parallel, in series or centralized in podiums (Figure 4-4), and this vast network makes up the pedestrian bridge system. For instance, the Tsuen Wan Pedestrian Bridges System consists of both attached and independent pedestrian bridges, within which the Citywalk shopping mall is linked with Tsuen Wan Town Hall in a parallel connection, and the Town Hall is centralized in its podium connecting surroundings. "They are not just an aggregate of segments … but an encompassing network, with every building linked to every other" (Whyte, 1988, p. 198). These systems emerge as another type, differing from the pedestrian bridge as a single unit. As well-organized networks of bridges spanning streets and connecting buildings and hubs of activity (Robertson, 1994) the systems contribute to isolate pedestrians from the ground level and provide an elevated pedestrian space. The various dynamic pedestrian bridge systems,

taken together, have transformed Hong Kong into an organically organized line-segment city floating in the air, where the inhabitants travel daily.

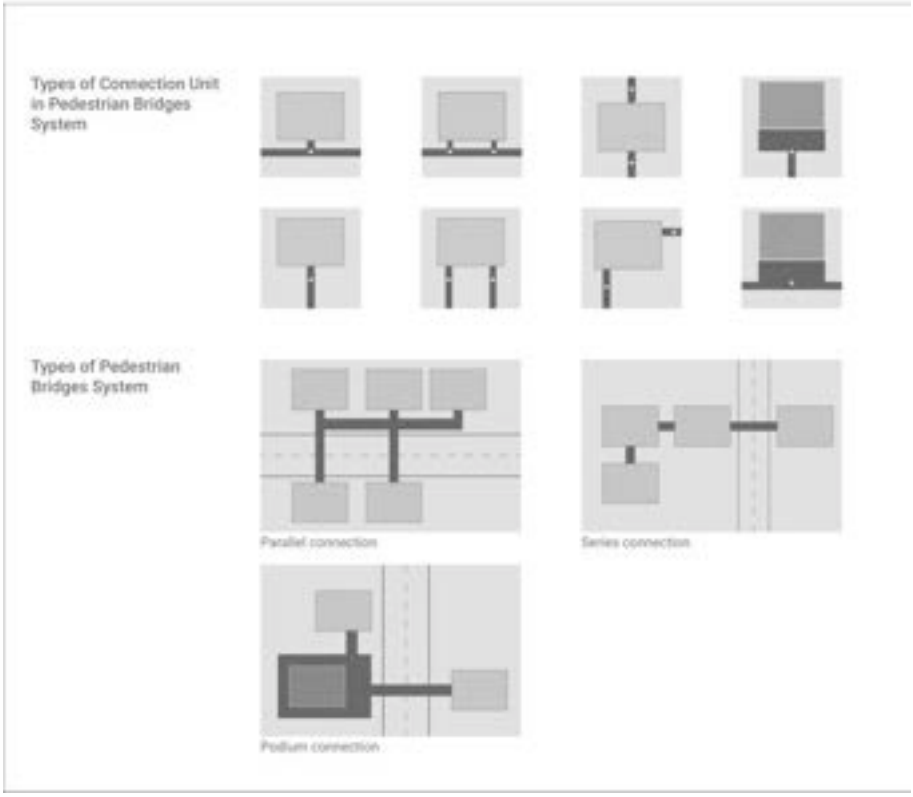


Figure 4-4 Typology of the pedestrian bridge system in Hong Kong

4.4 The physical characteristics of Hong Kong pedestrian bridges[1]

Treating pedestrian bridges as architecture, Ching's (2007) theories and analyses on the architectural form, space and order establish a critical research basis for analysing a bridge's physical qualities and characteristics. Pedestrian bridges are usually designed as short as possible, and are perpendicular to the streets. Most are thus linear in form, but are sometimes segmented or curvilinear, to respond to the specific urban context. The

[1] Parts of the author's own paper "Wang, W., Siu, K. W. M., & Wong, K. C. K. (2015). Pedestrian Bridges and Urban Landscape: A Case Study of Hong Kong Pedestrian Bridges' Aesthetics and Their Effects on the Urban Landscape. *The International Journal of Architectonic, Spatial, and Environmental Design, 9*(4), 35-53" are included in the Chapter 4.4. Longer sentences, phases, and paragraphs are referenced.

nature of the linear form therefore determines the spatial characteristics of Hong Kong pedestrian bridge space. Most are covered and different pillar and structural formation systems are used.

Dynamic

The linear form-dominated pedestrian bridges are dynamic. According to Kandinsky (1979), “The geometric line is an invisible thing. It is the track made by the moving point; that is, its product. It is created by movement - specifically through the destruction of the intense self-contained repose of the point. Here, the leap out of the static into the dynamic occurs” (p. 57). As a straight linear space, it has the tendency to run into infinity and “represents the most concise form of the potentiality for endless movement” (Kandinsky, 1979, p. 57), which is the material result of the movement in the form of tension and direction (Kandinsky, 1979). It expresses procession and movement. The longer and narrower the pedestrian bridge space, the more dynamic it is (Figure 4-5). When the space is wide enough to support different activities, it becomes more stable.

Figure 4-5

A characteristic of orienting

The linear spatial form and the potential of the linear-patterned movement of people create the characteristic of orienting in the space. People's sight is guided and a sense of a finishing point is provided, encouraging them to embark on their journey.

A dimension of time

Traveling through linear space involves time. When people walk through the pedestrian bridge space, their actions respond to the environment within constantly changing time. The overall spatial perception collected from each

moment or each pause makes the space to a certain degree a narrative function. The pedestrian bridge space transforms space and time, as it is deeply involved with the dimension of time (Figure 4-6).

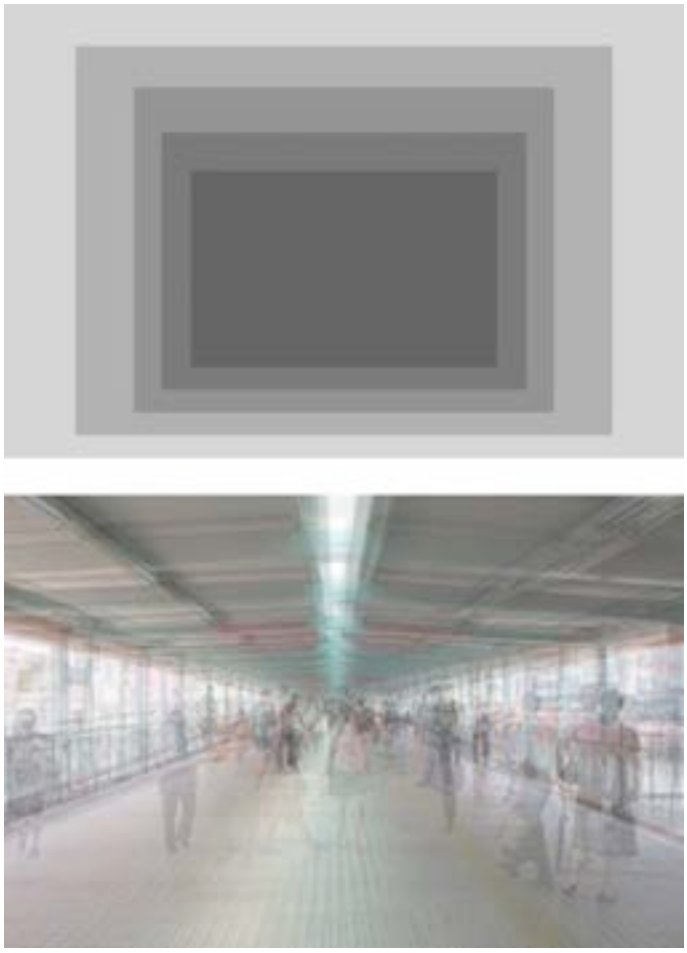


Figure 4-6

Transparency

Transparency results from visible layering, permeable to air and light (Rowe & Slutzky, 1992). As most pedestrian bridges are built without windows or with transparent glass, the pedestrian bridge space is revealed through its lack of depth and is usually seen beyond.

Order and rhythm

According to Ching (2007), order refers to geometric regularity and rhythm to “any movement characterized by a patterned recurrence of elements or motifs at regular or irregular intervals. The movement may be of our eyes…or of our bodies…through a sequence of space…rhythm incorporates the fundamental notion of repetition as a device to organize forms and spaces…(p. 382).” Pillars and different structural formation systems can significantly demonstrate spatial order and rhythm on Hong Kong pedestrian bridges. From the views both on the bridges and at ground level, the bridges are perceived to have a number of variations, but also certain regularity (Figure 4-7).

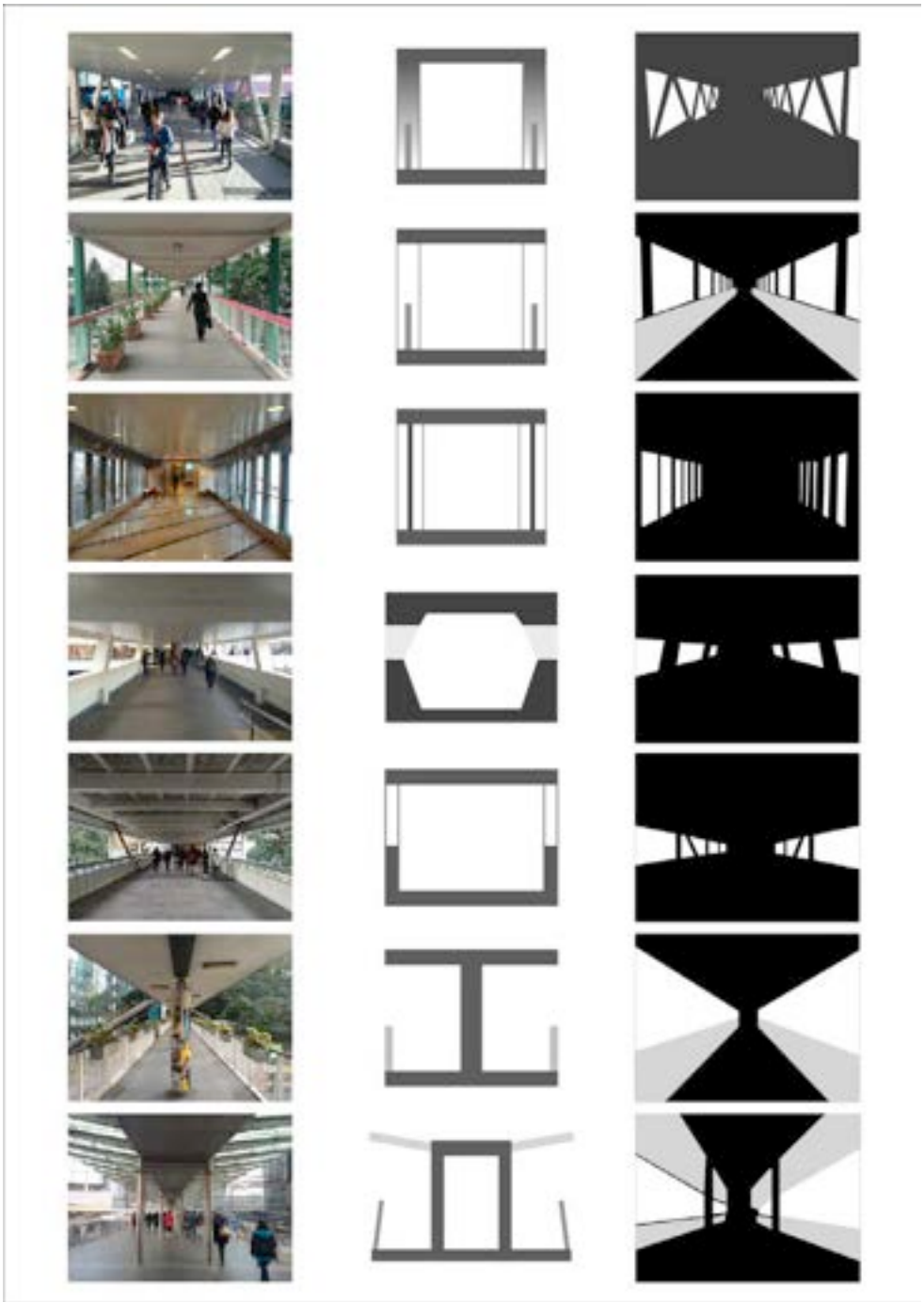


Figure 4-7 Hong Kong pedestrian bridges' spatial order and rhythm

Color

Spatially, pedestrian bridges can include certain clear outlines and facades consisting of mass and void. Their colors can thus be powerfully expressive of the bridges. Color is an important indicator of the character of the bridges' building context, accentuating their form and material, and

specifically reveals their urban locations. The bright blue and red of the pedestrian bridges in Fung Tak Road and Wai Yip Street (Figures 4-8, 4-9) indicate the residential areas in which these bridges are situated, while the use of dark black on the façade of the pedestrian bridge in Queen's Road Central (Figure 4-10) presents a typical image of the business district in Hong Kong.

Figure 4-8 Pedestrian bridge at 111 Fung Tak Road, Hong Kong
(Source: Google Maps)

Figure 4-9 Pedestrian bridge at 33 Wai Yip Street, Hong Kong
(Source: Google Maps)

Figure 4-10 Pedestrian bridge at 28 Queen's Road Central, Hong Kong (Source: Google Maps)

4.5 Pedestrian bridges' spatial effect on Hong Kong urban space[2]

For investigating the spatial effects of bridges, Ching's (2007) architectural analysis and research provides a closely related theoretical basis for examining the spatial effects of a pedestrian bridge. In addition, Robertson's (1994) studies on the effect of bridges on the cityscape of Minneapolis, US also give comparative examples and references. Hong Kong has a landmass of 1,104 km² and a population of seven million people, making it one of the world's highest density cities. Architectonically, the pedestrian bridges create floating mass and void in the city. They work as transition space that harmoniously enhances and connects the buildings at the elevated level. They intervene with the city and lend it a spatial vibrancy. A variety of pedestrian bridges linked with elevated public spaces and underground concourses contribute to the city's three-dimensional urban space, and provide highly accessible and efficient pedestrian circulation. Their

[2] Parts of the author's own paper "Wang, W., Siu, K. W. M., & Wong, K. C. K. (2015). Pedestrian Bridges and Urban Landscape: A Case Study of Hong Kong Pedestrian Bridges' Aesthetics and Their Effects on the Urban Landscape. *The International Journal of Architectonic, Spatial, and Environmental Design, 9*(4), 35-53" are included in the Chapter 4.5. Longer sentences, phases, and paragraphs are referenced.

emphasis on efficient movement through the city makes them unique contemporary urban objects in Hong Kong. They generate fascinating spatial experiences and blur the boundary of buildings in the elevated level, integrating the interior and exterior, and unifying the buildings and urban space. The physical presence of the pedestrian bridges in Hong Kong greatly influences the parameters of the daily lives of those who populate them, forming and transforming Hong Kong into a city without ground (Frampton, Solomon & Wong, 2012).

The pedestrian bridges are integral to the city, influencing urban access and the ways people travel. Linking up with other urban network structures such as ground-floor bus stations and underground metro concourses, the pedestrian bridges in Hong Kong jointly create an alternate system: the "second city" (Willensky, 1985).

Significantly, the Hong Kong bridges create transition and in-between spaces, enriching the perceived spatial experience. The voids of the pedestrian bridge spaces form transitional and permeable indoor-outdoor space-between buildings in the elevated level, enriching the urban fabric and the spatial structure of the city. They break the boundaries between buildings and streets, integrating and supplementing their various architectural and urban functions.

Harmony and discord in urban images

The city's buildings were built at different times in different architectural styles using different materials, and owned by different groups, so making the pedestrian bridges compatible with the designs of the buildings on both sides is extremely difficult. A bridge that is harmoniously coordinated with the building on one side may be discordant with that on the other, resulting in an inconsistent architectural style at the elevated level. One of the pedestrian bridges in Canton Road in Tsim Sha Tsui is beautifully joined to the Silvercord Building using the same materials and architectural style, but clashes with the Harbour City building on the other side, which features

contrasting black and white, different textures and different degrees of reflection in its facade (Figure 4-11).

Figure 4-11 Bridge over Canton Road in Tsim Sha Tsui
(Source: Google Maps)

When a bridge and its connected buildings were built at different times with different styles and materials, a fragmented urban image is presented. The pedestrian bridge at the intersection of Pedder Street and Des Voeux Road in Central is connected to a fashion retail store and an office building, whose façades are so distinctively different that the elevated image of the area extends incoherently along and across the street (Figure 4-12).

Figure 4-12 Pedestrian bridge at the intersection of Pedder Street and Des Voeux Road

As real estate is a key business in Hong Kong, powerful groups of developers are able to construct residential and/or office buildings in several phases, with podium spaces often developed into shopping malls connected by a group of uniformly designed pedestrian bridges. The developer can ensure the bridges are well-integrated parts of their projects, by including them in the master plan. In this well-planned and uniformly designed area, the exterior design of the pedestrian bridges thus adds to the visual attractiveness of the area. Langham Place in Mong Kok, developed by the Urban Renewal Authority and Great Eagle Holdings Limited, features two pedestrian bridges that link its shopping mall and hotel at different heights, creating a holistic dynamic street image and forming a dramatic spatial relationship in the site (Figure 4-13).

Figure 4-13 Pedestrian bridge over Langham Place
(Source: Google Maps)

In some areas, a certain degree of consistent and subtle architectural style can be found in the urban context of the bridges and their surrounding buildings. By standing in front of the Hong Kong and Shanghai Banking Corporation (HSBC) headquarters building and looking to the west, the

bridge both functionally and visually integrates itself in its surrounding buildings (Figure 4-14).

Figure 4-14 Pedestrian bridge near HSBC Headquarters

At night, artificial lighting weakens and softens the contrasts and clashes between the different elements of the built environment. The lighting systems transform the physical forms of the bridges into light and dark shadows. The pedestrian bridges are no more than steel or concrete, and are transformed into corridors of light that appear to float on the air, making Hong Kong resemble a city that is more of science fiction than of the real world (Figures 4-15).

Figure 4-15 The Mong Kok Pedestrian Bridge at night

Effect on the streetscape

Regardless of how and where pedestrian bridges are built, their tendency to dominate the streetscape is demonstrated by the many areas where they have either a positive or a negative influence. The pedestrian bridges initially frame and pattern the streetscape, encompassing the interior and exterior space (Figure 4-16). They also significantly change the everyday urban scene, as they do not only cross roads but also run alongside them, offering an elevated “pedestrianized” street space. In Central Hong Kong, the pedestrian traffic utilizes the bridge along Connaught Road, and very few people remain at the ground level, making the urban life there rather barren and inactive. The streetscape is then split into the vibrant and dynamic urban scape on the bridge, and the inactive scape below it, causing a dramatic discord and contradiction in the city’s multilevel urban space.

Figure 4-16 The pedestrian bridges' framed and patterned urban scenes

The streetscape of the crossroads has also changed due to the pedestrian bridges. The three pedestrian bridges that cross Des Voeux Road Central and Ice House Street are densely constructed around the intersection, creating a spatial enclosure elevated at the crossroads (Figure 4-17).

Figure 4-17 View from the intersection of Des Voeux Road Central and Ice House Street

Effect on the cityscape

Pedestrian bridges in Hong Kong float on the second story of the city. As a three-dimensional city, Hong Kong's terrain comprises of hilly slopes and seashores, with very few suitable sprawl spaces for urban development. This lack of space causes a demand for dense, high-rise office and residential buildings, resulting in intense urbanization: there are 1,251 skyscrapers and many buildings taller than 150m (500 ft.) in Hong Kong ("Cities with the Most Skyscrapers," 2014). The terrain, tall skylines, and high population density together make Hong Kong a typical three-dimensional vertical city. The several layers in the city's overall spatial structure can therefore be summarized as follows. The primary, fundamental layer—the natural terrain of Hong Kong—is made up of steep slopes, hills, mountains, and the seashore, all of which serve as a backdrop for the cityscape. The second layer comprises the skyscrapers, office and residential buildings, roadways, and the urban infrastructure such as pedestrian bridges, which create the high density city. This layer shows how the people build their homes on the land. The third is the human layer, where everyday activities transform the natural land and the built environment.

In Hong Kong, the mountains, steep slopes, and the sky are the landscape backdrop, and the densely constructed high buildings and skyscrapers the man-made settings. In this iconic landscape, qualities such as density, verticality, and concentration are continually present. The existence of pedestrian bridges invades and blocks the vistas and damages the depth and spaciousness of the view. The urban scene behind the bridge is sheltered and cut into sections by it. The verticality recedes as the pedestrian bridge

powerfully emphasizes the horizontality (Figure 4-18). In more open areas, for example when standing in front of the Cheung Kong Center in Des Voeux Road facing southeast, the abrupt horizontality of the pedestrian bridge is more obvious (Figure 4-19).

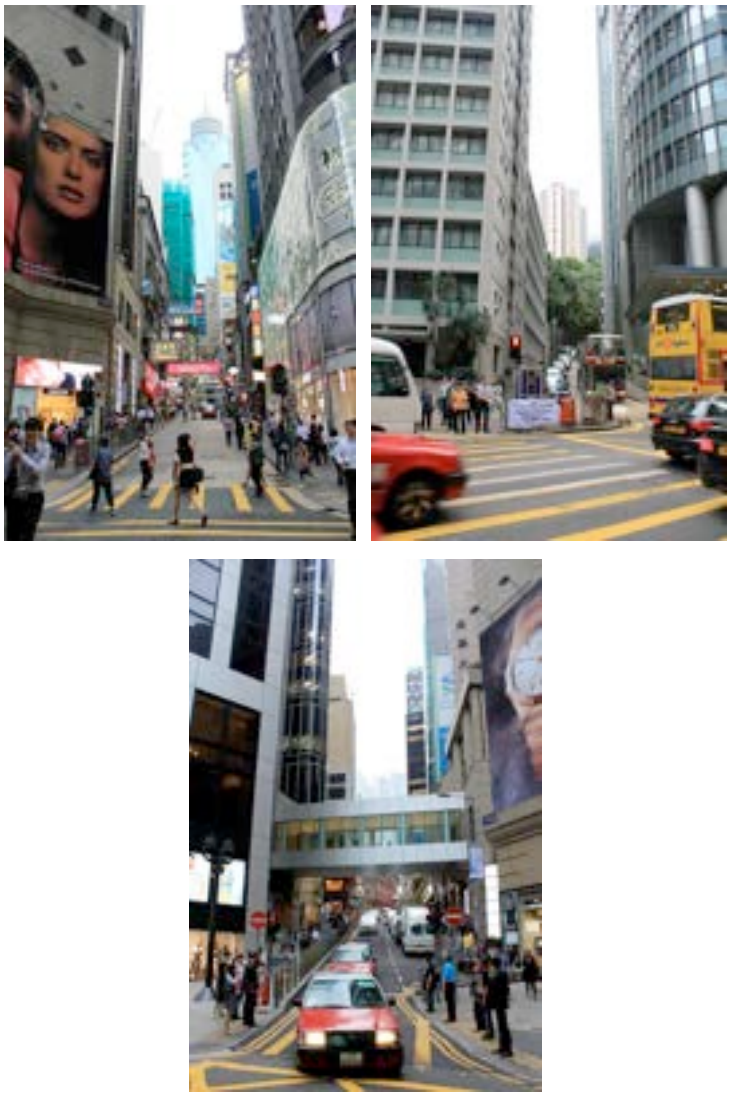


Figure 4-18 Comparative views from the intersections of Ice House Street and Queen's Road, the intersection of D'Aguilar Street and Queen's Road, and the intersection of Wyndham Street and Queen's Road

Figure 4-19 The abrupt horizontality of the Pedestrian Bridge

4.6 The urban roles of the Hong Kong pedestrian bridges[3]

Many people in Hong Kong use pedestrian bridges in their everyday lives, and bridges have become an important part of their urban lives. The bridges themselves are therefore critical to the city.

Pedestrian bridge primarily as an infrastructure for urban segregation

As a land-hungry place, Hong Kong has extremely limited scope for urban development, resulting in the concentration of a great many people and tall buildings within a restricted space, making it an extremely high-density city. The primary urban role of pedestrian bridges is to segregate pedestrians from vehicular traffic. They are fundamental in improving spatial connectivity and guiding people on specific routes, and help them avoid the obstacles of the physical terrain such as streets and railroads. They facilitate urban mobility and take commuters away from potential hazards at ground

[3] Parts of the author's own paper "Wang, W., Siu, K. W. M., & Wong, K. (2014). The Changing Role of Pedestrian Bridges in Everyday Urban Life: Case Study of Pedestrian Bridges in Hong Kong. *Proceedings: International Journal of Arts and Sciences, 7*(1), 347-356 (CD-ROM)." are included in the Chapter 4.6. Longer sentences, phases, and paragraphs are referenced.

level, improving pedestrians' safety and health (Jacobs, 1961). They gather people and allow them to travel in a quicker, safer, and more convenient way that irrevocably changes the patterns of everyday activity. For the recently developed strategy of TOD (Transit-oriented Development), the pedestrian bridges solve the "last mile" problem perfectly, carrying people from transport stations to their workplace or home.

The pedestrian bridges improve the connectivity of the urban spaces between the buildings, allowing people to easily and regularly navigate buildings' interior concourses and corridors on the elevated level. They establish connections between the commercial and/or residential buildings on the micro scale of urban space, and diversify urban sidewalk and street types, improving urban accessibility (Pasaogullari & Doratli, 2004). The pedestrian bridges of Canton Road in Tsim Sha Tsui directly connect two shopping malls to the Silvercord and Harbour City Buildings, creating convenient passages for consumers (Figure XXX). In Causeway Bay, an attached pedestrian bridge joins Lee Gardens' Phases I and II creating a corporate entity and a continuous shopping environment (Figure 4-20).

Figure 4-20 Attached pedestrian bridges at Canton Road in Tsim Sha Tsui (left), attached pedestrian bridge at Lee Gardens in Causeway Bay (right)

Pedestrian bridge as a multifunctional urban infrastructure

Many pedestrian bridges have been constructed in Hong Kong's densely populated urban areas since the 1960s, and information boards have been installed by the government, turning them into urban information units that

serve people during their daily commute. The information displayed can be categorized as follows.

(a) Transportation Information. Bus and subway route numbers and directions are often displayed on the supporting elements of pedestrian bridges located at the intersections of main roads to guide people to buses and trains. The pedestrian bridge situated between the Hung Hong MTR station and the Hong Kong Polytechnic University, for example, is a bridge that clearly displays information on several buses routes between Hong Kong Island and Kowloon District.

(b) Way-Finding Information. Small-scale regional maps are often placed on the sidewalls of pedestrian bridges in the downtown areas. These show the user's location, the important places in the vicinity, and how to navigate to them. Visitors such as tourists benefit greatly from these maps. The map installed on the pedestrian bridge in Mong Kok helps pedestrians plan their journeys in the area (Figure 4-21).

Figure 4-21 The map installed on the bridge

(c) Local Cultural and Art Information. In some areas, pedestrian bridges with certain design layouts can be transformed into other spaces, such as gallery spaces to display local cultural products and community achievements. Designed and developed by local designers and artists, Wan

Chai pedestrian bridge was transformed into the “Wan Chai Footbridge Gallery” to provide an intriguing display of art depicting the “50 landscapes of Wan Chai” to passing pedestrians (Figure 4-22).

Figure 4-22 Wan Chai footbridge gallery

On a broader community scale, pedestrian bridges have been catalysts in the urban (re)development process, gathering people and attracting the density to build a new layer of urban life that affects investment patterns. Lublin (1984) states that “the use of skyways as an economic tool in a downturned downtown area has overridden the climate-control issue” (p. 1). The role of pedestrian bridges as catalysts is well demonstrated in the downtown areas of Hong Kong. Office buildings and shopping malls are closely connected with bridges, though they may be owned or managed by different parties. The pedestrian bridge systems promote the multilevel urban circulation of pedestrians and traffic, complementing the area’s urban functions. These systems become catalysts for effective urban (re)development planning tools (Robertson, 1994). The pedestrian bridge systems in the Tsuen Wan and Central districts of Hong Kong Island encourage pedestrian circulation, creating “an image of a modern and utilitarian downtown” (Robertson,

1994, p. 137). They contribute to the city's dense urbanscape and sustain the intensive use of vertical urban space, which results in the urban spatial qualities of connectivity, verticality, and complexity (Miao, 2001). Other examples are Harbor City in Tsim Sha Tsui, New Town Plaza in Sha Tin, and Tuen Mun Town Plaza in Tuen Mun, where pedestrian bridges link adjacent buildings to create an integrated powerful spatial and economic unit.

The pedestrian bridge as a public space

In Hong Kong, pedestrian bridges not only offer safer and shorter routes to destinations, but also provide a more convenient and comfortable space to stay in for short periods, particularly during bad weather. Relaxing with a cigarette, chatting, and eating are common experiences on pedestrian bridges (Figure 4-23, Figure 4-24). Many amusing conversations occur spontaneously between strangers on the bridges. A tourist may ask for directions from a passer-by, or a group of men may borrow and share a lighter and enjoy a cigarette together around a rubbish bin. In the early morning, local residents who live near pedestrian bridges even take advantage of them as gymnastic apparatus for their morning exercise. Late at night when there are very few pedestrians people walk their dogs on the bridges, and street performers show off their talents to the passing audience, while hawkers take advantage of the heavy flow of pedestrians to sell their goods. Considering different high-density areas within a city such as residential, commercial and mixed-use areas, we can look at pedestrian bridges as ordinary features that can complement a city's urban functions at different times. For instance, bridges located in commercial areas usually facilitate people's commute on weekdays, while bridges in residential areas are vibrant places on weekends. Furthermore, the absence of people during certain times of the day provides the opportunity for other groups of people to take over the bridge, such as homeless people who occupy bridges at night regardless of location.

Figure 4-23 Friends encounter each other on the bridge and start a conversation

Figure 4-24 Empty cans and bottles left on the bridge after meals (physical traces)

A multitude of collected and combined urban activities transform pedestrian bridges in Hong Kong into a new form of public realm for both urban movement and activities. They function as supplementary urban objects and help to ease the city's problems. They offer the city extra public space that enables people to not only commute but also to socialize, promoting diverse urban activities such as street performing, hawking, and relaxing—a significant asset for a city such as Hong Kong, where land is severely limited. It is a new type of public realm hosting urban movement and various necessary, optional, and social activities (Gehl, 1987). An elevated stage is created where "the drama of communal life unfolds" (Carr, Francis, Rivlin & Stone, 1993, p. 3). The pedestrian bridges transcend their function

as tubes for movement to become social spaces (Elsheshtawy, 2013). The bridge in Mong Kok sustains many aspects of everyday life, from commuters and sightseeing tourists to performing artists, market traders, resting travelers and relaxing domestic helpers. This makes the bridge itself a perfect public space to host diverse urban events.

4.7 Summary

This chapter first demonstrates how pedestrian bridges in Hong Kong were developed, from the first bridge that was constructed in 1961 to the 1,214 bridges that are now in place as of May 2015. The chapter goes on to show the typology of Hong Kong pedestrian bridges, such as attached and independent, and the pedestrian bridge system. The physical characteristics of bridges are then summarised, looking at dynamism, the characteristics of orientation, time, transparency, order and rhythm. Their effects on the cityscape are also examined. Finally, the multiple roles of pedestrian bridges as urban infrastructure, multifunctional urban facility and public space are elaborated.

CHAPTER 5 THE PEDESTRIAN BRIDGE AS EVERYDAY PLACE IN HIGH-DENSITY URBAN AREAS

5.1 Preamble

PART ONE - An Extreme High-density Urban Area: The Mong Kok District

5.2 Land use of Mong Kok district

5.3 Analysis of public space in Mong Kok district

PART TWO - Case Study of The Mong Kok Pedestrian Bridge As Everyday Place

5.4 Design and spatial properties

5.5 An everyday space in a compact high-density urban context

5.6 All members of all the publics: Users of The Mong Kok Pedestrian Bridge

5.7 Locating public in an everyday space

5.8 Possibility, diversity, and inclusiveness of everyday urban life

5.9 The socio-spatial dialectic in an everyday public place

5.10 A multi-layered everyday place's catalytic effects

5.11 The everyday place as an urban gathering place and an assemblage

PART THREE - An Urban Reference of Placemaking in a High-density Context

5.12 The pedestrian bridge as everyday place: An urban reference of placemaking in a compact high-density context

5.12.1 Spatial settings of pedestrian bridges: The well planned and designed space primarily for necessary activities but not only

5.12.2 Everyday appropriation, everyday placemaking

5.12.3 Placemaking as the continuing spatial re-configuration to maximise shared value

5.12.4 An urban reference for understanding necessity and sufficiency of placemaking

5.12.5 Place-led development

5.13 Summary

5.1 Preamble

This chapter comprehensively presents the findings from the in-depth case study of the Mong Kok Pedestrian Bridge, which examines the idea of 'pedestrian bridges as everyday places in densely populated urban areas'. Furthermore, the framework of everyday placemaking is generated and developed.

Specifically, the first part of this chapter presents and discusses the high-density urban context of the Mong Kok district where the pedestrian bridge is located and where there is a serious lack of public space. The second part comprehensively examines and demonstrates the idea of pedestrian bridges as everyday places in high-density urban areas with the use of the in-depth case study of the Mong Kok Pedestrian Bridge. Learning from this example and taking the Mong Kok Bridge as an urban reference, a model and framework of everyday placemaking in densely populated urban areas is generated and developed.

PART ONE - An Extreme High-density Urban Area: The Mong Kok District

5.2 Land use of Mong Kok district

Excluding the major road area, most of the Mong Kok district is planned for residential use. These two types of use make up 71.2% of the land. The next largest is "Government, Institution, or Community" areas, which take up 9.26% of the land. Only 5.97% of the area is planned for open space (Figure 5-1, Table 5-1).

Figure 5-1

(Source: The figure is edited based on The Outline Zoning Plan, NO. S/K3/30, Planning Department)

Table 5-1 Land use in Mong Kok district

土地用途及面積一覽表
SCHEDULE OF USES AND AREAS

USES	大約面積及百分率 APPROXIMATE AREA & %		用途
	公頃 HECTARES	% 百分率	
COMMERCIAL	9.25	6.31	商業
COMPREHENSIVE DEVELOPMENT AREA	0.04	0.03	綜合發展區
RESIDENTIAL (GROUP A)	42.56	29.05	住宅（甲類）
RESIDENTIAL (GROUP E)	2.82	1.92	住宅（戊類）
GOVERNMENT, INSTITUTION OR COMMUNITY	13.57	9.26	政府、機構或社區
OPEN SPACE	8.74	5.97	休憩用地
OTHER SPECIFIED USES	10.25	7.00	其他指定用途
MAJOR ROAD ETC.	58.96	40.23	主要道路等
URBAN RENEWAL AUTHORITY DEVELOPMENT SCHEME PLAN AREA	0.33	0.23	市區重建局發展計劃圖範圍
TOTAL PLANNING SCHEME AREA	146.52	100.00	規劃範圍總面積

(Source: The Outline Zoning Plan, NO. S/K3/30, Planning Department)

According to the Hong Kong Planning Standard and Guidelines (HKPSG), the standard for provision of open space in the urban areas, including the Metro Area and the New Towns, is a minimum of 20 ha per 100,000 people; specifically, 2 m^2 per person. Thus in Mong Kok district, at least 27.2

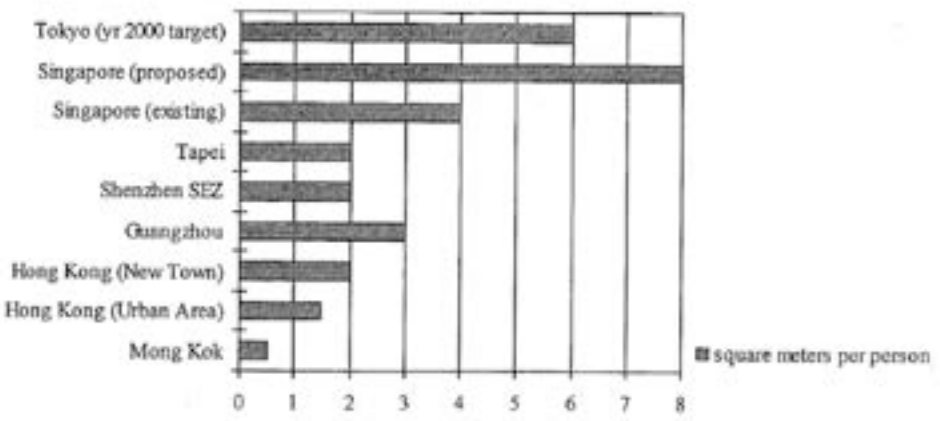
hectares should be dedicated to open space. However, the latest Mong Kok Outline Zoning Plan (NO. S/K3/30), indicates only 8.74 hectares of open space in Mong Kok, which is far below the Hong Kong Planning Standard and Guidelines (Table 5-2). Public space in Mong Kok is much less than in other cities in Asia and worldwide (Table 5-3). Public space in Mong Kok is used by many more people than just its local residents, and the high frequency of visits from tourists and those from other areas of Hong Kong must be seriously considered. According to the Transport Department, the substantial commercial, retail, and other economic activities in Mong Kok create a pedestrian flow at Sai Yeung Choi Street South of around 20,000 pedestrians per hour during peak hours, and the road space to accommodate both vehicular traffic and pedestrians is insufficient, resulting in numerous traffic accidents ("Pedestrian schemes for Mong Kok," 2015). Mong Kok district is therefore extremely lacking in public space for everyday use.

Table 5-2 Provision of open space in Mong Kok district

	Existing provided	HKPSG Standard	Square meter/person (Existing / HKPSG)
Open space in Mong Kok	8.74 ha	27.2 ha	0.64 / 2

(Source: Outline Zoning Plan, NO. S/K3/30, Planning Department)

Table 5-3 Comparison of open space provision



Source: Xue et al. (2001)

5.3 Analysis of public space in Mong Kok district

Mong Kok district is one of the oldest urban areas in Hong Kong, and residential land use is predominant. Intermixed with more recent high-rise buildings for mainly mixed commercial and residential uses, most residential buildings in the district are made up of four to six floors and were built in the post-war period.

According to the latest Mong Kok Outline Zoning Plan (NO. S/K3/30) (Figure 5-2), the Major Road zone has the largest land area of 55.95 hectares. The Residential Zone (Group A) is the second largest, occupying 42.56 hectares and including nearly all the residential development except that on both sides of Nathan Road. Here, high-density residential development is combined with commercial premises such as shops and eating-place on the lowest three floors. The Government, Institution, or Community Zone is the third largest, serving the needs of local residents and in some areas a wider district. In this zone, the main facilities are Mong Kok Stadium and two indoor games halls that are near the intersection of Sai Yee Street and Boundary Street, Mong Kok District Police headquarters that is at the intersection of Prince Edward Road West and Nathan Road, the Kowloon depot of the Food and Environmental Hygiene Department that is near the intersection of Sai Yee Street and Fife Street, a market and an indoor games hall complex that are at the intersection of Mong Kok Road and Fa Yuen Street, a Government complex at Fuk Tsun Street, and a fire station at Tong Mi Road. With the overall improved accessibility afforded by buses, minibuses, and The Mass Transit Railway of Tsuen Wan Line and the East Rail Line, the Commercial Zone of shops, department stores, cinemas, restaurants, and offices predominantly cover sites on both sides of Nathan Road, which forms the central commercial zone within Mong Kok district.

Figure 5-2 Distribution of open spaces in Mong Kok district

The Open Space zone in Mong Kok district covers 8.74 hectares, which serves the recreational needs of local residents and the wider public. The main open spaces consist of Boundary Street Sports Ground, Macpherson Playground at Nelson Street, Lok Kwan Street Park, and the playgrounds at Willow Street, Anchor Street, Canton Road, Mong Kok Road, Thistle Street, and Ivy Street. Two sites along Nullah Road that were previously used as petrol filling stations have been rezoned as open space. The site at the intersection of Nullah Road and Sai Teung Choi Streer South has been developed into a sitting-out area under the District Minor Works

Programme of Yau Tsim Mong District Council. And under the Urban Renewal Authority's Proposed Revitalization Plan for Mong Kok, the site at the junction of Nullas Road and Tung Choi Street will be developed as a public open space.

Using the quantitative method of space syntax for analysis (Figures 5-2, 5-3), many larger public spaces such as Boundary Street Sports Ground and Macpherson Playground are found to be located in areas with a lower degree of integration. These open spaces are relatively harder to reach as access within the Mong Kok district is limited.

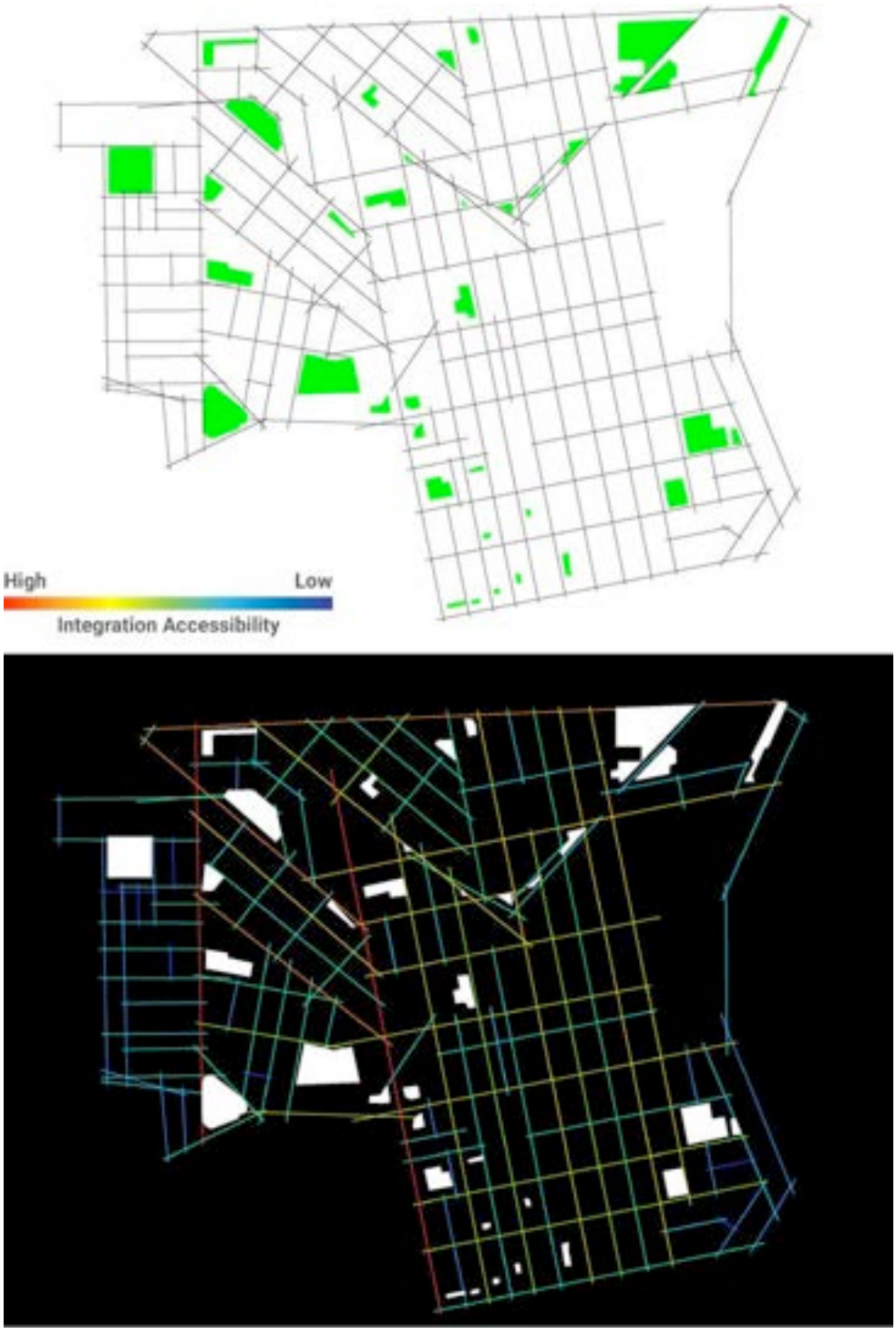


Figure 5-3 Axial map of Mong Kok district showing integration accessibility

From the walk-by observation, the physical survey, space syntax, and the site analysis, several problems are revealed. First, the open spaces are distributed unevenly. Many open spaces are allocated at the corners and boundaries of Mong Kok district, with very few in the central shopping and

commercial zone. Second, active open space is defined by the Planning Department as “recreation open space which contains outdoor recreation facilities, mainly for the core activities including games facilities,” passive open space is “recreation open space which is landscaped as parks, gardens, sitting-out areas, waterfront promenades, paved areas for informal games, children’s playgrounds, jogging and fitness circuits etc., where people can enjoy the surroundings in a leisurely manner” (“Recreation, open space and greening,” 2015). In Mong Kok district, several of the largest open spaces are active, such as the Boundary Street Sports Ground and Macpherson Playground. Given that Mong Kok is an aging community with many elderly people, these active spaces are thus not only underused but also appropriated by elderly people as sitting-out, passive open areas. Therefore, the active to passive space ratio requires adjustment, based on the district’s aging population structure. Third, many passive open spaces are actually leftover or roadside spaces, which are small in size, adjacent to roads, and not very accessible to the public. Hence, extremely polluted air and traffic noise are all these open space provide (Figure 5-4).

Figure 5-4

Summary

The serious lack of public space in Mong Kok district is one of the most obvious urban issues. The urban characteristics of extremely high

population density, limited land availability for future development, the compact urban forms of the over-concentrated commercial zone and densely built transport stations, diverse public programs, large flows of both pedestrian and vehicular traffic, substantial economic activities, and the aging and lower-income community profile together make Mong Kok a unique high-density urban context. In this context, the ways public spaces are conventionally planned, designed, utilized, perceived and managed are questioned and challenged. The emerging forms, types, and conditions of public space thus need re-definition, re-examination, and re-conceptualization.

PART TWO - Case Study of the Mong Kok Pedestrian Bridge

5.4 Design and spatial properties

The Mong Kok Pedestrian Bridge is open to the public 24 hours a day. The bridge takes a flat route with a 90-degree turn and connects several crowded places, such as the Mass Transit Railway (MTR) Mong Kok station, the MTR Mong Kok East station, the Grand Century Place shopping mall, and bus and minibus stations, providing connectivity and convenience. The walk from Mong Kok Station to Mong Kok East Station usually takes less than six minutes. The elevated pedestrian bridge therefore shortens the travel time of people commuting from district to district.

Over 350 meters in length, the L-shaped long span of the Mong Kok Pedestrian Bridge connects distances of greater length, unifying and organizing the surrounded buildings and infrastructure into an assembled unity. Ground level can be reached from 13 access points, four of which are accessible elevators to ensure easy access for elderly people, the disabled, parents with small children, and pregnant women, while the other nine guide pedestrians through the escalators and stairways to the sidewalks. It is

one of the longest covered pedestrian bridges in Hong Kong, with many exits. Due to the high-density context and the shortage of land, the ramp is not used in the Mong Kok Pedestrian Bridge. The covered walkway gives protection from extreme weather conditions such as sun exposure, wind, and rain in summer. The bridge's directional signage is clear and consistent with very good visibility, and the simple L-shaped floor plan is easily navigable. To cope with the busy pedestrian flow, the bridge is designed to be spacious and airy, and is between 5.5 meters wide at the Sai Yee Street phase and 8.5 meters wide at the Mong Kok Road phase. The main color scheme of the bridge is pink and green, giving a bright appearance. Throughout the bridge space, rubbish bins and plant plots are placed along the sides.

Themed shopping streets such as Fa Yuen Street and high-density residential buildings surround the bridge, and shops, civic services, and eating places occupy the lowest three floors of the buildings. Queen Elizabeth School, the Hong Kong and Kowloon Chiu Chow Public Association Secondary School, and the Kowloon depot of Food and Environmental Hygiene Department are located along the east side of the bridge. High-density residential buildings line the west sides of the Sai Yee Street phase. To ensure that the nearby residential areas, schools, and government offices are not visually or acoustically interrupted by the daily heavy pedestrian traffic, and to safeguard the privacy of those living nearby, semi-transparent walls have been installed along the Sai Yee Street phase of the bridge, which gives people the sense that they are walking indoors. The local community exhibits photos of local life on these barrier walls. Unlike the Sai Yee Street phase, the Mong Kok Road phase of the bridge is fully open to its surrounding residential buildings on both sides except the Fa Yuen Street Municipal Market at the junction of Mong Kok Road and Fa Yuen Street, which encourages interactions with the surroundings rather than the focus being simply internalized (Figure 5-5).

Figure 5-5 Location and site of Mong Kok Pedestrian Bridge

5.5 An everyday space in a compact high-density urban context

Accessibility and connectivity

Accessibility can be defined as “the freedom or ability of people to achieve their basic needs in order to sustain their quality of life” (Lau & Chiu, 2003, p. 200). An accessible public space allows many different people to come and go, thus increasing passive and active interactions. According to

Salingaros (1999), accessible urban space prioritizes pedestrians by providing access to all user groups of the city. The accessibility of a space is judged by its visual as much as its physically connections, which means the space is not only easy to pass through but also identifiable from a distance or close up. Primarily a physical connector, The Mong Kok Pedestrian Bridge is extremely accessible and very well connected to its adjacent buildings, subway stations, and ground level access. The inclusion of stairs, elevators, and escalators together give all user groups access, whether the disabled, children, or the elderly. Although the bridge is located in a densely populated urban area and surrounded by buildings, it still can be easily identified from a distance by its bright color and its elevated deck floated at crossings (Figure 5-6). Its signage at street level successfully draws and guides people into it. The interior of the Mong Kok Pedestrian Bridge can also be seen from the outside, strengthening its visual access. This visual accessibility is thus more critical than physical accessibility when considered within the context of a high-density urban area with an extremely compact urban form, as the visual accessibility directly enables people to first notice and find their destination, help them orientate themselves, allowing them to reach their destinations over a short distance. In highlighting the physical accessibility of various entrances to all user groups and the more important visual accessibility in a high-density compact urban area, the space of the Mong Kok Pedestrian Bridge is easily found and reached.

Figure 5-6 Though compact in urban form, the Mong Kok Pedestrian Bridge is visible from a distance

Connectivity refers to the number of routes to contact or the degree to which these are offered by the environment through a range of scales and different types (Talen, 2011). Located in the center of Mong Kok district, the Mong Kok Pedestrian Bridge is a physical connector that effectively links adjacent buildings such as shops and bus or subway stations at both ground and elevated levels. Built along Sai Yee Street and the Mong Kok Road, the bridge enhances the existing urban fabric. Carrying the heavy daily commuting traffic, the bridge functions within the district's movement pattern and particularly sustains the pedestrian flow transferring between the Mong Kok East and Mong Kok stations, and has a great potential to bring different social groups together in space and time (Hiller, 1996, 1996a). Originally a transit node, it provides good connectivity with other human activity nodes within the district. Within the compact high-density district of Mong Kok, the smaller and densely configured urban blocks intensify the bridge's connections, and in turn the bridge enriches the multiple connections at an extra elevated level to afford more choices in daily routes, which attracts people and encourages diverse uses. The extensive system of the Mong Kok Pedestrian Bridge and its linked subways also increases connectivity and improves the wider urban circulation.

Permeability and looseness

Permeability is defined by Bentley et al. (1985) as "the extent to which an environment allows people a choice of access through it, from place to place" (p. 12), which is a key measurement of the responsiveness of the environment. Considering the linear, long-spanned Mong Kok Pedestrian Bridge space in micro-scale, it has a high degree of permeability. Unlike visual accessibility, which mainly relates to people's orientation from the outside when looking for the bridge, the visual permeability of the L-shaped bridge allows a partial view through its space for people inside, improving the awareness of choices in the bridge space, although the bridge's floor

plan is already very simple and easy to identify (Figures 5-7, 5-8). Permeable to light and air, the Mong Kok Pedestrian Bridge does not have a well-defined exterior. With a width varying from 5.5m to 8.5m, the external appearance only matters through the visual or physical contact it makes with its surrounding environment. As it is so closely located between adjacent buildings, this visual permeability exists between the interior of the bridge and the interiors of these buildings. The glass windows of the shops on the second floor of the surround buildings allow pedestrians on the bridge to peer in (although not to move in) and those inside the shops to gaze out onto the bridge (Figures 5-9, 5-10). The shops' products may entice passersby on the bridge to enter, while the shops also lend vitality to those on the bridge through the product displays and the interior shopping activities, blurring the boundary between public and private and encouraging active and passive social interrelations. The elevated level interface of public/private is thus articulated by this visual permeability. Consequently, the Mong Kok Pedestrian Bridge is transformed into an interior corridor of the city, as its exterior condition completely disappears within the high-density compact urban context.

Figure 5-7

Figure 5-8

Figure 5-9

Figure 5-10

For Marshall (2005), connectivity refers solely to the number of connections whereas permeability refers to the spatial capacity of those connections. The alternative and transient existence of this urban conduit in Mong Kok, integrated into the grain of the city and embraced by buildings around, transforms itself into a rich and dynamic space with multifunctions rather than simply being a pedestrian segregation infrastructure. The provisional and temporal functional permeability (Ellin, 2006) of the Mong Kok Pedestrian Bridge enables it to host various urban events such as everyday hawking in the rush hour and domestic helpers' gatherings every weekend, which complements the city's functions and enriches its vibrancy.

Whyte (1988) suggests that in public spaces, people always adjust the use of certain environmental elements to meet their needs. Nicholson (1972) states that what people can move, change, and adapt are the "loose parts" (p. 5) in the environment that lead to the possibilities of discovery and creativity. Frank and Stevens (2006) indicate that loose space offers possibilities for different activities to occur simultaneously. People use the Mong Kok Pedestrian Bridge in their own ways, transgressing its original function as a crossing. The columns supporting the roof are used to display product promotion signage. The stairs at the entrances are used as a "third place" by senior residents to play Chinese chess. Pedestrians passing by become a

mobile audience, sometimes sitting or standing on the steps and the sidewalk at different heights to watch the games. Tourists align themselves along the fence to enjoy the hustle and bustle of the Mong Kok urban scene from the elevated, mid-street perspective. The diverse city users loosen their own space precisely on the basis of their spatial capacity demand and their relationship with other activities. Highly accessible to the public and permeable both visually and functionally, the Mong Kok Pedestrian Bridge's flat, expansive deck, interrupted only by essential elements such as rubbish bins, provides people with considerable appropriation possibilities in their everyday urban activities (Figure 5-11). Afforded by the spatial adaptability inherent in its structure, the looseness of the bridge thus stems from people's appropriations.

Figure 5-11

Day and night, the Mong Kok Pedestrian Bridge carries an endless stream of people from A to B, acting as an urban concourse along which people and capital move quickly, simultaneously pursuing courses at the ground and elevated levels. In a high-density compact urban context, the high degree of permeability and looseness of the bridge as a whole characterizes the everyday space that spurs the district's prosperity. Good public accessibility and a high degree of permeability make the bridge capable of accommodating both short- and long-term urban programs. This looseness

enhances the spaces between the ground-level sidewalk and the stairs of the bridge's entrances. Numerous activities occur in the area around the Tung Choi Street stairway entrance. There are many eateries, and the elderly sit on the steps to play chess while others rest and enjoy the local food (Figure 5-12). Pedestrians walk through these groups to enter or leave the bridge. Compared to Tung Choi Street, the Fa Yuen Street entrance is reserved, surrounded by the Fa Yuen Street Urban Council Complex, which specializes in selling cooking materials rather than providing cooked food that can be enjoyed immediately. It can be concluded that the permeable in-between spaces and attractions stimulate the looseness, eliminating the edge between the bridge and its connected ground-level sidewalks.

Figure 5-12

Spatially, the high degrees of accessibility, permeability, and looseness of the Mong Kok Pedestrian Bridge frame "opportunities for expression and for social engagement" (Franck & Stevens, 2006, p. 9), which passively and actively accelerate the movement of capital and social communication, leading to users' creativity and discovery. Beyond these spatial qualities, the bridge space's sensory attributes also affect experiences (Franck & Stevens, 2006). The sounds of the street art performers, the smells from the ground-level food shops, and the sensation of being high in the air all influence pedestrians' emotions and perceptions. Overall, the physical and sensory

attributes of the bridge space support its everydayness for sustaining people's desired activities, which generates the possibility, diversity, and vitality of public urban life, softening the Mong Kok Pedestrian Bridge space and its surroundings.

5.6 All members of all the publics: Users of the Mong Kok Pedestrian Bridge

This study takes the perspective of everyday life to examine the daily uses of the Mong Kok Pedestrian Bridge. Primarily as an urban segregation infrastructure for heavy traffic, the bridge is fundamentally accessible to the general public. However, although the initial planned purpose of the bridge is for improving urban circulation of commuters' daily travel in terms of safety and efficiency, different groups use the bridge far beyond its planned function. Therefore, the general public is divided into several categories based on the various purposes of the Mong Kok Pedestrian Bridge.

Commuters

Commuters are the primary users of the Mong Kok Pedestrian Bridge, as it was built for aiding the daily commute. The bridge is directly linked to stations of two subway lines, various bus stations, a large shopping mall, a street market, several government departments, and a school as it spans both the commercial and the residential zones of Mong Kok district. The bridge provides service to daily commuters, who use it according to the function it was planned and designed for. They usually walk fast across the bridge from one place to another (Figure 5-13) and do not stop to participate in any other activities during their journey. They are free to use the bridge and its facilities, such as stairs and elevators, for their daily traveling. The whole bridge space is designed to sustain the travel and mobility of the heavy flow of commuters.

Figure 5-13

Tourists

The shopping and amazing food in Mong Kok attracts many tourists, who are present on its busy streets. It is a must for tourists looking to find a bargain in the various themed markets. Tourists use the Mong Kok Pedestrian Bridge it for two important purposes: navigating and sightseeing (Figure 5-14). If they get lost when traveling through the bridge, they can navigate using the traffic signs installed on the bridge. Tourists can use the unusual elevated and mid-street perspective of the bridge as a vantage point to enjoy the hustle and bustle of Mong Kok, one of Hong Kong's liveliest and most densely populated urban districts.

Figure 5-14

Hawkers, salespeople, and staff of charitable and nonprofit organizations

The extremely large number of people offers many potential customers to hawkers. Although hawking is prohibited on the Mong Kok Pedestrian Bridge by the government, many hawkers use the bridge frequently for selling their goods. They usually sell at the exit located between the most northern end of Sai Yee Street phase and the entrance of the Grand Century Shopping Mall, where they can encounter the heavy pedestrian flow but also easily hide from the patrolling urban management officers (Figure 5-15). They mainly sell belts, socks, and phone accessories, and on rainy days, many umbrellas are sold to passers-by. Hawkers work in teams and stick together. In addition to those who directly sell, others patrol back and forth on the bridge, and alert the other hawkers by cellphone to leave as fast as they can when the urban management officers are spotted. Operating every day at rush hours, the hawkers are one of the most dynamic groups on the Mong Kok Pedestrian Bridge.

Figure 5-15

Although hawking is forbidden, on application to the government salespeople are permitted to conduct product promotions on the bridge (Figure 5-16). Commercial marketing surveys can also be carried out. Unlike illegal hawking, which is usually hidden near the northern exit on Sai Yee Street, the salespeople carry out their promotions in the middle of the wide deck of the bridge's Mong Kok Road phase. Staff from charitable and nonprofit organizations also ask for donations in these and nearby areas.

Figure 5-16

Elderly people

Public space in Mong Kok district is lacking, and what is available is inaccessible and of low design quality. As mentioned previously, the active and passive open space is unevenly distributed. Mong Kok is also an aging district with relatively high numbers of elderly people, and as the Mong Kok Pedestrian Bridge is located in the center of the area, the elderly local residents use it as their own sitting-out area and playground for various recreational uses (Figure 5-17).

Figure 5-17

Street performers

The heavy pedestrian flow on the Mong Kok Pedestrian Bridge makes it a favorite for street performers. They set up their instruments such as electronic piano or violin, or simply sing, at the corner and the west end area of the bridge's Mong Kok Road phase. As the Mong Kok Pedestrian Zone changed in January 2014 and now only operates at weekends and public holidays, many performers have moved to the Mong Kok Pedestrian Bridge, which is nearby, to play on weekdays. The performers are usually solo singers or bands of about five people (Figure 5-18). These few street performers occupy very little space compared with the huge flow of commuters, but they have a significant effect on everyday public urban life

both positively and negatively as people start to hear the music from far away actively and passively. The music can amuse and relax during the everyday commute, easing the hustle and bustle of Mong Kok, but as reported on the local news, residents have complained that it is so noisy they cannot even hear their TVs in their own living rooms (“旺角專區縮開放,” 2014). In a perceptual sense, it can be said that these performers rule the sound space of the Mong Kok Pedestrian Bridge.

Figure 5-18

Domestic helpers

Domestic helpers are permitted by the government to gather on the pedestrian bridge on weekends (Figure 5-19). They use the bridge freely as their space for eating, entertainment, recreation, and socializing from early morning to late at night every weekend.

Figure 5-19

Homeless people, those on low incomes, and other marginalized individuals

The Mong Kok Pedestrian Bridge is fully used and can become overloaded in rush hours, but at night homeless and low-income people are able to stay and sleep on the wide bridge deck. It becomes a bedroom for the homeless (Figure 5-20). A local news channel reported that they choose the Mong Kok Pedestrian Bridge for its convenient location (“露宿行人天橋,” 2015). The bridge is very close to Fa Yuen Street Municipal Market and many eating-places and not far from the Mong Kok Stadium, so homeless people can very easily go to public restrooms in the street market, have food, and take a shower in the dressing room of the stadium. Staff from the Food and Environmental Hygiene Department clean the bridge once a week, and more importantly, government officers do not drive them away.

Figure 5-20

5.7 Locating public in an everyday space

Different groups of people use the Mong Kok Pedestrian Bridge for different purposes. They together share and produce the space. Each group is a part of the bridge space, regardless of whether their behavior is legal or illegal, temporary or long-lasting, well-planned or spontaneous. People dynamically interact and harmoniously coexist on the Mong Kok Pedestrian Bridge, creating an everyday public urban space "between an individual or defined group and the rest of the city … the site of multiple social and economic transactions, where multiple experiences accumulate in a single location … where differences collide or interact" (Crawford, 2008, p. 6), where individuals live and sustain their everyday lives .

The Mong Kok Pedestrian Bridge is open and accessible to all members of the public, regardless of their class, gender, age, or cultural background, providing space for social and cultural interaction, fostering a sense of belonging to all. In James Holton's notion of insurgent citizenship, marginalized groups ask for recognition and at the same time challenge and disrupt the currently established social order and how space should be used. Similarly, the public of the Mong Kok Pedestrian Bridge is all members of all the publics. For example, hawking activity is illegal, and not permitted

on the bridge, but the illegal hawkers are "are becoming a political as well as an economic presence in the city" (Crawford, 2008, p. 7), periodically visible on the bridge and integrated into the fabric of everyday public life. In fact, many passers-by are happy to stop and buy stuff from them. Thus, the hawkers' presence and their selling, though illegal, have already redefined what the bridge can be used for and by whom, challenging the scope of the established public. The definition and meaning of the public is therefore expanded as previously excluded groups of individuals are accepted and integrated into a more inclusive conception of the public. From the perspective of everyday life and space, "the vibrancy of public space results from recognizing for example that undocumented workers constitute a separate 'public' that is distinct, that brings its own unique values to public life, and that should have a right to public space without needing to conform to a single definition of the public" (Neal, 2010, p. 204). Therefore, the "public" of the everyday space of the Mong Kok Pedestrian Bridge exists in "all the members of all the publics" rather than simply in "all members of the public." The celebration of inclusiveness, difference, and diversity significantly enriches and sustains the public life of the bridge.

5.8 Possibility, diversity, and inclusiveness of everyday urban life[4]

Following Gehl's (1987) method of categorizing people's actions, everyday activities can be categorized into necessary, optional, or social, and the demands on urban spaces of each are very different. Necessary activities such as commuting to work occur regardless of the quality of space, as they are compulsory everyday activities in which people must engage. Optional activities happen when places invite people, generating powerful spatial looseness. This is the dominant type for activities that make their own

[4] Parts of the author's own paper "Wang, W., Siu, K. W. M., & Wong, K. C. K. (2015). Loose Space, Inclusive Life: A Case Study of Mong Kok Pedestrian Bridge as an Everyday Place in a Densely Populated Urban Area. *The International Journal of Constructed Environment, 5*(2), 1-15." are included in the Chapter 5.8. Longer sentences, phases, and paragraphs are referenced.

places. When people are heading somewhere on the Mong Kok Pedestrian Bridge, sightseeing is a common optional activity during their journey, especially for tourists who use the upper-level mid-street vantage point provided by the bridge as an observation deck for taking in the iconic Mong Kok shopping streetscape. Pedestrians also frequently stop for a quick meal on the bridge, using the fence as their dining table and simultaneously enjoying the delicious food, drink, and the view. In the early morning, local residents engaging in morning exercise use the same fence as their gymnastic apparatus (Figure 5-21).

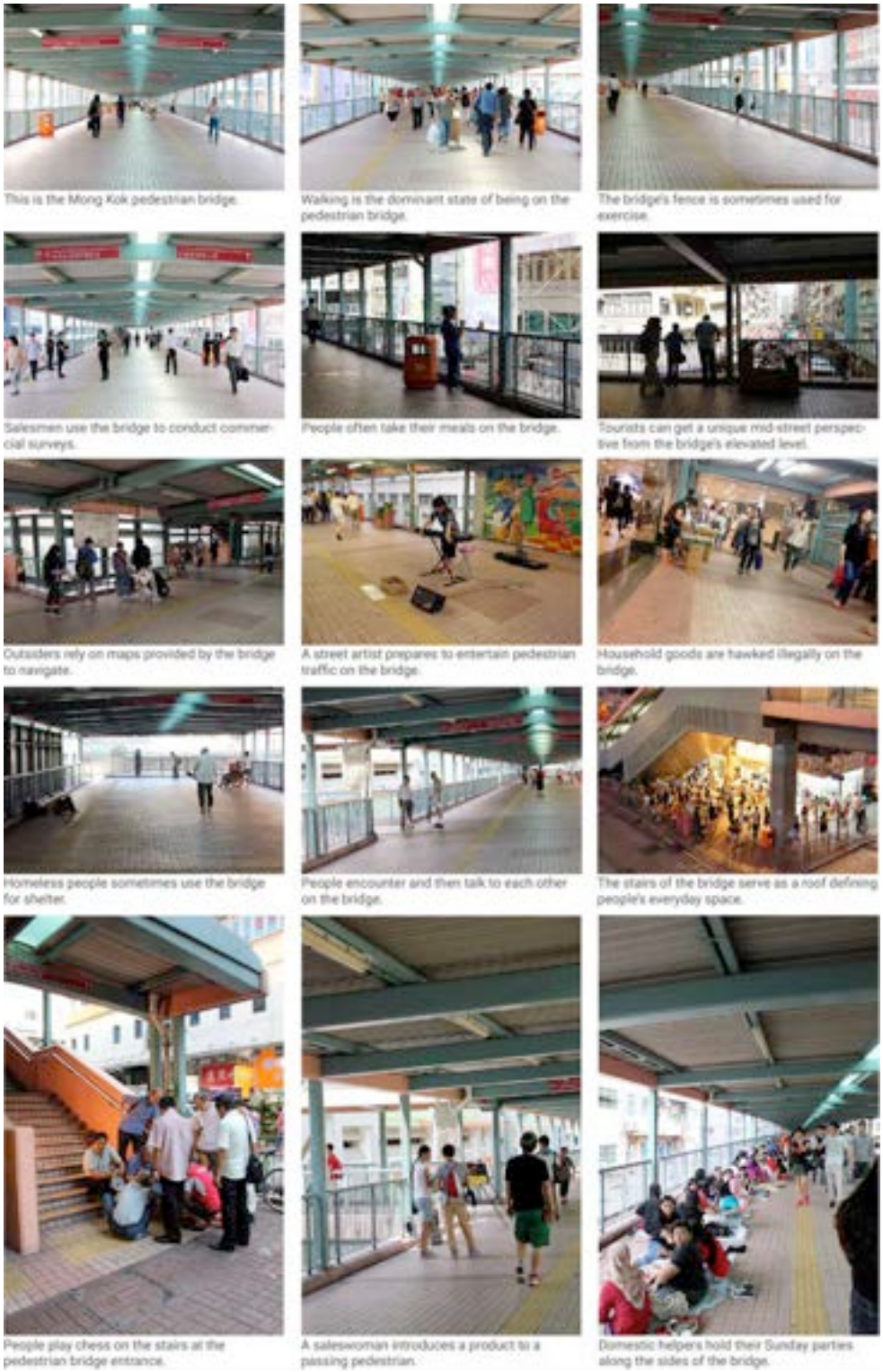


Figure 5-21

The wide variety of optional activities contributes to the bridge space's public-ness, which substantially encourages broad social engagement and communication between strangers. The diversity of the urban residents is most obvious in public spaces such as these. Located in the busiest, most

crowded commercial district of this global city, the Mong Kok Pedestrian Bridge is a diversity magnet. Pedestrians of different ethnicities, races, genders, occupations, family backgrounds, religious beliefs, educations, property statuses, and length of residence mix in the dense crowds on the Mong Kok Pedestrian Bridge. Social acceptance is typically tempered by spatial avoidance, but everyone inhabits the pedestrian bridge together, and all are included and their different activities are harmoniously sustained.

According to Franck and Stevens (2006), the remarkable diversity among strangers sharing a public space leads to more relaxed and inclusive behavior. Everyone traversing the Mong Kok Pedestrian Bridge is relieving the daily constraints of their social roles, due to the nature of Mong Kok (and Hong Kong) as a city of migrants and their offspring, who value equality and diversity. Everyday urban life is expanded through the appropriations of the Mong Kok Pedestrian Bridge space by the diverse crowds of pedestrians and their activities. The high density and wide diversity of foot traffic on the bridge means that people inevitably engage in social activities such as simply hearing or seeing other pedestrians. During rush hours on weekdays, the activities necessary to the daily commute dominate the bridge, leaving very little space for other optional and/or social activities. In the off-peak hours, the various optional and social activities spontaneously and randomly happen on the bridge.

On normal Sundays, social activities dominate the two sides of the bridge and necessary activities occupy the middle; domestic helpers have parties along the sides, salesmen launch and promote new products to the passing crowds, tourists take photos of the Sunday street market, and a steady stream of people passes through the middle. “The mixing of uses is synergistic” (Franck & Stevens, 2006, p. 36). The activities of one group of people create opportunities for and initiate another group’s actions. Many activities are dynamically survived and negotiated, which makes the Mong Kok Pedestrian Bridge a vibrant everyday place of constant movement and change. Pedestrians are flowing, hawkers are selling, and tourists are traveling. The conviviality and prosperity of the bridge paradoxically make

people more free and relaxed, and the broad diversity and possibilities lead to a high degree of social inclusion and acceptance. As Urban Knowledge Network Asia suggests, "in an increasingly multi-cultural world in which international as well as migrations are fuelling the growth of cities throughout Asia, an inclusive society cannot limit the idea of 'cities by and for the people' to citizens or legal residents, but will instead be judged by the ways in which it creates the city as Cosmopolis that welcomes the stranger."

5.9 The socio-spatial dialectic in an everyday public place[5]

An analysis of the everyday place and the possibility and diversity of public urban life as a socio-spatial dialectic process reveals its development through interactions between people and between people and space. Spatially, the Mong Kok Pedestrian Bridge is very permeable and loose, so the high density of pedestrians generates numerous optional activities, encouraging and facilitating their social activities. Pedestrians from diverse background make their own living places through their appropriated uses of the pedestrian bridge. Unlike passive consumers, people on the Mong Kok Pedestrian Bridge actively change its use to meet their diverse urban needs. Planned or unplanned, momentary or long-lasting, and legal or illegal activities occur on the bridge, day and night. Regardless of class, sex, age, or cultural background, each member of all publics is equally supported by the bridge's space. The many, broad activities intermingle to create a remarkably everyday urban place. Given its dual existence as an urban infrastructure and an everyday public place, the Mong Kok Pedestrian Bridge accommodates pedestrians' routine encounters and encourages their shared urban experiences, which leads to and sustains broader everyday

[5] Parts of the author's own paper "Wang, W., Siu, K. W. M., & Wong, K. C. K. (2015). Loose Space, Inclusive Life: A Case Study of Mong Kok Pedestrian Bridge as an Everyday Place in a Densely Populated Urban Area. *The International Journal of Constructed Environment, 5*(2), 1-15." are included in the Chapter 5.9. Longer sentences, phases, and paragraphs are referenced.

placemaking. The high degree of spatial adaptability enables socially and culturally different people to use the pedestrian bridge space to fulfill their various urban needs, and their potential conflicts and contradictions are buffered or even eliminated.

In the “reflexive and recursive relationship between people and the place” (Knox, 2005), the place of everyday and the possibility and diversity of public urban life cooperate with a dynamic and mutual integrity, within which everyday placemaking and formal or informal public urban actions affect each other dialectically, so that the integrity is constantly evolving. New forms of everyday appropriations between people generate new opportunities for other social members, which in turn prompt new possibilities of for everyday actions. Within this mechanism, however, it is possible that the socially unacceptable conflict and contradictions prevent this circulation from changing the direction of further development. The rights and actions that people call on to make their everyday place provide each member of the general public with feelings of community and ownership, which serve as the foundation of a society that includes all members from all publics. Such a society, in turn, relies on the everydayness of places to allow and afford the overall social members’ active participation in their everyday lives. Applying Giddens’ (1986) structuration theory, the dialectic formation process of everyday place and the urban society relies of the relationship between everyday activities and the social structure. It is the repetition of everyday practices that produces such a structure, which can then be changed by other everyday practices. Everyday public urban life is generated by the wide diversity of practices, and the production of everyday activities in a place contributes and constitutes the development of the social system and structure, which leads to a more dynamic and inclusive society in the city. As Soja (1980) states, “space and the political organization of space express social relationships but also react back upon them (p. 207) … the social relations of production and social formation in general … contain within them a fundamental vertical vs. horizontal structure affecting the position of all agents of production and shaping a simultaneously social and spatial division of

labor" (p. 224). Gehl (2010) asserts that, "First we shape the cities, then they shape us" (p. 9). People in Mong Kok appropriate and adjust the Mong Kok Pedestrian Bridge to meet their needs and express their values. However, they appropriate the bridge in their own ways for different purposes, which may cause conflict. City users must therefore "choreograph their activities…to maximize opportunity and minimize disruption" (Franck & Stevens 2006, p. 94). They gradually "accommodate both to the physical environment and to the values, attitudes, and comportment of people around them. People are constantly modifying and reshaping place, and places are constantly coping with change and influencing their inhabitants" (Knox, 2005, p. 76). These complex social interactions between all user groups, and the negotiations in spatial configuration clearly demonstrate that the dialectical process of the making of everyday place is constantly evolving. Hence, people's everyday life and their experience of everyday routines on the Mong Kok Pedestrian Bridge "lead reflexively to a pool of shared meanings" (Knox, 2005, p. 76). The dynamic everyday lives and diverse urban activities of those who use the bridge enable the places of everyday to spur social exchange and accommodate colliding differences (Figure 5-22).

Figure 5-22

5.10 A multi-layered everyday place's catalytic effects

Efficiency and Isolation

‘A city made for speed is made for success’ (Le Corbusier, 1971, p. 179). Efficiency is a critical factor in the everyday life of modern urbanites who are constantly competing with time. Being as efficient as possible is one of the main goals for people in Hong Kong. Pedestrian bridges segregate pedestrians from vehicles, thus successfully improving the efficiency and safety of urban traffic. Pedestrian bridges located in densely populated urban areas and spanning longer distances evidently improve and promote the urban circulation within the city. The pedestrian bridge between Wanchai MTR station and Immigration Tower replicates the street below, so that people can travel between the two sites without having to wait for the traffic lights at crossings. In Mong Kok, the 350-metre-long Mong Kok Pedestrian Bridge provides a pedestrian-only route between the Mong Kok and Mong Kok East MTR stations, which shortens the ground-level walking time and distance. Traveling between these two MTR stations, the plan shows the comparative walking times and distances between the bridge and the four closest alternate ground-level routes. The bridge is clearly the most efficient route, involving a 350-metre walk taking 4 minutes and 39 seconds (Figure 5-23); this cuts the ground-level walking time by 23% to 43% and the walking distance by 27% to 41%. The interviewees also indicated that the pedestrian bridge ‘lets them walk fast with much less concern about traffic safety’.

Figure 5-23 Efficiency of the Mong Kok Pedestrian Bridge and Ground-Level Routes: Images from the smartphone app used to record the travel time and distance for Mong Kok Pedestrian Bridge and other selected routes.

The empirical findings from the test walks identified various reasons for the success of the pedestrian bridge in improving urban circulation. (a) The 350-metre long Mong Kok Pedestrian Bridge (5.5 metres wide in the Sai

Yee Street phase and 8.5 metres wide in the Mong Kok Road phase) runs the shortest route between the two MTR stations and provides an exclusive pedestrian urban channel with considerable spatial capacity. ‘The manner in which the Mong Kok connection is used is akin to that of a motorway’ (Shelton, Karakiewicz & Kvan, 2010, p. 140). The pedestrian bridge system in Central district works in essentially the same way. (b) The planning of mixed pedestrian and vehicular traffic gives vehicles priority, with a wider street capacity and vehicle-prioritised traffic lights that prolong people’s waiting time at crossings and consequently the total travel time. (c) People’s everyday appropriations have changed the street’s original planned traffic uses and spatial configuration. For example, on both sides of Tung Choi Street, the shop owners occupy as much space as possible in front of their shops with attractions such as advertisement boards. Such obstacles hinder people passing through, as they narrow the already overcrowded 3-metre-wide pedestrian roads. (d) The pedestrian bridge reshapes the traffic pattern of the ground-level streets, which increases travel distances at ground level. In coordination with the pedestrian bridge at the elevated level, restricted crossings allow people to pass through in certain directions at ground level (Figure 5-24).

Figure 5-24 Pedestrians are guided by the limited access from Mong Kok Pedestrian Bridge to ground level and by the restricted permissible ground-level crossings.

Pedestrian bridges were originally designed to segregate pedestrian and vehicular traffic in urban areas. To fulfil this primary objective, the city's residents are accordingly managed and designed as a group of homogeneous components – a moving unit – that can be transmitted and operated smoothly. Urban pedestrians are analysed as moving units to be isolated at ground and elevated levels to achieve maximum traffic efficiency. Thus, pedestrian bridges 'not only function to enclose or define space but also to isolate people' from the ground level (Ellis, 1978, p. 115). The limited access to the ground from the elevated Mong Kok Pedestrian Bridge,

combined with the restricted number of permissible crossings at ground level, prevents people from communicating between the upper and lower levels and strictly controls the natural flow of urban exchange with the ground-level streets. At the expense of people's isolation and in the name of 'feeling safe', as the interviewees put it, the carefully planned, reformed and restricted three-dimensional urban tunnels guarantee traffic efficiency and urban order (Figure 5-25).

Figure 5-25 To improve the urban traffic efficiency in densely populated urban areas, pedestrian bridges are used to segregate pedestrian and vehicular traffic; pedestrians are isolated between the ground and elevated levels.

The pedestrian bridge as an everyday public place

Initially operated as a means of pedestrian segregation, pedestrian bridges span the physical terrain to aid people's daily commutes. Apart from supporting people's daily travel, The Mong Kok Pedestrian Bridge has been transformed into a new form of public realm for dynamic, highly interactive urban movement and activity, and as an ideal public place to sustain and accommodate people's necessary, optional and social activities (Gehl, 1987). Derived from its primary functionality and people's everyday appropriations, the Mong Kok Pedestrian Bridge enriches the city's everyday urban space, promotes people's activities and nurtures their everyday life in this high-density urban area.

People inevitably change the original planned use of urban space and adjust the public facilities to meet their own needs (Whyte, 1988). As discussed, salespeople use the columns on The Mong Kok Pedestrian Bridge to display product promotion signs; senior residents play Chinese chess on the access stairways, and pedestrians become a mobile audience, some even staying to watch for a while; tourists use the bridge as an elevated mid-street vantage spot to enjoy the hustle and bustle of the Hong Kong urban scene; and venders illegally hawk their wares to pedestrians passing by (Figure 5-21). In particular, there are always street performers and hawkers occupying the most visible areas (the red area in Figure 5-26) to maximise the influence of their performances and to spy on the urban management officers (Figure 5-27). During weekday rush hours, daily commuters dominate the Mong Kok Pedestrian Bridge, while during off-peak hours, various ‘optional and social activities’ (Gehl, 1987) spontaneously take place. On Sundays, domestic helpers socialise with their friends along the two sides of the bridge, transforming it into a popular public place for eating, dancing and relaxing (Figure 5-28).

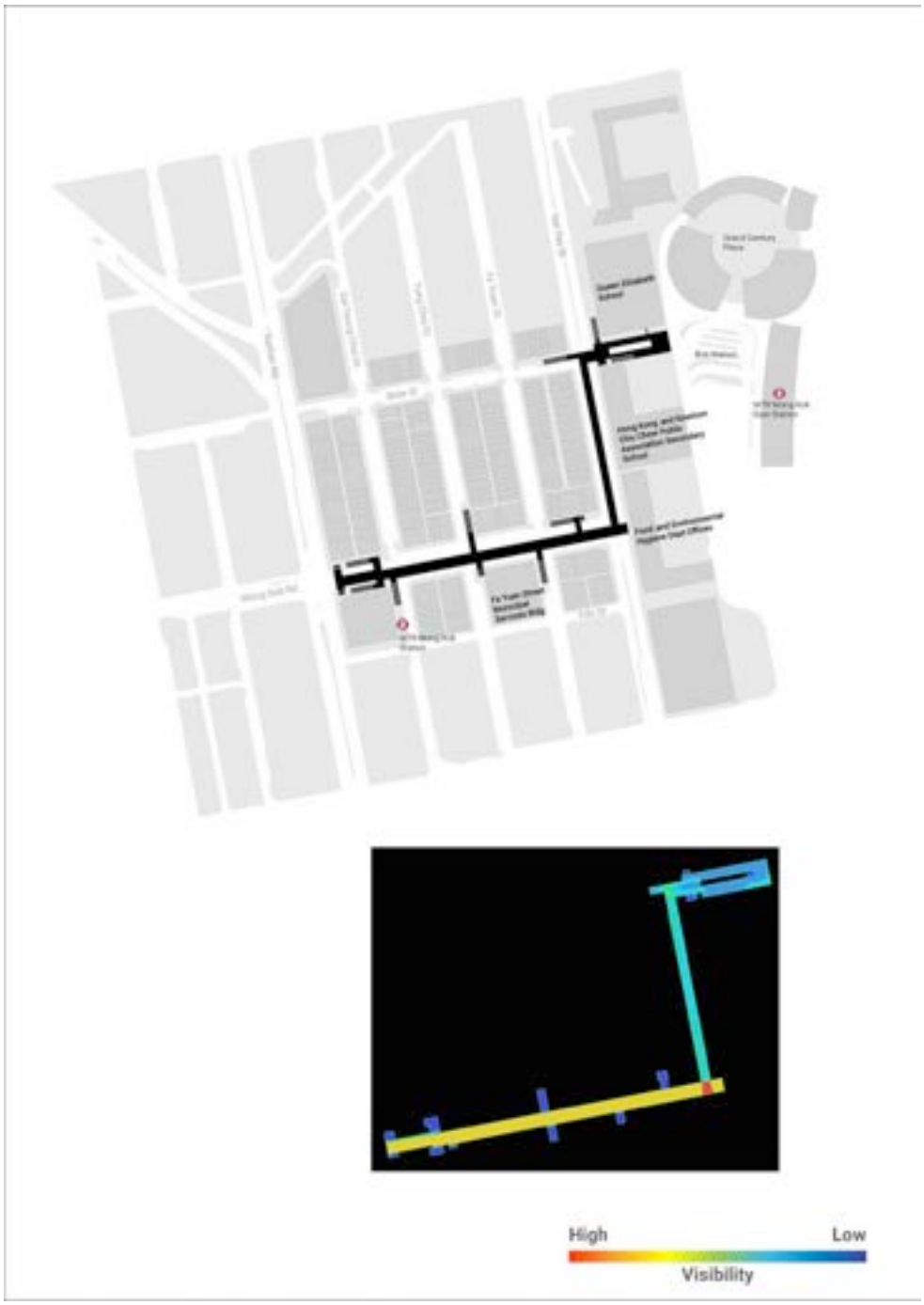


Figure 5-26

Figure 5-27 A street performer settles in the most visible location to maximise his audience (left); a hawker always occupies the location with the greatest visibility to act as a guard for her illegal accomplice.

Figure 5-28 The highly accessible and loose space of the Mong Kok Pedestrian Bridge is a perfect host and an urban magnet for diverse groups of people.

As Lynch (1972) indicates that change is an important dimension of successful public spaces, the ability of pedestrian bridges and their 'loose space' (Frank & Stevens, 2006) to naturally change and evolve is a very important quality in their transformation into a public place. Being highly

accessible and open to all members from all publics, The Mong Kok Pedestrian Bridge's flat, expansive deck provides the city's people with considerable appropriation capacity for various everyday urban activities (Figure 5.9.1 and Figure 5.11.6). The simplicity of the bridge allows people to use it in their own ways, and the looseness and permeability allow to accommodate various types of urban activities. Given that Hong Kong is a place with an extremely high population and very limited land, the bridge is becoming a complementary elevated stage on which 'the drama of communal life unfolds' (Carr, Francis, Rivlin & Stone, 1993, p. 3), accommodating and encouraging pedestrians' routine encounters and shared urban experiences.

Unlike traditional public places such as urban parks and plazas, which are designed and planned by regulators and professional authorities, The Mong Kok Pedestrian Bridge is defined and transformed into a public place by people's everyday planned or unplanned, momentary or long-lasting, even legal or illegal activities, thus complementing the city's functions and transforming the bridge into an urban generator that enriches and sustains the vibrancy of everyday urban life. It is an alternative emerging form of public place that responds to our rapidly changing high-density city. It is the city's everyday places 'between an individual or defined group and the rest of the city … the site of multiple social and economic transactions, where multiple experiences accumulate in a single location … where differences collide or interact' (Crawford, 2008, p. 6) and is shaped from the bottom up through ordinary people's everyday tactical uses and appropriations. It is even an 'insurgent public place' (Hou, 2010), self-made by the general publics demonstrating alternative social and spatial relationships in a contemporary fast-changing city.

Multi-layered street life in a high-density urban area

In the downtown areas of some US cities such as Charlotte and Dallas, elevated pedestrian bridges remove people from ground level and kill off the lively streets. In Baltimore's Charles Center and on the Circle Campus

of the University of Illinois in Chicago, people tend not to use the elevated walkways very often and prefer to stay at ground level (Whyte, 1988). ‘Why go up? Unless there is a clear reason, people resist’ (Whyte, 1988, p. 201). In a two-level system, either the ground level or the elevated level usually suffers because there are not enough different types of daily activities to fully support the multi-layered system.

In Hong Kong, to some extent, the hyper-dense Mong Kok area has done a great job of combining a lively street level with an elevated pedestrian bridge. Located in one of the most densely populated urban areas, the bridge spans the physical terrain to aid people’s daily commute. It is built not just to cross roads, but also to run alongside them, offering an elevated ‘pedestrianised’ street area on which pedestrians can travel short distances much more safely and comfortably. It increases the street capacity for pedestrians to accommodate their everyday activities, which compensates for the serious shortage of ground-level pedestrian space (Figure 5-29). Furthermore, the bridge is designed with 13 access points connected to local shopping streets shops and shop houses, and to two crowded MTR railway stations and the Grand Century Place shopping mall. Therefore, the intricate mixture of people’s ‘necessary activities, optional activities and, social activities’ (Gehl, 1987, p. 9) sustains the lively upper-level pedestrian bridge and transforms it into an everyday public place and ‘pedestrian expressway’.

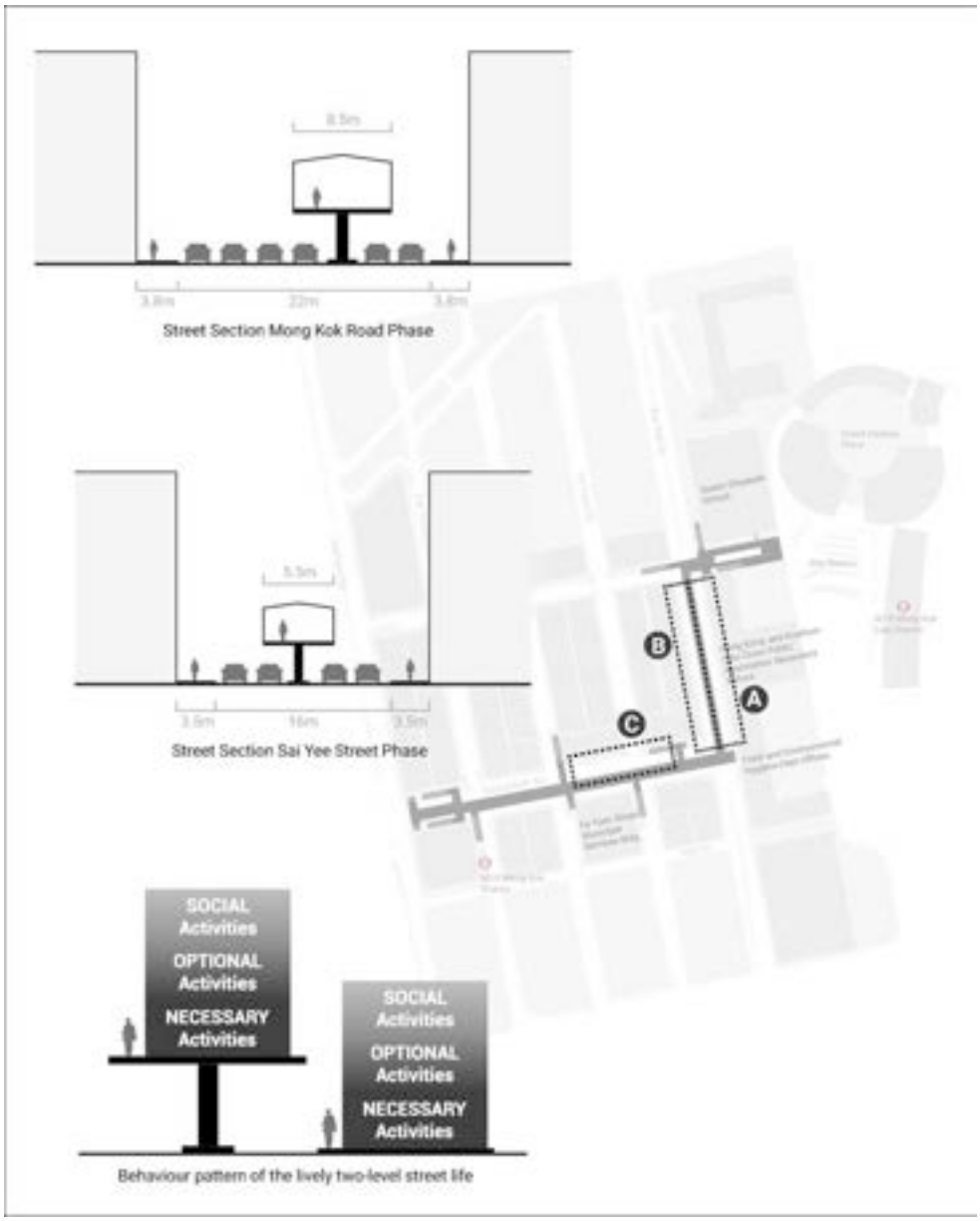


Figure 5-29 Two-level street life in a high-density urban area and behaviour pattern of lively two-level street life

The elevated walkway, in conjunction with people's 'necessary activities, optional activities and, social activities' and their respective proportions, determine the vitality of the ground-level streets. The selected street A is dominated by necessary activities, as only the Hong Kong and Kowloon Chiu Chow Public Association Secondary School is located there. Street B is mainly for optional activities, as the street is very inviting with various retail shops. Street C is a good mix of necessary activities and optional activities, together with a variety of shop houses and many bus stops (Figure

5-29). The intensive two-level observation of three selected streets, A, B and C (Figure 5-30, Figure 5-31, Figure 5-32), provides clear empirical evidence of ‘necessary activities’, such as students walking to school at around 12 am in street A and people waiting for the bus in street B, which are not influenced by the ground-level street condition nor the elevated pedestrian bridge. In contrast, the ground-level ‘optional activities’ are significantly affected by the spatial conditions of the upper-level pedestrian bridge. The two-level daily life in street B indicates that although the ground-level street with various shops is inviting and attractive, it lacks any ‘necessary’ reasons for people to visit. Thus, people will choose the safer and faster elevated pedestrian bridge. The same situation is found in Tsuen Wan district, where the shop owners complain that the newly built Tsuen Wan Pedestrian Bridge system removes people from street level, causing a significant decline in the number of customers (“荃灣商戶呻趕客”, 2012).

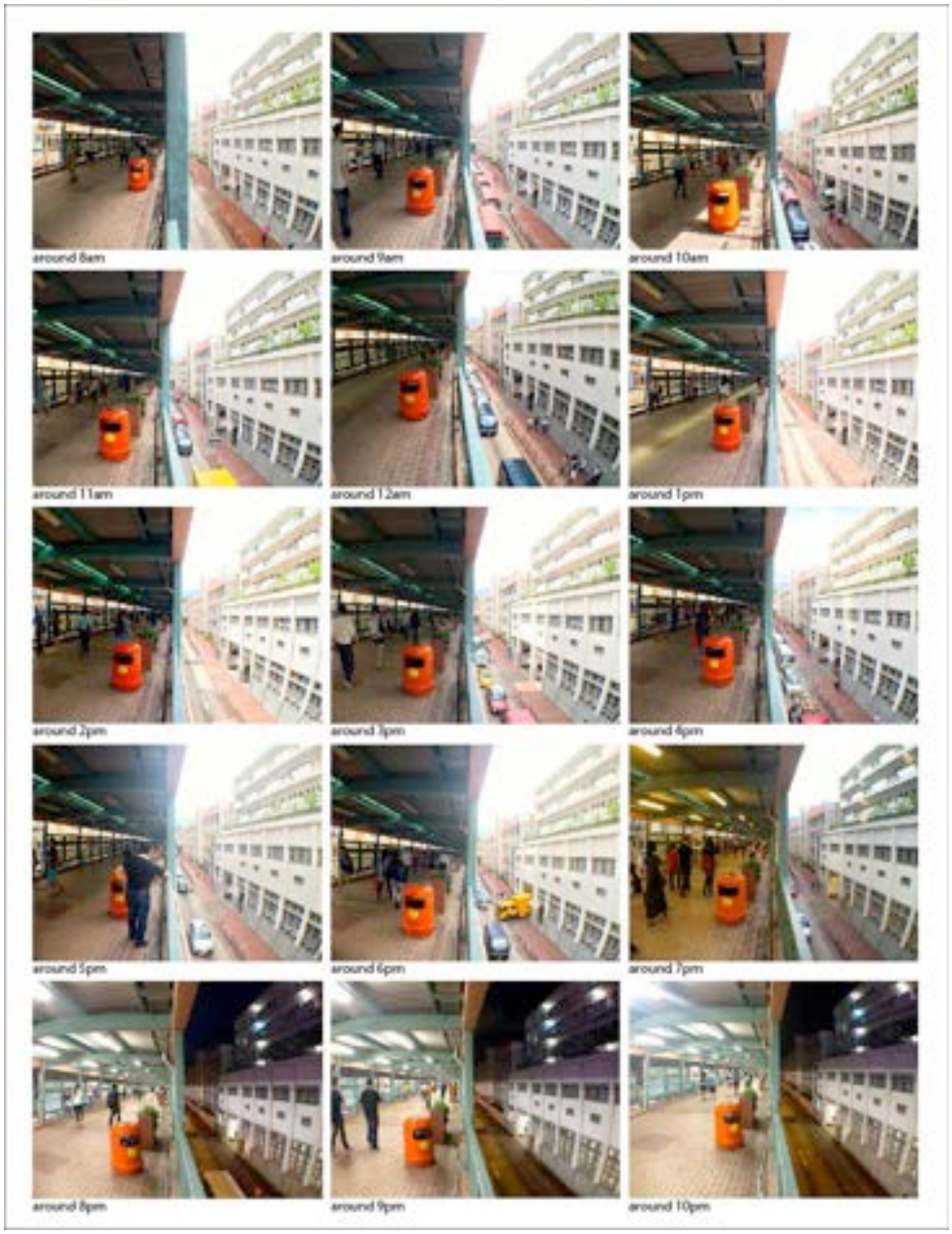


Figure 5-30 Two-level street life at location A

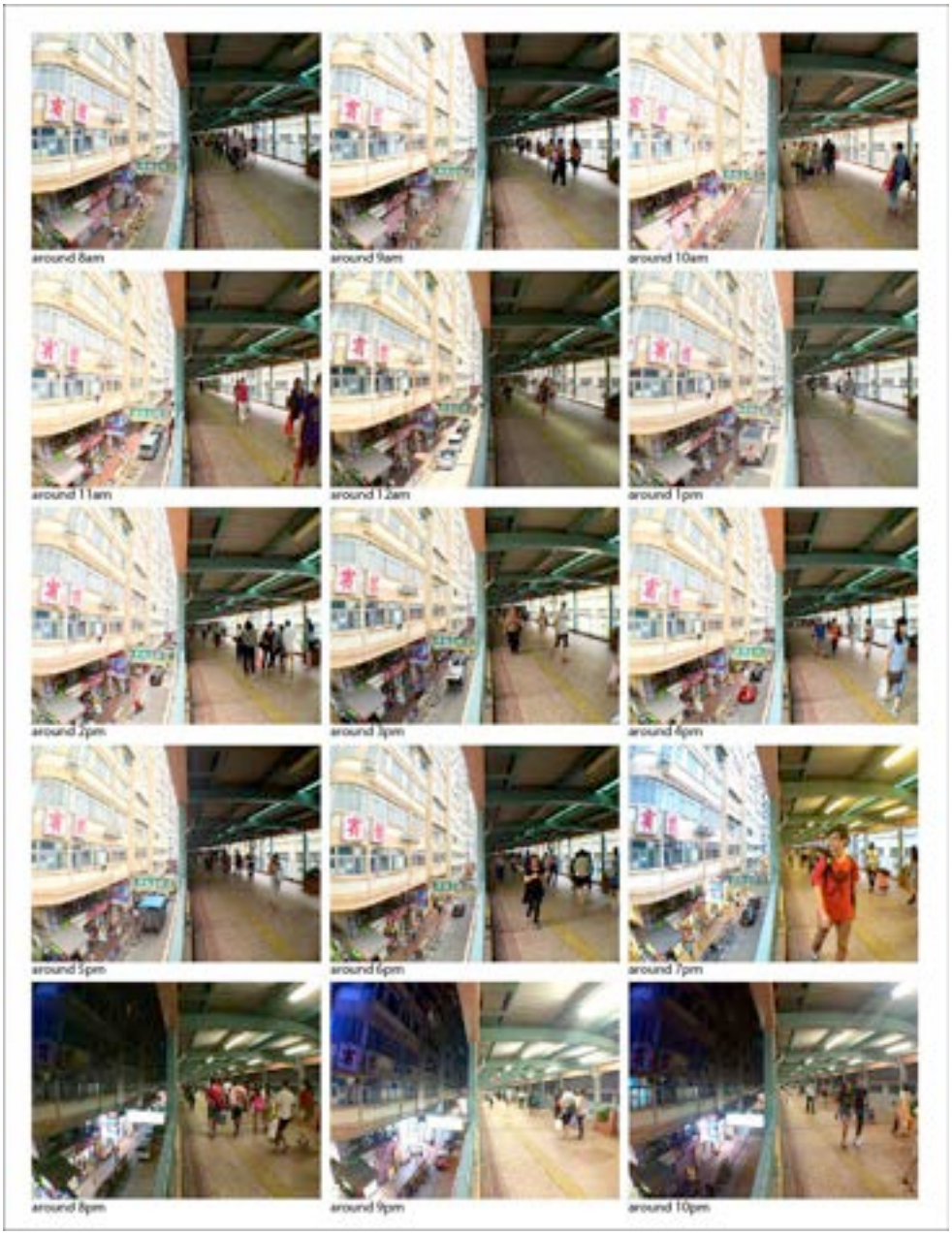


Figure 5-31 Two-Level Street Life at Location B

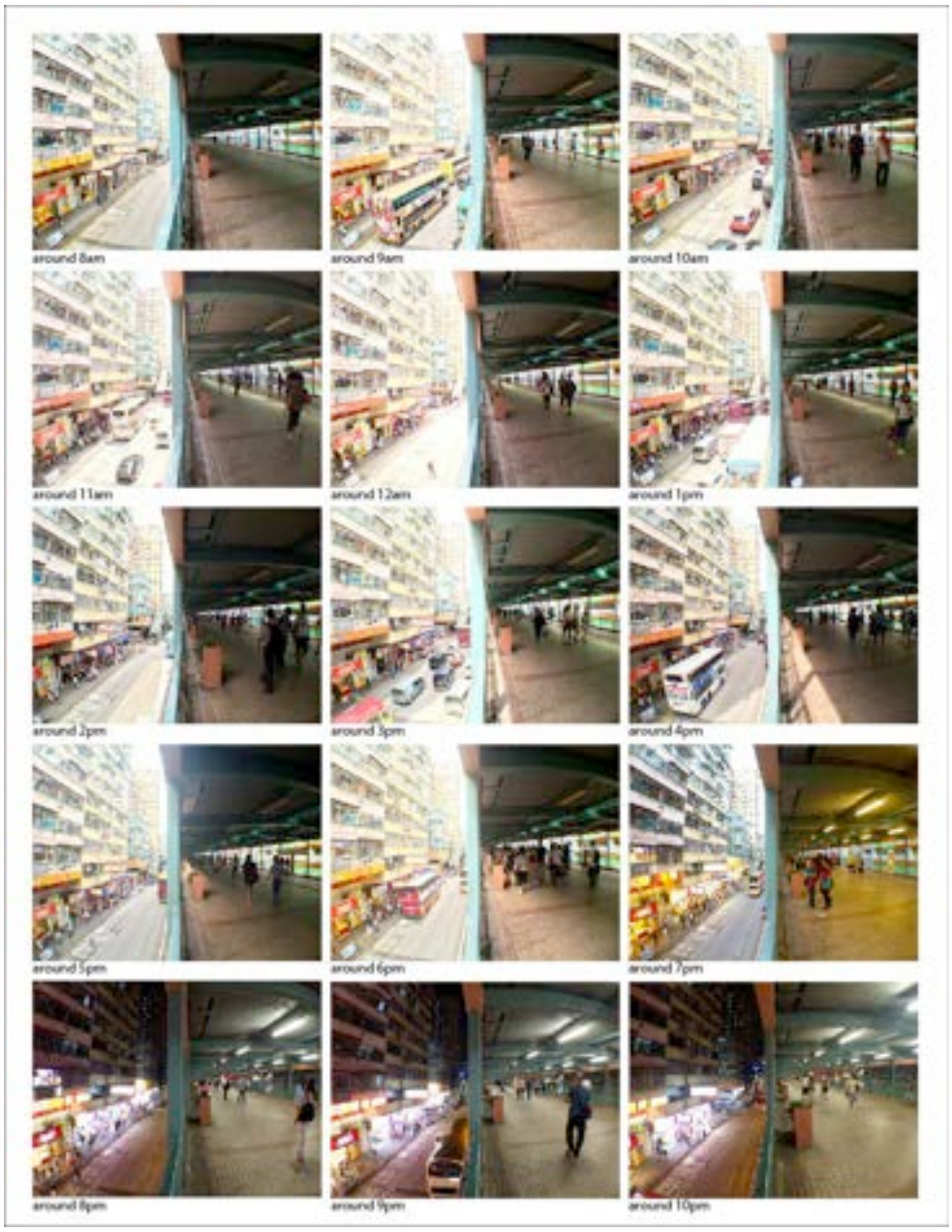


Figure 5-32 Two-Level Street Life at Location C

Unlike streets A and B, street C has many necessary activities and bus stops, with various stores opening directly onto the street inviting people to the area, which supports a great mixture of necessary and optional activities. As the two-level system in street C demonstrates, it is possible to have both an elevated level and a lively ground level, where both levels actively sustain everyday necessary and optional activities, and where social activities are situated. Consequently, in densely populated urban areas, it can be concluded that necessary activities are important for anchoring individuals

in space and these are not influenced by either level; the elevated level can easily remove people from the ground-level optional activities because they naturally prefer the safer and faster route, especially when there is no critical reason for them stay at ground level. The lively urban life coexisting on two levels originally started with the necessary activities on both levels, which then cultivated optional activities, and eventually attracted and sustained social activities.

The in-between public urban life

Located in one of the busiest and most crowded commercial districts in Hong Kong, the Mong Kok Pedestrian Bridge is an urban magnet. Dense crowds of pedestrians with diverse backgrounds merge together when using the bridge. The bridge is a new public realm for everyday activities and urban movement. It complements the city's functions and enriches the vibrancy of the nearby streets. In particular, it does much more than simply adding another layer of space to accommodate urban events; it is embedded in the urban fabric and embraced by the surrounding buildings. Its effect is catalytic, thus life is not only facilitated on the two-level system but also within it; that is, in the space in between (Figure 5-33).

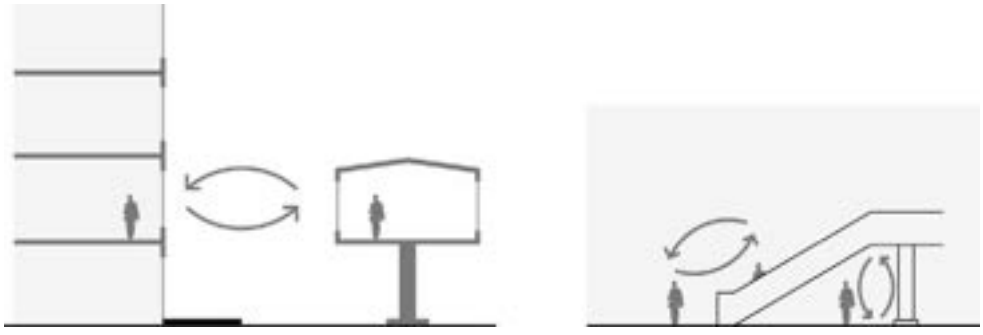


Figure 5-33 The life of the space in between

To take great advantage of the heavy pedestrian traffic flow and attract potential customers, the stores and restaurants add elevated signboards to attract people's attention. These vividly coloured signboards compete with each other to catch as many potential customers as possible, interacting with

people up in the gym above ground level (Figure 5-34). More interactively, in the Wan Chai district there is a gym near the pedestrian bridge that offers exercise bikes facing the second-floor windows, so that customers can use the vantage point to watch urban life on the bridge, promoting an interesting human interaction between the pedestrians on the bridge and the cyclists in the gym.

Figure 5-34 People on the bridge are attracted by the second-story shop

The steps leading to the bridge are not just entrances, they also represent the edge that re-configures the space in both horizontal and vertical directions. They are the most catalytic elements of the in-between space. Spatially, they connect the two levels, while at the same time serving as inviting nodes at the ground level. Elderly people play chess on the steps, while pedestrian passers-by become a mobile audience, sitting or standing on the steps and the sidewalk at different heights to watch the games. In front of the steps, passers-by align themselves along the fence to enjoy the snacks served by the surrounding shops. The steps of the bridges serve as an urban roof and redefine the everyday space, playing a catalytic role to varying degrees. Sheltering under the ladder-shaped outdoor roof, as can be seen from the comparative life images captured at Tung Choi Street and Fa Yuen Street (Figure 5-35 and Figure 5-36), a much more vibrant in-between urban life exists in the synergistic spatial arrangement between the bridge's steps and

various shop houses. In Tung Choi Street, the ground-level eateries, pet stores, other attractive shops and the steps of the bridge are organically integrated; together, they form a very inviting in-between place that facilitates lively urban life. In contrast, the steps of the municipal services building, standing alone on Fa Yuen Street and lacking synergy between itself and the ground-level shops, are used mainly as a shelter for storing goods rather than as an urban roof for hosting various urban activities. The upper-level Mong Kok Pedestrian Bridge forms a space between the surrounding buildings and ground-level streets, together hosting everyday life with synergy within.

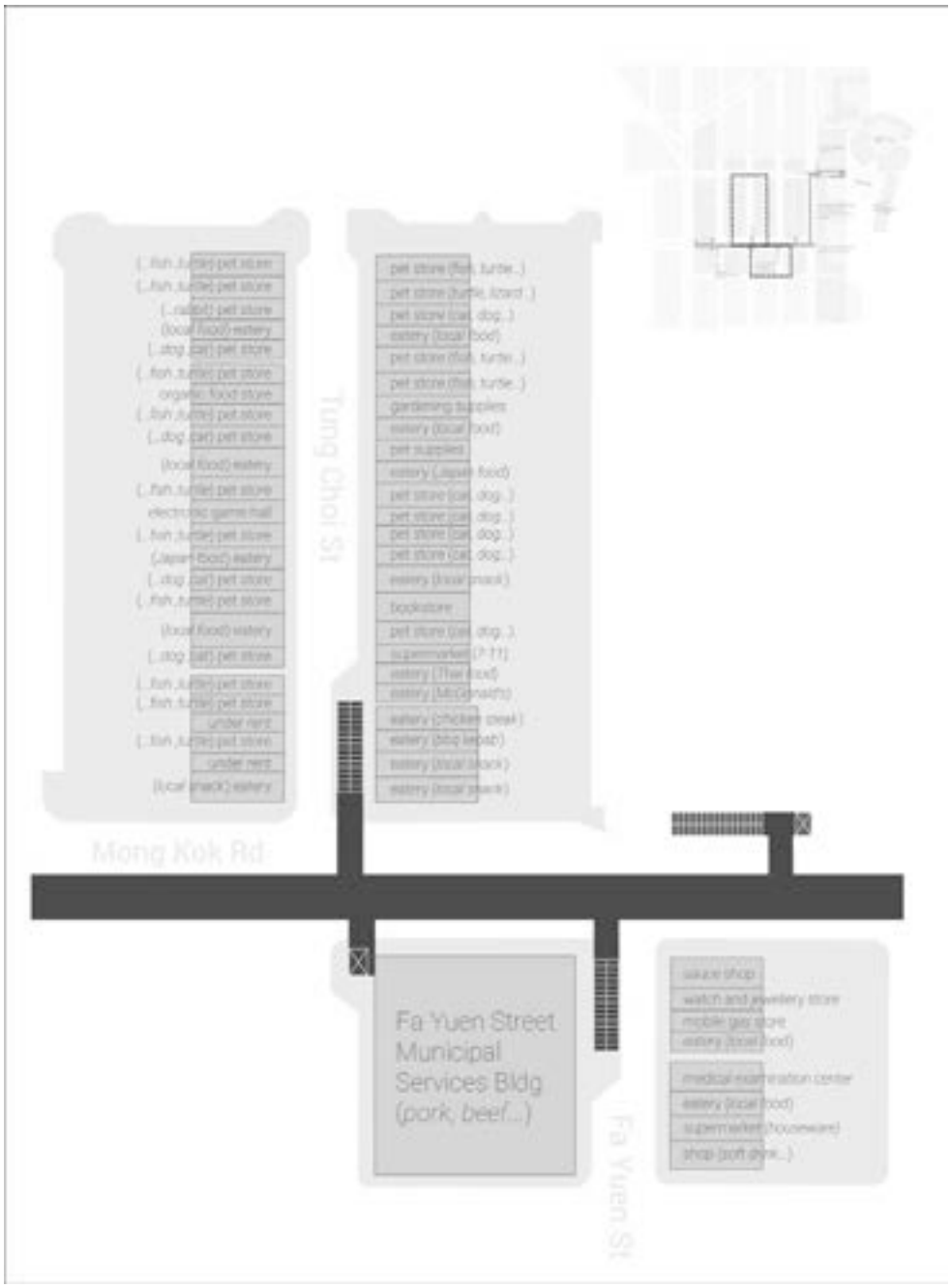


Figure 5-35 Shop Map of Tung Choi Street and Fa Yuen Street-Mong Kok Pedestrian Bridge's Phases

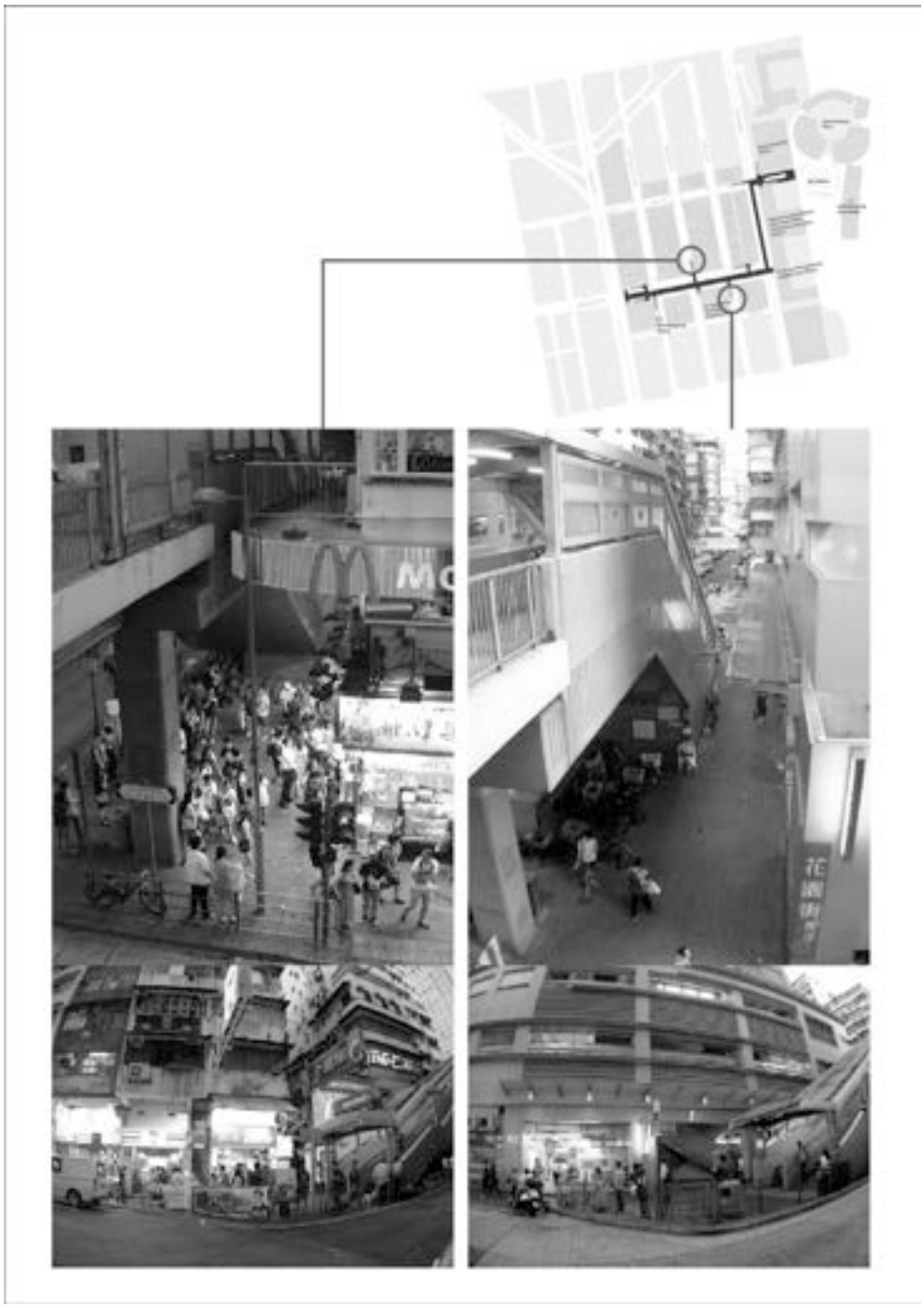


Figure 5-36 Images of life in the space in between

Summary of The Mong Kok Pedestrian Bridge's everyday effects

In general, the everyday effects of the elevated bridge are catalytic. Besides spanning the physical terrain and increasing the capacity for pedestrian traffic, the bridge primarily serves people's pursuit of efficiency and safety, although they do not realise that they are becoming isolated for the sake of

staying safe. Located in a compact high-density urban area, The Mong Kok Pedestrian Bridge also work as a new public realm that can accommodate various urban activities, complementing the city's function. Embedded and integrated in the urban fabric, the lively multi-layered streets can coexist when people's necessary activities are established at both levels and their optional activities are supported and cultivated, which promotes the urban intensity in terms of both spatial structure and people's uses. Embraced by the buildings around, the elevated pedestrian bridge does much more than simply adding another layer; on account of its permeability and looseness, the bridge place's catalytic effects release the life of the space in between, enrich the vibrancy and encourage everyday social exchanges.

5.11 The everyday place as an urban gathering place and an assemblage

Accessible to all members of all publics and with a high degree of spatial permeability and looseness, the Mong Kok Pedestrian Bridge is located in one of the most densely and busiest populated urban areas, and is an urban host and magnet that assembles and gathers both humans and nonhumans. As Heidegger (1971) reflects, the bridge "does not just connect banks that are already there... Bridges lead in many ways. The city bridge leads from the precincts of the castle to the cathedral square; the river bridge near the country town brings wagons and horse teams to the surrounding villages. The old stone bridge's humble brook crossing gives to the harvest wagon its passage from the fields into the village and carries the lumber cart from the field path to the road. The highway bridge is tied into the network of long-distance traffic, paced as calculated for maximum yield. Always and ever differently the bridge escorts the lingering and hastening ways of men to and from, so that they may get to other banks and in the end, as mortals, to the other side... The bridge *gathers*, as a passage that crosses, before the divinities-whether we explicitly think of, and visibly *give thanks for*, their presence, as in the figure of the saint of the bridge, or whether that divine presence is obstructed or even pushed wholly aside. The bridge *gathers* to itself in *its own* way earth and sky, divinities and mortals... But the bridge, if

it is a true bridge, is never first of all a mere bridge and then afterward a symbol. And just as little is the bridge in the first place exclusively a symbol, in the sense that it expresses something that strictly speaking does not belong to it" (p. 150-151). Beyond its physical materiality, the bridge is connections, relations, flows, and a location where practices are sustained and meanings hosted, and the whole forms an urban assembly. Deleuzian and Parnet's (2007) general definition of the concept of assemblage is "a multiplicity constituted by heterogeneous terms and which establishes liaisons, relations between them" (p. 52), which refers to "productive self-organized wholes that emerge from dynamic interactions between parts, including people and things, subjects and objects" (Dovey & Wood, 2015, p. 4).

From a static view, the bridge is an everyday place, a socio-spatial territory. From a dynamic view, the Mong Kok Pedestrian Bridge involves the processes of connecting and gathering, connecting various people or different places to each other, people to buildings and stations, public to private, and within which the everyday practices of the various groups are acts that people assemble themselves. Considered as an urban assemblage, the whole of the Mong Kok Pedestrian Bridge is a relational constitution. It is the assemblages that take various spatial configurations and forms that produce the Mong Kok place. The urban assemblage of the Mong Kok Pedestrian Bridge brings a processual and dynamic rather than a confined spatiality, which allows openness to multiple spatialities. It is not simply produced by everyday urban practices but initiates possibilities of everyday actions, which, addresses the liveliness of space (Lefebvre, 1991). The informal unplanned uses of the Mong Kok Pedestrian Bridge such as hawking are how people cope with their everyday urban life and illegal marginality.

PART THREE - An Urban Reference of Placemaking in a High-density Context

5.12 The pedestrian bridge as everyday place: An urban reference of placemaking in a compact high-density context

Taking the concept of "pedestrian bridges as everyday places" investigated in Hong Kong, this part discusses and summarizes the frameworks of necessity and sufficiency of placemaking, and then of place-led development. Moreover, an elaborative framework of everyday placemaking with respect to the dynamic relationship between micro-scale spatial characteristics and people's everyday behavior is generated. And a performance-based actionable placemaking strategy is proposed for the implication of placemaking in densely populated urban areas, through which the roles of designer, planner, regulator and ordinary everyday users are discussed and clarified.[6]

5.12.1 Spatial settings of pedestrian bridges: The well planned and designed space primarily for necessary activities but not only

Emphasizing on 'what and how pedestrian bridges connect', the physical survey of Hong Kong's pedestrian bridges reveals that the pedestrian bridges take various forms and connection methods, which are primary for accommodating and sustaining the 'necessary activities' (Gehl, 1987, p. 9) of people's daily commute (Figure 5-37).

[6] Parts of the author's own paper "Wang, W., Siu, K. W. M., & Wong, K. C. K. (2016). The pedestrian bridge as everyday place in high-density cities: An urban reference for necessity and sufficiency of placemaking. *URBAN DESIGN International, 21*(3), 236-253. doi: 10.1057/udi.2016.3" are included in the Chapter 5.12. Longer sentences, phases, and paragraphs are referenced.

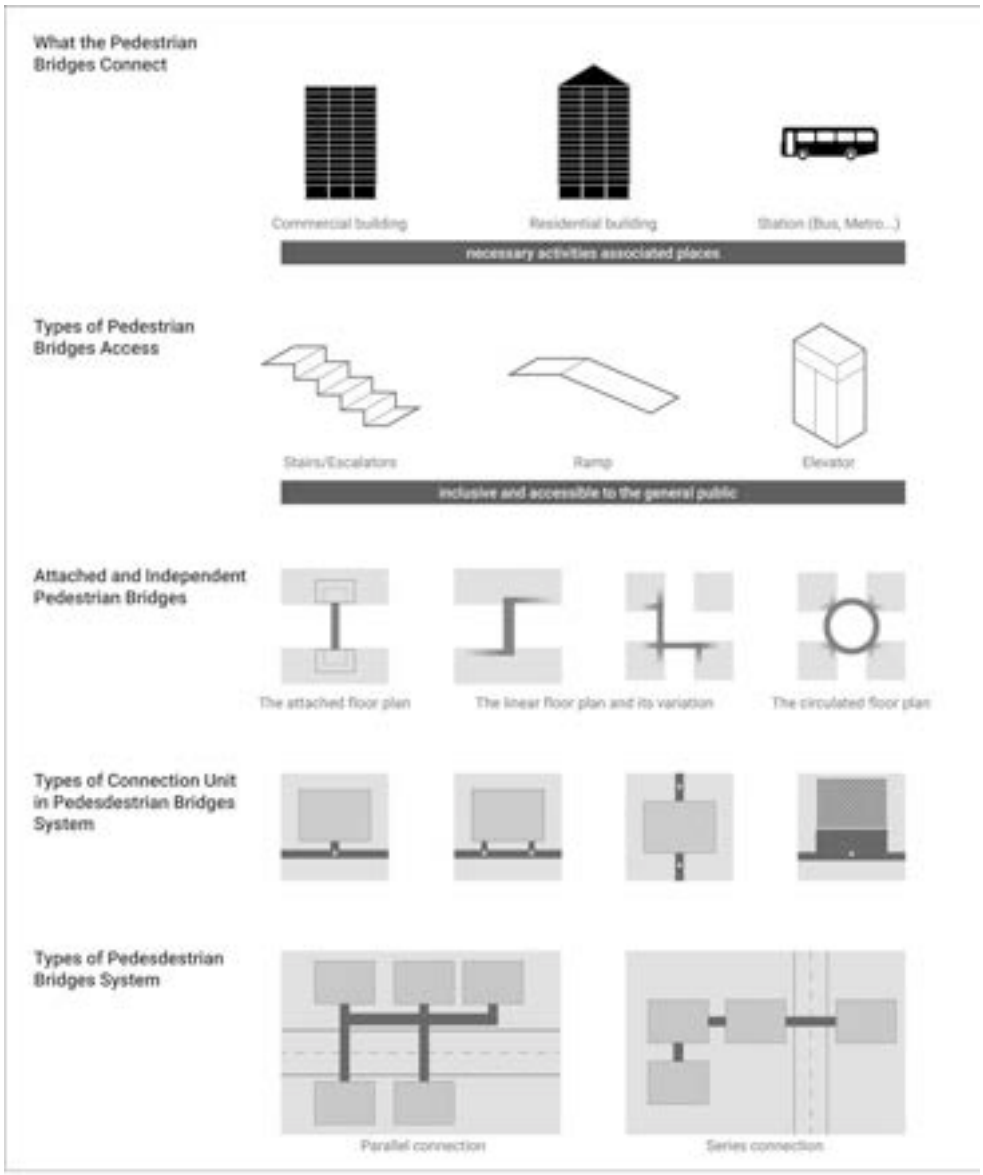


Figure 5-37 Spatial settings of pedestrian bridges in Hong Kong.

Built with ramps, escalators, stairs, lifts and covers, pedestrian bridges initially provide inclusive and accessible access to all city user groups, and protect them from extreme weather conditions. Form follows function, because the pedestrian bridges are primarily used for the daily commute (e.g. going to work or waiting for a bus) and segregating pedestrians from vehicular traffic. Therefore, they are planned to be directly connected with people's workplaces, their home and the transportation stations. In terms of their designs in general, they are dominantly configured for walking space, with flat and expansive decks (width usually ranges from 3m to 9m), and

feature different degrees of enclosure by architectonic structures, interrupted only by essential public facilities, such as rubbish bins and direction signs, and by plant plots in some cases (Figure 5-38).

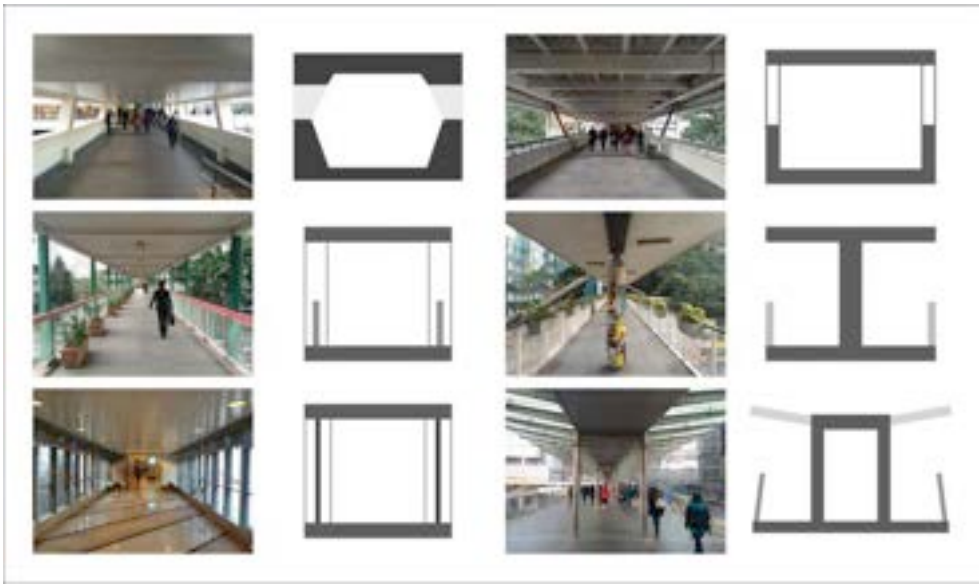


Figure 5-38 Design variations of pedestrian bridges in Hong Kong

Planned to be highly associated with necessary daily activities, designed to be accessible to all members of all publics in the society, and closely integrated in the city's existing urban fabric, Hong Kong's pedestrian bridges are a new form of public realm for urban movement and activities, offering great possibility and capacity to people's everyday urban programs. Day and night, the pedestrian bridges carry an endless stream of people, acting as urban magnets where the movement of people and capital are supported, which frames great urban interfaces for social engagement and social exchange. The high mobility and diversity of people accommodated by the accessibility and looseness of the pedestrian bridge space transform the pedestrian bridge space into a lively public realm.

5.12.2 Everyday appropriation, everyday placemaking

Initially planned and designed as the urban segregation infrastructure for pedestrian traffic and urban movement, the pedestrian bridges primarily

channel the traffic flow and carry crowds of people for their daily commute. Meanwhile, the looseness and permeability of the pedestrian bridges spatially grant great possibility to individuals' everyday urban life. Examined and discussed in the previous parts in this chapter, located in one of the most compact and high-density urban areas in Hong Kong, The Mong Kok Pedestrian Bridge cultivates, and is widely appropriated by, people's various optional activities (Figure 5-21, Figure 5-39).

The Mong Kok pedestrian bridge in the early morning.

"Necessary and social activities-mixed" bridge use pattern

"Necessary activities-dominant" bridge use pattern

Figure 5-39 Types of everyday bridge uses with different groups of people use and appropriate Mong Kok Pedestrian Bridge in their own ways.

Just as Lefebvre (1991) and de Certeau (1998) mentioned about people's rights and their ability to use the space, the everyday Mong Kok Pedestrian Bridge demonstrates a living example showing that on the basis of people's primary spatial capacity needs and of their relationship with others ordinary people have their own ways and tactics to appropriate the space to meet their own urban needs. And it is through people's various optional activities such as homeless people's lodging and domestic helpers' gathering the everyday place is collaboratively made and cultivated on The Mong Kok Pedestrian Bridge. Again, Tuan's '… if we think of space as that which allows movement, then place is pause; each pause in movement makes it possible for location to be transformed into place' (Tuan, 1977, p. 6). Each 'pause' of everyday urban life, and each stationary optional activity, transforms the pedestrian bridge into an everyday place.

As discussed, the primary objective of the pedestrian bridge is to segregate pedestrians from the vehicular traffic, and to serve urban movement and improve urban circulation. Pedestrian bridges are thus introduced and planned in prime urban areas by departments of Hong Kong government, whereupon they are intensively used for their planned purpose, and also appropriated by urban dwellers of different backgrounds for their own various everyday urban needs. People utilise the bridge to its full capacity, and endow it with multiple programmes and meanings. Hence, the everyday placemaking of The Mong Kok Pedestrian Bridge is constantly transformative and ever-changing; and the process of placemaking dwells on the continuing spatial re-configuration through public participation and between people's internal negotiation.

5.12.3 Placemaking as the continuing spatial re-configuration to maximise shared value

Clearly, as the Mong Kok Pedestrian Bridge demonstrates above, besides commuting, the pedestrian bridge is an everyday place for public expression, social gathering and exchange, which performs various societal and cultural

functions for all individuals. Regardless of people's background, each member of society is equally supported. And each member not only appropriates the space in their own way, but also in the best way they instinctively know to use. On The Mong Kok Pedestrian Bridge, the street performing and/or hawkers' guarding often stay at the turning spot, taking the great advantage of the highest degree of inter-visibility within the bridge (Figure 5-40). Occupying the location with the most visibility, the street performer can benefit from the heavy pedestrian flow to attract as many audiences as possible; the hawker acts as a guard for her accomplice, because hawking is illegal and not allowed in the pedestrian bridge, not to mention that tourists always take the whole bridge as vantage points to enjoy the city-view from the unique mid-street elevated perspective. There are no designers or planners to teach them how to appropriate the space in advance - people instinctively re-configures the space for their best uses.

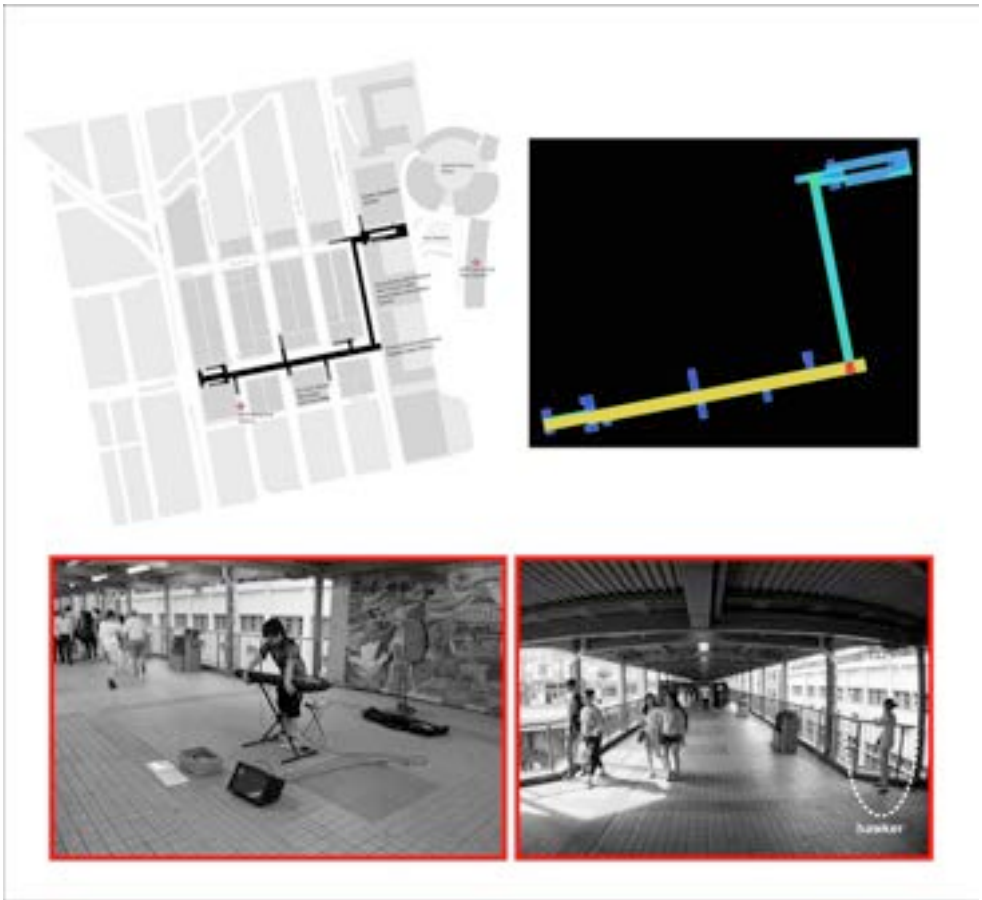


Figure 5-40

Learning from the case of The Mong Kok Pedestrian Birdge, it can be seen that everyone is working within their daily constraints, and the wide range of activities survives and is cultivated dynamically. The mixing of all individuals' uses is synergistic, whether it is temporary or long lasting; formal or informal, even legal or illegal. One group of people's utilisation of the space can potentially create opportunities for others (Figure 5-41). On a normal Sunday, domestic helpers gather along the two sides; salesmen promote their products not only to the passing crowd, but also to those domestic helpers; the endless stream of people pass along the bridge as they always do, albeit in a narrower but still acceptable route. However, with these differing uses and needs there is the potential for conflict. At such times, spatial and social negotiation is required to avoid and resolve conflict, thus all the society members need "to maximize opportunity and minimize disruption" (Franck & Stevens, 2006, p. 94). As a result, they gradually "accommodate both to the physical environment and to the values, attitudes and comportment of people around them. People are constantly modifying and reshaping place, and places are constantly coping with change and influencing their inhabitants" (Knox, 2005, p. 76). The domestic helpers leave the space in the middle for the daily commuters, and the local residents understand even sympathize the domestic helpers who are far away from home to allow them to gather along the deck on Sundays and other public holidays. Within the constant spatial and social negotiations between all members of all the public, the continuing transformative, re-configured pedestrian bridge makes itself the everyday place "of multiple social and economic transactions, where multiple experiences accumulate in a single location … where differences collide or interact" (Crawford, 2008, p. 6), leading to the maximised shared value and meaning.

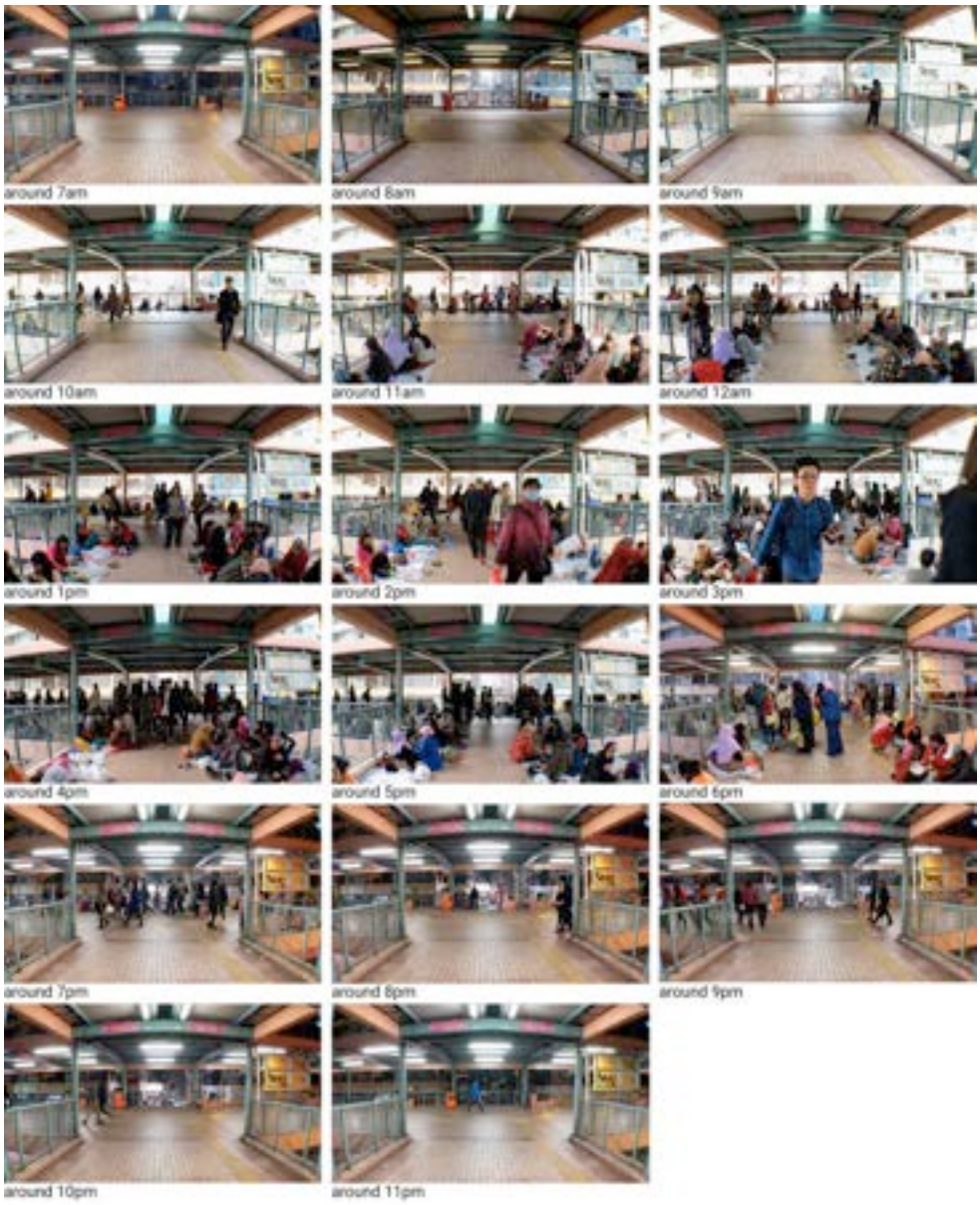


Figure 5-41 Screenshots from the video *A Sunday on Mong Kok Pedestrian Bridge*: people's continuous spatial re-configuration leads to the maximised shared value.

5.12.4 An urban reference for understanding necessity and sufficiency of placemaking

In logic, necessity and sufficiency are implicational relationships between statements, which concern the relations between the conditions. "A necessary condition for some state of affairs S is a condition that must be satisfied in order for S to obtain. A sufficient condition for some state of

affairs S is a condition that, if satisfied, guarantees that S obtains." ("Necessary versus sufficient conditions," 2015).

In the case of placemaking and the transformation of Mong Kok Pedestrian Bridge, all society members have their own tactics to best utilise the space and together re-configure the space, leading to the maximised shared value. Learning from the pedestrian bridge as an everyday place in a high-density setting like Hong Kong, the process of placemaking and its necessary and sufficient conditions are revealed. The pedestrian bridge's placemaking as an urban reference demonstrates performance-based principles and mechanisms from the perspective of everyday life.

Referencing the case of pedestrian bridge as an everyday place, the findings on the spatial settings clearly indicate that the pedestrian bridges are highly associated with people's necessary activities. People have to go to work/school, or cross the streets to take the bus, through pedestrian bridges. The pedestrian bridge is filled with a very heavy pedestrian flow primarily because it is the only way through which people can complete their necessary activities. Second, with the spatial qualities of looseness and accessibility, located in the high-density urban context, the pedestrian bridge invites and is greatly favoured by all society members, with individuals appropriating the space in their own way, endowing it with multiple optional activities and thus meanings, through which the place is made accordingly. As Tuan (1977) states, human experience transforms a relatively abstract notion of space into a relatively lived and meaningful notion of place; endowed with human meanings, space is transformed into place.

Looking at specifics, the 40 completed questionnaires with bridge users' answers to "What will make you slow down your pace, or even stop and stay for a while on the bridges" clearly demonstrate that landscape viewing, street selling (both illegal hawking and allowed product promotion), and performing are the most favored and attractive activities for bridge users; Additionally, causes such as everyday phone-using, way-finding, smoking,

and chatting reveal that the use of pedestrian bridge is closely related to and integrated into people's various everyday urban activities (Table 5-4), which indicate that the closely everyday-integrated optional activities significantly contribute to and lead to the placemaking, being the sufficient condition for the making of place from the perspective of environment-behaviour. It is the optional activities that develop the people–place bonding through which the place attachment is cultivated. Appropriated by people's everyday optional activities, the pedestrian bridge transforms itself into an everyday place that gives people alternatives to facilitate their desired urban experiences. It is important to every social member because of its great potential functional urban values. Although these functional based physical attachments are weak and temporary, optional activities that people participate in voluntarily directly and sufficiently promote the formation of place attachment, develop the place's urban functions, and lead to the making of place.

Table 5-4 Ranking of causes that people slow down their pace on pedestrian bridge

Reasons of people slowing down their pace	Total No. of respondents
The view perceived from the pedestrian bridge	19
Hawking/Products' street promoting	13
Street performing	15
Too crowded to move	13
Phone answering and/or messaging	3
Being lost or finding ways	3
Being attracted by interesting public facilities	2
Waiting for someone	1
Smoking	1
Chatting	1
Donating to beggars	1
When there are not many people	1
When free newspaper is given	1

Regarding the everyday placemaking of pedestrian bridges, from a performance-based perspective necessary activities gather people, anchoring them in the space. Then, the optional activities especially the ones closely associated with people's everyday necessary tasks in which people

voluntarily participate transform the space into a lively and meaningful place. Moreover, it is the interactive social activities that sustain and coordinate the different groups of city users, collaboratively giving great possibility of long-lasting and sustainable place-led development (Figure 5-42).

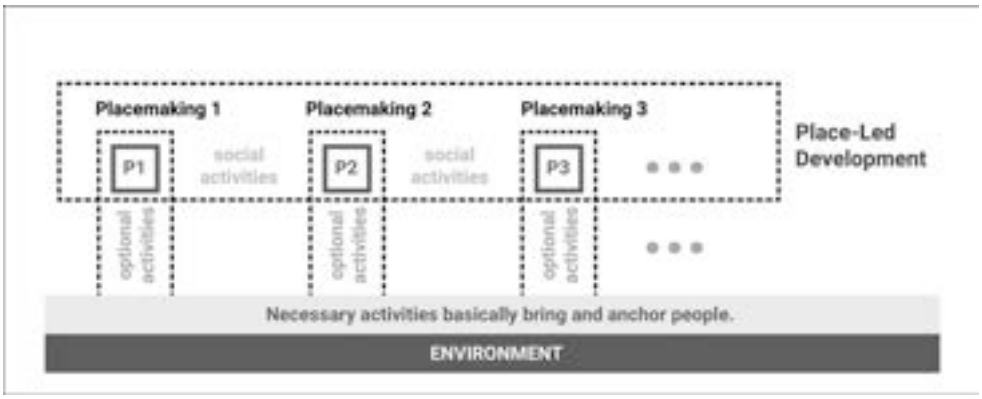


Figure 5-42 Framework of necessity and sufficiency of placemaking

5.12.5 Place-led development

Place-led development puts the concept of place at the centre of the policy and planning framework (Project for public space, 2015), producing lasting and shared wealth, and leveraging the social capital between all of society's members. The place-led development approach can best build and leverage the social capital, making not only lively, but also sustainable and resilient everyday places. In this sense, placemaking with human efforts generates the long-lasting and resilient shared value in various spatial forms.

Combining this analysis with Gehl's categorisation of people's activities (Gehl, 1977), another conclusion that can be drawn is that the optional activities are about the singularity of people-place bond placemaking, and the qualities of the social activities lead to the collaborative and sustainable place-led development, uniting different groups of people to bring them to live in harmony with each other. The empirical fieldwork also proves that (Figure 5-43, Figure 5-44, Figure 5-45): in location A, the ground-level

street has few qualities other than supporting the necessary activities of students going to school, so it is greatly affected by the elevated Mong Kok Pedestrian Bridge, which removes most people from ground level, making the street space dull; in location B, the street has a good mixture of necessary activities (bus stops), optional activities (the diverse ground-level shops attract and invite people) and spontaneous social activities between all of the street users, and so, although the pedestrian bridge has a certain effect on the ground level, the ground-level street remains a dynamic and lively everyday place of resilience and sustainability.

Figure 5-43 Locations of selected site A and site B.

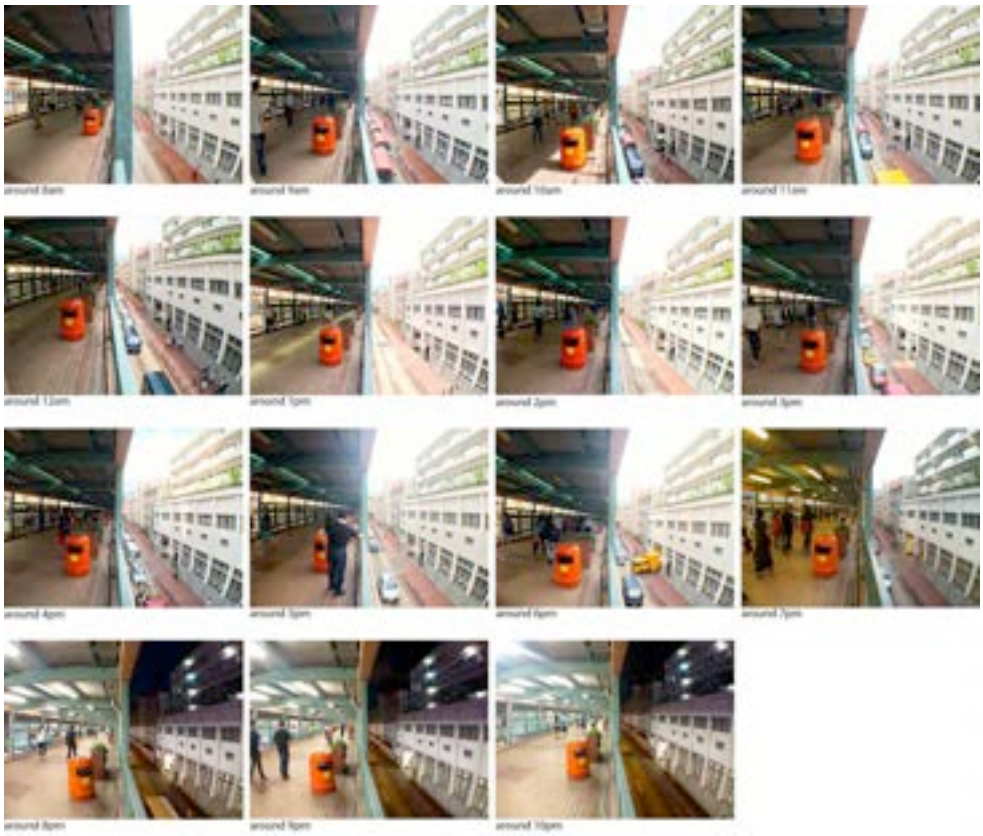


Figure 5-44 Two-level street life at location A.

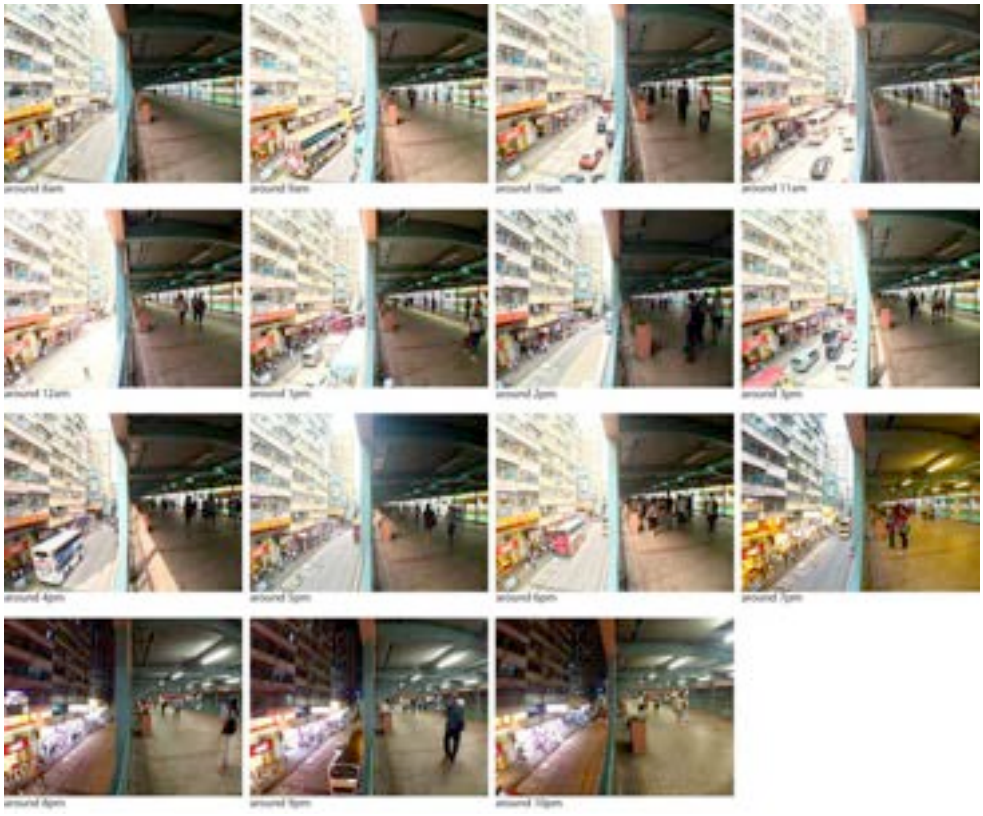


Figure 5-45 Two-level street life at location B.

5.13 Summary

This chapter presents an in-depth case study of the Mong Kok Pedestrian Bridge. The first part investigates the high-density urban context of Mong Kok and finds that there is a serious lack of public space with this space being unevenly distributed. The second part examines the concept of 'pedestrian bridges as everyday places in densely populated urban areas' with respect to the bridge's physical characteristics, its users, individuals' everyday urban activities and people's perceptions in relation to the bridge. In addition, the bridge's catalytic effects are summarised, looking at efficiency and isolation, pedestrian bridges as everyday places, the multi-layered street life and the in-between urban public life.

Furthermore, the third part of this chapter generates and develops a framework of everyday placemaking to explain how necessary activities gather people and anchor them in a space and how people's optional activities then transform each individuals' space into their own everyday place. The interactive and dynamic social activities between different individuals sustain the making of everyday places.

CHAPTER 6 CONCLUSIONS, IMPLICATIONS, AND LIMITATIONS

PART ONE – Conclusions

In this thesis, the literature on concepts of public space, place, and placemaking is reviewed, providing a comprehensive description of the physical properties of Hong Kong pedestrian bridges. Their changing urban roles is investigated, and the mechanism of everyday placemaking in a high-density urban context systemically examined and revealed. This chapter concludes the study by responding to the three research aims and related objectives raised in Chapter 1, and each is answered and elaborated. Future work and the limitations of this study are then discussed.

6.1 Responding to the research aims and objectives

This study presents and examines pedestrian bridges as a typology of public urban space and people's everyday place in a high-density urban context. The aim is to reveal, examine, and develop a model and strategy for everyday placemaking and for implementing placemaking in high-density cities.

6.1.1 Qualities and characteristics of everyday places: Responding to the first research aim of revealing and examining the mechanism of everyday placemaking in high-density cities

The everyday place as ordinary people's lived experiences

As reviewed in Chapter 2, place is the product of and inextricably linked to human experiences (Relph, 1976; Tuan, 1977), made up of physical settings, actions, and perceptions (Canter, 1977). It is the locus of individual existence. The Mong Kok Pedestrian Bridge space as an everyday place is

transformed and experienced by the ordinary people who inhabit it and use it. It is inherently at the scale of the ordinary individual, which allows people to interact with urban spaces in their own ways, that is, it allows for their lived experiences.

In everyday places, people from all publics exercise their right to participate in and to appropriate the city. Ordinary individuals make their own everyday places through their own everyday actions and initiations. According to Dilthey (1985) and Sartre (1985), lived experiences refer to the most basic forms of temporal spatial organizations, which relate to people's immediate awareness. In the Mong Kok Pedestrian Bridge space, ordinary citizens' formal or informal, planned or spontaneous, and legal or illegal everyday actions and interactions create vibrant everyday places, and the bridge simply sets the stage for the urban drama to unfold. In other words, the physical bridge is a container filled with ordinary people's lived experiences, which transforms it into an everyday urban place. High quality urban experiences significantly contribute to the making of everyday place. As the survey presented in Chapter 5 discussed, the high quality urban experiences of sightseeing, shopping from illegal hawkers, and enjoying street performances are exactly the everyday urban actions ordinary people most prefer on the bridge, slowing the pace and filling the physical bridge space with collective lived experiences. Everyday places are in this sense ordinary people's collective lived experiences.

The everyday place as process

The physical spatiality of everyday place influences what people do in it, while the everyday place is in turn affected by people's everyday actions. The high degree of accessibility and permeability of the Mong Kok Pedestrian Bridge enables people to travel freely through the bridge, and simultaneously the various everyday appropriations of ordinary individuals transform the bridge into a tourists' observation deck, a domestic helpers' plaza, and a performers' urban stage. The everyday place is never a static concept. It is constantly evolving and becoming. It is an urban process that

is ceaselessly adjusting and balancing within ordinary individuals (Figure 6-1).

Figure 6-1

The everyday place is about common people's everyday living. It is not planned and it cannot be planned. The primary planned use of the Mong Kok Pedestrian Bridge is for segregating pedestrians from vehicular traffic, but the everyday bridge users continually use the bridge to meet their various urban needs. Diverse urban programs randomly tweak the place to better meet the needs of participants during the process, continually improving the place in their own ways. The everyday place is a never finished product; it is a constantly re-programming urban process.

Within this process, the everyday place provides great opportunities to dwell in the everyday place by means of diverse everyday activities such as shopping, selling, relaxing, meeting, or performing, which occur through the constant interplay of formal or informal, order or disorder, even legal or illegal. Seeing the everyday place as an urban process by examining everyday placemaking on the Mong Kok Pedestrian Bridge raises several points crucial to understanding and to untangling the mechanism of everyday placemaking.

The everyday place is highly integrated with the everyday necessities of daily life.

Although ordinary individuals appropriate the space (in this case the Mong Kok Pedestrian Bridge) randomly and spontaneously, people first need reasons to go or to be there. A compelling and shared reason, which can bring as many people as possible to a single place, is that it is closely related to and highly integrated with people's daily necessities, such as going to work or home. The more closely the everyday place is integrated with daily necessity, the more vibrant it can be. As many share the daily necessity of going to work or home, all kinds of different individuals will then go to and stay in a single place, such as the Mong Kok Pedestrian Bridge. Many opportunities and possibilities then arise, which can sustain a variety of accumulated multiple experiences. Ordinary individuals' social, cultural, and economical differences thus collide and interact, producing a constantly

evolving everyday place, or, one might say, an ever-programming urban process.

The everyday place celebrates ordinary individuals.

The everyday place celebrates and represents the ceaseless programming of ordinary individuals. Regardless of social, cultural, religious, and economical backgrounds, each individual acts freely and independently and makes use of the space in his or her own way. Although sometimes the authorities take actions that affect certain individuals' diverse agendas, such as the city management officer stopping the hawker's illegal selling, inherently the everyday place represents the most shared interests of the vast majority of ordinary individuals. Considering the Mong Kok Pedestrian Bridge as an everyday place, though it was initially planned as an urban segregation infrastructure for improving urban traffic, its functions, activities, and meanings are endlessly redefined and reconfigured by the city's common people. Ordinary everyday actions show how people can transform urban spaces into their everyday places, and represent their exercised "right to the city." The everyday place alternatively provides a great living space out of the professionals' and authorities' "conceived spaces." In the everyday places, ordinary individuals act within the constraints of the existing structure but continually appropriate the space with their own tactics to resist, which explains how the everyday place as process is rooted in everyday practices, and the everyday place is performed by the individuals who dwell in it. It also allows for the view that the everyday place is the result of individuals' everyday practices, which is constantly improving and changing.

The inherent publicness of the everyday place

The everyday place is inherently public. Accessible to all members of all publics, it accommodates individuals' daily lives. It brings ordinary individuals in the community together in a single location. On the Mong Kok Pedestrian Bridge on a normal Sunday, daily commuters, street

performers, tourists, street performers, and domestic helpers harmoniously dwell on the bridge, and though they their own specific tactics for uses of the bridge their lives are all sustained by the everyday place, and the multiple social, cultural, and economical transactions are thus fostered and encouraged.

Beyond being spatially accessible and open to all members of all publics, the everyday place's inherent publicness also originates from ordinary public life. It is the place where people live their public lives. The everyday space primarily facilitates each individual's everyday necessary life, which then sustains ordinary people's shared public lives. The everyday place lays a solid foundation for the facilitation of each individual's daily tasks, accommodating everyday interactions and exchanges, helps to develop close social bonds with others, which lead to the inclusiveness of public life in the everyday place. The everyday place has the capacity to accommodate the resistance. Spatially, the everyday place is accessible and open to all members of all publics, but it also owns possibilities and opportunities to relieve the tension when conflict arises between people. For the recognition and inclusion of people with insurgent citizenship, the constantly evolving everyday place has the capacity to accommodate the ever-changing civil order, which reflects the productive nature of the everyday place between domination and resistance. As Friedmann (2007) asserts, "some accommodations will be made as a place acquires its specific character, shaped not only from within itself but in response to the demands and decisions…" (p. 261).

The collective temporariness of everyday place

Recollecting Tuan's (1977) concept of place "… The ideas "space" and "place" require each other for definition … if we think of space as that which allows movement, then place is pause; each pause in movement makes it possible for location to be transformed into place" (p. 6), there is a temporary nature in the everyday place. It is a temporary entirety consisting of different individuals at the same time and of different "pauses," which

each individual dwells in (Figure 6-2). The collective temporary nature reflects the time dimension in everyday placemaking. The temporary and transient nature of the everyday place also demonstrates the mechanism within the everyday public place and the idea of the everyday place as process. As Miller (2007) argues, public space is a constantly changing situation rather than a concrete or fixed reality.

Figure 6-2

The collective temporary nature of the everyday place is reflected in two aspects. From the perspective of the ordinary individual users, their everyday places and people's everyday appropriations are temporary and contingent. Domestic helpers take over the sides of the bridge decks on every Sunday, while the salespeople occupy the middle for product promotion. The transformation of the place is temporary, as the different individuals' appropriated uses of the bridge are contingent.

The temporary nature also reflects the temporary control of the everyday place by the authorities. The temporary controlled public space gives common people greater possibilities and opportunities to conduct their dynamic daily lives and their public life. Particularly within the compact high-density urban context, the temporarily different uses of the public space give the city substantial flexibility and capacity to adapt and to sustain the diverse urban programs of individuals from all publics. The individuals'

uses and the authorities' regulations thus dialectally interact and are affected, and the rhythm and the balance of the use and the management of public space is what everyday life is about.

In summary, the individuals' temporarily transformed and the authorities' controlled everyday place complements the city's urban functions, particularly enhancing the quality and provision of public space in the high-density context.

6.1.2 An environment–behavior-based everyday placemaking model: Responding to the second research aim of developing and validating the framework of everyday placemaking in densely populated urban areas

In the concept of "pedestrian bridge as everyday place" in Part Three of Chapter 5, the model of necessity and sufficiency for placemaking and for place-led development is developed and analyzed with respect to the dynamic relationship between micro-scale spatial characteristics and people's everyday actions.

Physical environment and behavior affect and shape each other. People's compulsory and necessary activities primarily lay a solid foundation for everyday placemaking. Their optional and social activities, particularly those closely associated with necessary daily tasks, create sufficient conditions for people to make their own lively places. The vitality of optional and social activities directly determines the degree of the place's liveliness and its quality.

6.1.3 Implications: Responding to the third research aim of formulating a performance-based actionable placemaking strategy in the dimensions of design and management

Unlike Western cities that are generally planned with a structured grid system and an axial hierarchy, Asian cities do not rely on nodal points (Miao, 2001). With an extremely high population density and very limited land availability, Asian cities such Hong Kong or Tokyo inevitably adopt a compact, intense, and high-rise urban strategy. Hence, in an extreme compact and high-density urban context, the ways in which public space are conventionally defined, planned, designed, used, and managed are very different from public space in Western cities. Learning from the idea of pedestrian bridges as everyday places in Hong Kong, the new types and qualities of public space in this high-density context are motivated, examined, and analyzed.

6.1.3.1 Constructing everyday public spaces in compact high-density cities: Key spatial themes

Visual accessibility (visibility)

According to Jenk et al. (1996), compact high-density cities are considered as ideal places to live as daily travel distances are reduced, so people can go to urban public spaces that are relatively near their homes or workplaces. However, though people can travel to places in a relatively shorter time when living in and experiencing compact urban space in high-density urban areas, they find it more difficult to navigate and orientate themselves, as their views are blocked by the urban density. Surrounded by densely built high-rise commercial and residential buildings, people simply cannot see very far. To successfully reach the public spaces in a high-density context, visual accessibility, namely the visibility of public spaces is particularly critical. As soon as people can see the public space, they can orient themselves to directly reach it, usually within walking distance in Asian cities like Hong Kong or Singapore. The directional signage of the public space that people want to reach should be visible, as should entrances or exits when entering or exiting public spaces. The entrance signage of the Mong Kok Pedestrian Bridge, on both ground and elevated level, clearly

guide and navigate its users, even from a distance, and the bridge's elevated level deck acts as a "landmark," drawing attention and helping to direct travelers. On the bridge, the consistent way-finding and sign systems clearly lead people to their destinations. In summary, the visual accessibility of public space in a compact high-density cities context is critical in ensuring public spaces can be seen and found, which helps people more effectively navigate to them and accurately structure their images of the areas.

Permeability

Permeability is "the extent to which an environment allows people a choice of access through it from place to place" (Bentley et al., 1985, p. 12). It relates to the capacity of entering and moving in an area (Montgomery, 1995). In a compact high-density city such as Hong Kong, pedestrian bridges are embraced by the buildings around and are integrated in the existing urban fabric, providing a new form of public space in the city. It intensifies the city's vertical space and thereby the urban intensity. The high density of compact cities such as Hong Kong is generally measured by examining the numbers of people, households, or building per hectare, which are highly dependent on where the boundaries are drawn (Pont & Haupt, 2010). Urban density is then "the amount of people or elements of urban form (e.g., dwelling units, floor area) per unit area of land" (Sevtsuk et al., 2013, p. 553). High density is therefore an inescapable urban strategy for cities with a large population and limited land availability.

The terms urban intensity and urban density are often used interchangeably, but in the fields of urban planning and design, strictly speaking urban intensity refers to the concentration of volume of urban life. It is "an emergent effect of the connections, alliances, interactions and differences between the people, practices and built forms that comprise the city" (Dovey & Symons, 2014, p. 44). The more diverse and highly concentrated the urban activities, the more intense the urban area. Unlike the concept of urban density, urban intensity has a synergistic effect on everyday urban life, which relates to the positive urban experiences of public spaces. In general,

urban intensity has no direct relationship with urban density. The intensity can be improved by increasing or decreasing the density, as it is closely related to concentrations of activities. However, in the urban context of high-density cities, constructing public space with high degrees of permeability can greatly improve urban intensity, promoting social interactions and exchanges that provide vitality to public spaces. In Hong Kong, the Mong Kok Pedestrian Bridge offers more than extra public space to increase the density of everyday activities. Its physical and visual permeability enriches the structure of vertical urban space, providing more capacity to sustain everyday public urban life. Constructing public spaces with a high degree of permeability in compact high-density cities brings intensity to the cities, expanding urban nodes of movement and exchange and also creating mixed and multifunctional spaces. The intensely structured and permeable urban public spaces are like breathing spaces in that their cellular solid structure contains interconnected holes and tunnels, which relatively increase the urban interface areas. The concentration of the various everyday urban activities and their interconnectivity enhances the quality of the everyday living space, thereby enhancing the quality of urban cultural and social exchange. To summarize, the spatial permeability of public space integrated into vertical high-density cities allows for a concentration of urban intensity, and brings with it the diversity and validity of everyday urban life.

6.1.3.2 Making everyday places in compact high-density cities

Focusing on ordinary individuals' daily lives rather than spatial form

Form follows function. With the rapid development of computer technology, design and planning professionals are armed with increasingly advanced computational software and hardware. They can now design and construct much broader ranges of forms with technology such as 3D scanning and printing. This can lead to a trend of designing "cool" shapes, neglecting to consider fundamental human needs. Form follows function and function

follows actions. Planners and designers should focus on and start from the everyday lives of ordinary individuals, attempting to understand and unlock their life codes and considering them in the planning and designing of urban spaces. Hence, spatial design considerations such as the form and the typology of the space are not prioritized and designers and planner should not be constrained by the existing urban spaces, but be able to generate new spatial form and typology to response to common people's daily needs.

A performance-based strategy for placemaking[7]

Placemaking strengthens the connection between people and space and is spatially transformative, driving people to create their place and improve their everyday life. The deep participation of all members of society means that everyday places are collaboratively constructed to maximise their shared value. "More than just creating better urban design of public spaces, placemaking facilitates creative patterns of activities and connections (cultural, economic, social, and ecological) that define a place and support its ongoing evolution. Placemaking is how people are more collectively and intentionally shaping our world" ("What is placemaking?" 2015).

This study exemplifies the process of making pedestrian bridges as everyday places based on the spatial conditions associated with people's activities and their everyday appropriations of pedestrian bridges. It also provides a valuable framework for designers, planners and regulators to understand and implement placemaking from the perspective of everyday life. First, planners and designers can examine everyday appropriation with the concepts of loose parts (Nicholson, 1972) and loose space (Franck & Stevens, 2006), which are discussed with regard to the Mong Kok Pedestrian Bridge in this study. This examination can give them the freedom

[7] Parts of the author's own paper "Wang, W., Siu, K. W. M., & Wong, K. C. K. (2016). The pedestrian bridge as everyday place in high-density cities: An urban reference for necessity and sufficiency of placemaking. *URBAN DESIGN International, 21*(3), 236-253. doi: 10.1057/udi.2016.3" are included in the content of "A performance-based strategy for placemaking". Longer sentences, phases, and paragraphs are referenced.

and possibility to implement their own tactics when making lively places. More importantly, referencing the pedestrian bridge as an everyday place, through the analysis of the necessity and sufficiency of placemaking the roles of designers, planners, and regulators are clarified, and an actionable implementation strategy is proposed for planning and designs, within which the focus is directly on the concept of public life, identifying people's various needs rather than simply examining the spatial properties of public space. Second, to primarily determine the spatial functions, designers and planners should mediate and balance the freedom and control in the design quality, to allow for and create the highest potential for public participation in optional and social activities. Third, regulators should facilitate and respond to the dynamic changing demands of all social members from all publics in a timely fashion (Figures 6-3 and 6-4).

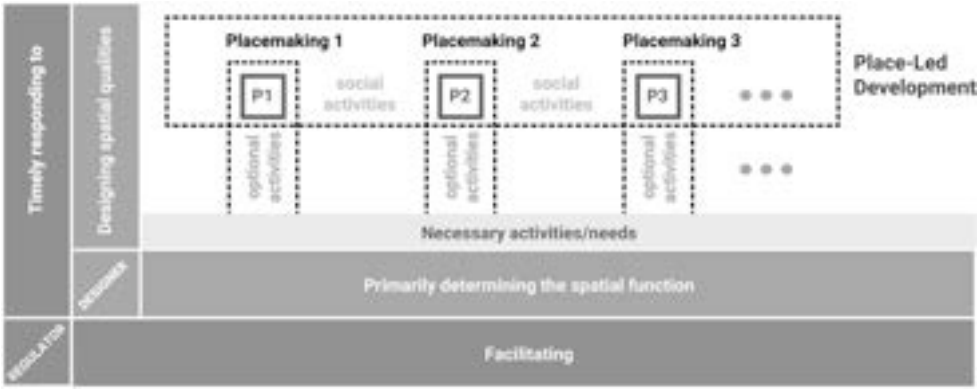


Figure 6-3 Framework of actionable placemaking strategy

Figure 6-4 Place is made by designers, users, and regulators

The comprehensive investigation of this research suggests that when making a lively place, designers should provide a functional spatial form to support necessary activities, rather than try to design everything, encouraging voluntary participation in the area's spatial uses and transformation, leading to everyday placemaking. Instead of formalising the space and rigidly designing and planning all aspects permanently, the roles of designers and planners is more about cultivating than controlling, balancing the freedom and control of everyday spatial settings. Miller (2007) argues that designers seek to fully design and plan urban spaces, which may inevitably concretize in built form aesthetic representations and programmatic systems, restricting common people's definitions, conception, and uses of urban places. This approach to design and planning is as much top-down as the law and policy, which limits what constitutes everyday urban life and who is accepted by the urban spaces.

The long-lasting, lively everyday place is a collaborative and sustainable place-led development, with the regulatory emphasis on sustaining and coordinating different parts of society, avoiding and resolving potential conflicts, and dealing with the tension between different groups. Given that people appropriate space in their own way for their own uses, there may be conflict. Therefore, the regulator's management can build and encourage negotiation between different parties. Tension reflects the complexity of placemaking, which is not always conflictual and not necessarily bad, and can primarily mediate relations between all social members (Franck & Stevens, 2006).

Ownership and management

Ownership and management are important factors affecting the creation of everyday places. However, the management of urban spaces, unlike its ownership, is much more closely associated with ordinary individuals' everyday placemaking, as the allowance of spatial public accessibility relates to the management of the space, whether publicly or privately owned. What is spatially accessible is the space itself, and allowing the general

public to use it enables ordinary people to shape their own everyday urban place. For example, though certain spaces are owned and managed by the public, such as the Legislative Council Square in Hong Kong, they are extremely limited in terms of public accessibility. The Legislative Council Square is an outdoor area used for leisure purposes and managed by the Legislative Council. It has a very high security level, which makes it much less accessible. Activities such as staging petitions and demonstrations are allowed, but only if permission is obtained in advance from the Legislative Council Commission, which also reserves the right to deny admission to the square, or to insist a person leave the square, indicating that the management rather than the owner directly determines whether or not the space can be used and when.

Considering the management of urban spaces in a compact high-density context, the collective temporary nature of the everyday place should be taken as the basis and a starting point, which emphasizes the time dimension of the everyday place. In everyday places, individuals' needs and actions change with times of the day and with days of the week. One group of individuals' uses may cause conflicts or create opportunities for other groups. Understanding and managing urban spaces from the perspective of everyday users can mean the spaces are fully and efficiently used. Responding to the temporary and transient characteristics of people's everyday appropriations in everyday places, the management of the space must adapt to the rhythms of ordinary, everyday lives.

From the perspective of the management of everyday places and developing the categorization of necessary, optional, and social activities, daily actions can be divided into unconditional permissible activities, conditional permissible activities, and impermissible activities. In the everyday place, unconditional permissible activities are the everyday necessary activities that fulfill basic primary urban needs, such as daily commuting or being in the space temporarily. The managers of everyday places, whether public or private, should impose minimal restrictions with regard to people's security, focusing on maintaining the safety and cleanliness of the space. Managing

conditional permissible activities should aim at regulating the activities of organizations, rather than individual actions. Permission for specific groups to carry out commercial or non-commercial activities should be obtained in advance from the management department, such as product promotions, temporary exhibitions, or charitable events. For these activities, relevant administrative departments are responsible for setting case-specific rules and requirements before granting permissions to the organizations, ensuring the daily necessary unconditional permissible activities of others are not affected. Finally, impermissible activities are mainly illegal, and are banned in any situation in the everyday place, but they can also include conditional permissible activities if the applicant has not obtained permission from the relevant administrative department.

As a time schedule for the above-mentioned activities, it is advised that in general unconditional permissible activities are allowed to operate 24 hours a day, unless there is a serious concern or potential public safety risk. The allowed operational time schedule for conditional permissible activities depends on their requirements and is subject to the specific context, as different organizations may have their own operational hours for their planned temporary urban programs. In the everyday place, the management authorities should give particular attention to managing minorities and the marginalized, such as homeless people or beggars. In this study, it is suggested that unless their uses of the everyday place affect people's permissible activities, marginalized groups should be allowed to use the place. At night, the Mong Kok Pedestrian Bridge is much less used than in the daytime, with far fewer people, so there is adequate room for the homeless to sleep.

Managing and regulating the different time schedules of the everyday place accommodates various types of everyday activities and fosters diverse uses of the space. Although ordinary individuals have their own tactics to best appropriate urban spaces for their own benefit, a highly adaptive and loose management strategy can foster and sustain relatively long-term everyday placemaking and place-led development. In principle, the management

authorities and regulators should encourage social inclusion and equality rather than exclusion and restriction, allowing and making room for everyday appropriations and urban informality. Particularly in the high-density urban context, the loosely managed everyday place has the flexibility and potential for enhancing and encouraging spontaneous, informal, and everyday experiences, which spatially covers the lack of provision of urban spaces and complements the city's urban functions.

6.2 Emerging forms of public space in a high-density context

From the concept of the pedestrian bridge as everyday place in a high-density urban context, as discussed and analyzed in the previous chapter, it can be argued that pedestrian bridges in densely populated cities like Hong Kong are a new form of urban public space. Many traditional forms of public space are extremely obvious, such as parks and plazas that are planned and designed for public gatherings. However, other forms of public space exist in the city. The pedestrian bridges of Hong Kong, which accommodate all members of all publics and sustain people's everyday urban life, complementing the city's urban function, can be considered as public spaces.

From the notion of pedestrian bridges as everyday places in a densely populated city, two specific aspects can be considered when constructing public space in compact dense cities. From the perspective of urban functions, transit-oriented spaces such as stations and bridges have the potential to transform themselves into lively public places. Primarily as transit nodes, these spaces are closely associated with necessary activities, identified in the framework of everyday placemaking examined and analyzed in the last chapter. The many different transit infrastructural create many possibilities for these transit-oriented spaces great to become rich and dynamic urban public spaces with multiple functions. In cities like Hong Kong that are developed with the transient-oriented development (TOD) strategy, these transient-oriented facilities and their space are increasingly

planned and designed as town centers, rather than simply transit nodes, emphasizing the community and urban culture. The “conceived space” of the transit-oriented space is planned and constructed to foster the “lived space” (Lefebvre, 1991), allowing for and encouraging spatial practices from all users of the infrastructure and those who live nearby. The potential for conflict between the regulating of these transit facilities and people’s appropriated uses is, however, high. More broadly speaking, the development of urban public spaces can be integrated into a dense city’s transport planning to some extent, so the accessibility of public spaces and their vitality is closely connected.

The second aspect of increasing the supply of public space in high-density cities is from the perspective of spatial formation and configuration, and focuses on the spatial elevated form of public spaces, namely the multi-layered public space. Dealing with the issues of high density and the very limited land supply, the multi-layered space initially intensifies the uses of vertical urban spaces and provides more possibilities and opportunities for living in and experiencing the city. As a vertical and three-dimensional urban space, multi-layered urban spaces have the potential to be linked, therefore improving the city’s inner accessibility and connectivity, promoting urban circulation and exchange.

PART TWO - Limitations and Future Work

6.3 Limitations of the study and future research

Topic and scope

This research is conducted on pedestrian bridges in Hong Kong, and selects the Mong Kok Pedestrian Bridge as the case study to examine the concept of everyday placemaking in a high-density urban context. Various methods, such as observation and a physical survey, are used to collect data, which

are suitable and efficient for conducting research as the focus is on a specific city. However, as a very high-density city, Hong Kong is unique and special in many ways. Politically, it is a former British Colony and now a Special Administrative Region under China. Economically, it implements positive non-interventionism policy described as “small government, big market,” within which the government only acts when there are obvious imperfections in the operation of the market mechanism. Geographically, it is either hilly or mountainous with steep slopes. Hence, further comparative studies in other high-density cities such as Taipei and Singapore or the dense urban areas of Europe and America would provide a more comprehensive and holistic global view. A much better understanding of the idea of pedestrian bridges as everyday places can be consequently obtained.

The abstract concept of place and its meanings are review in this study, and it is defined from a humanistic psychological perspective. In contemporary society, the homogenizing effect of globalization has increasingly brought the issues of placemaking and placelessness of places to people’s attention. Using the same understanding of the concept of place to examine and implement placemaking in various forms of public spaces can significantly extend this study and contribute to a world with more human-centered lively public places.

Methodology

This study mainly uses the strategy of single-case design. However, the single-case study approach is inherently concerned with issues of methodological rigor, researcher subjectivity, and external validity. Due to a relative absence of methodological guidelines for the case study, this study is limited in the dominant-less dominant data collection approach, as qualitative methods are selected as the dominant data collection method, while very few quantitative methods are implemented. Additionally, as the author conducted this study from beginning to end, the research may be limited in its validity due to the author’s subjectivity. With regard to

external validity, though intensive observations are used, the limitations of a single-case study is inherent in the research.

To address these limitations, future studies would ideally be conducted by various researchers, with substantial data collected through both qualitative and quantitative methods to investigate and explore the research issues.

Findings

Everyday space and place, such as the Mong Kok Pedestrian Bridge, constantly changes and evolves. This three-year study of urban public space and placemaking in a high-density urban context includes a field study conducted over two years. The mechanism of everyday placemaking in densely populated urban areas is revealed and examined. The frameworks of necessity and sufficiency for placemaking and place-led development are built and developed. However, Intensive observation and videography are used to collect the data, which is then analyzed and the above findings obtained. The findings and conclusions are thus generalized from real-time field data obtained within the two-year field study. As urban space is continually changing, the potential and possibilities are great. A feasibility study for the Phase 2 western extension of the Mong Kok Pedestrian Bridge commenced in October 2013 and should be constructed and completed in the near future. This will have a significant effect on everyday place and everyday urban life, and therefore limit the findings and conclusions obtained in this urban study. To fully and comprehensively capture the daily dynamics within such a lively and vibrant everyday urban place, it is strongly recommended that further much longer-term field studies are conducted.

A user-centered humanistic approach is taken in this study when conducting the research. It reflects the everyday lives of ordinary people in urban public space, focusing and relying on “bottom up” grassroots urban practices. Hence, further studies can be designed and conducted using a “top down” approach to study the opinions and attitudes of authorities such as design

professionals and government officials, and policy studies of “top down” strategies on urban open space and public place would be important complementary perspectives.

In summary, the limitations of this study, suggest that further research focuses on two main aspects: examining more pedestrian bridges in other high-density urban areas to gain a global dimension in researching and inspiring new forms of public spaces and implementing the placemaking framework generated in this study to create places in the real world, and subsequently refining the framework.

The focus of this study is on everyday placemaking, contextualized through pedestrian bridges in Hong Kong. Placemaking is increasingly a critical and important global urban concept. The research methods and structure used in this study can inspire further examination and investigation of the issue of placemaking in other cities with various spatial forms. We are in a world where places matter.

6.4 Summary

By answering the research questions raised in the first chapter, the first part of this chapter concludes that everyday places are made up of ordinary people’s lived experiences. These places are constantly being processed and highly integrated into the everyday necessities of daily life. They have qualities of inherent public-ness and collective temporariness. The chapter also demonstrates that the mechanisms, frameworks and implications of everyday placemaking are closely associated with individuals’ necessary, optional and social activities with respect to the dimensions of design and management. The second part points out the limitations of this study and accordingly gives suggestions and potential directions for future research.

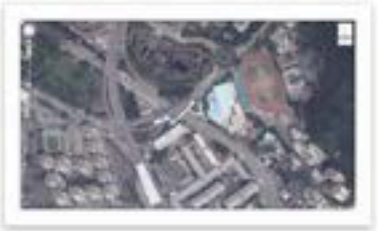
Appendix

Appendix 1 Definition of public space from Hong Kong Planning Department

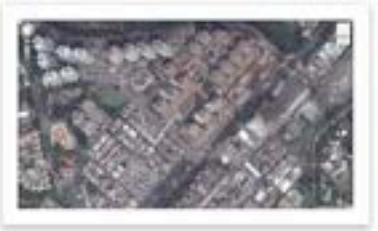
Appendix 2 Satellite images of a hundred Hong Kong pedestrian bridges by Google Earth

Chek Lap Kok-I-赤鱲角 Airport Roa...p Kok Airport, New Territories.png

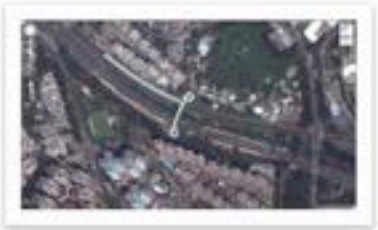
Cheung Sha Wan-I-长沙湾.png



Choi Hung-I-彩虹九龙.png



Fanling-A-粉嶺2 33 Luen On Street, Fanling.png

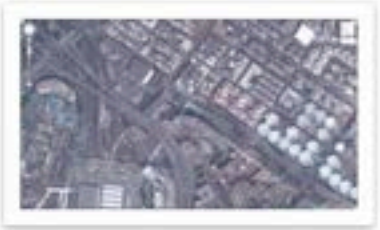


Fanling-I-粉嶺 Fanling Highway, Fanling.png

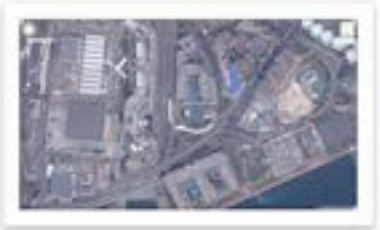
Fanling-I-粉嶺3 Fanling Highway, Fanling.png

Harcourt Road-A-港島 Harcourt Road, Hong Kong Island.png

Hung Hom-A-紅磡2.png



Hung Hom-I-红磡.png



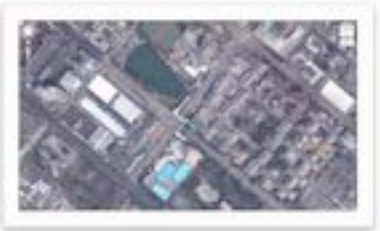
Hung Hom-I-红磡3.png

Hung Hom-I-红磡街市.png

Hung Shui Kiu-I-洪水桥 Castle Pea...ung Shui Kiu), New Territories.png

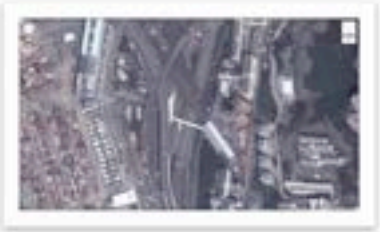
King Kau-I-深井2 Castle Peak Road (King Kau), Sham Tseng.png

King Kau-I-深井4 Castle Peak Road (ing Kau), Sham Tseng.png

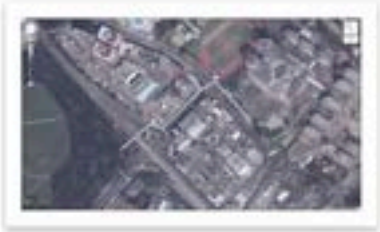


Kowloon Tong-I-九龙.png

Kowloon Tong-I-九龙2.png

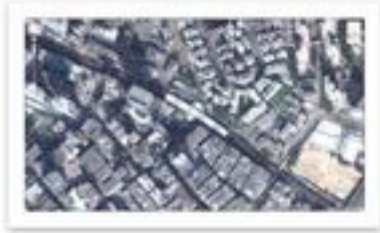


Kwai Chung-I-葵涌.png



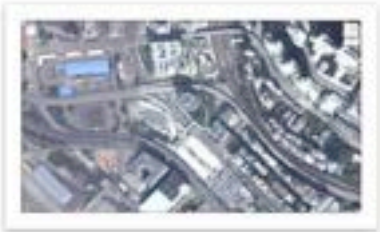
Kwai Chung-I-葵涌2.png

Kwai Chung-I-葵涌3.png

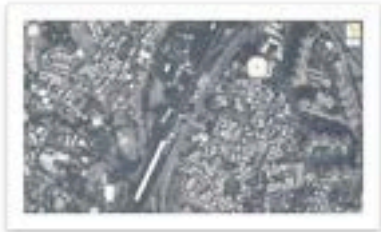


Kwun Tong-A-观塘2.png

Kwun Tong-A-观塘北.png



Kwun Tong-I-观塘.png



Lam Tei-I-屯门蓝地 Castle Peak Road (lam Tei), Lam Tei.png

Lam Tei-I-屯门蓝地2 Castle Peak Road (lam Tei), Lam Tei.png

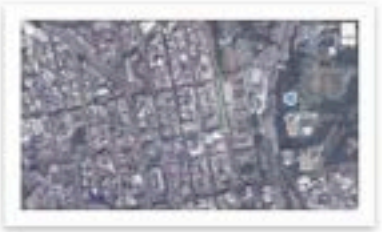
Ma On Shan-A-马鞍山3.png

Ma On Shan-I-马鞍山.png

Ma On Shan-I-马鞍山2.png

Ma On Shan-I-马鞍山4.png

Ma On Shan-I-马鞍山5 10 On Luk Street, Ma On Shan.png



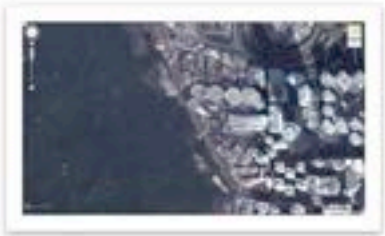
Mong Kok-I-旺角.png

Olympic-I-奥运.png

Pok Fu Lam-A-薄扶林 103 Pok Fu Lam Road, Pok Fu Lam.png

Quarry Bay-A-鰂魚涌3 Kornhill Road, Quarry Bay.png

Quarry Bay-I-香港仔2 Aberdeen Praya Road, Aberdeen.png



Quarry Bay-I-鰂魚涌.png

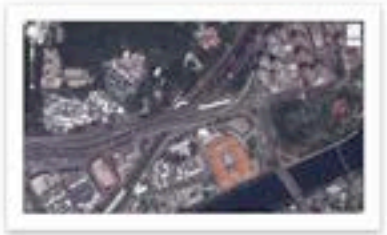
Quarry Bay-I-鰂魚涌2 Island Eastern Corridor, Quarry Bay.png

Sai Wan Ho-A-西灣河 63 Yiu Hing Road, Sai Wan Ho.png

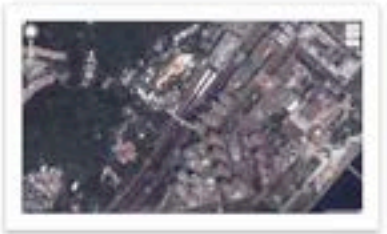
San Hui-I-屯门新墟.png

Sau Mau Ping-I-秀茂坪 (高差).png

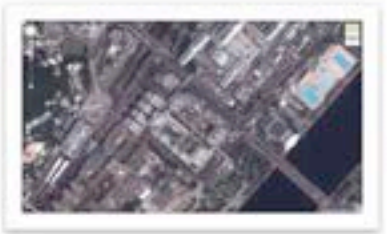
Sha Tin-A-沙田4 9, Sha Tin.png



Sha Tin-I-沙田 Lion Rock Tunnel Road, Sha Tin.png

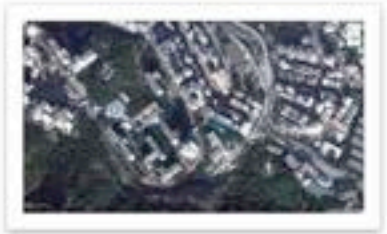


Sha Tin-I-沙田2 9, Sha Tin.png

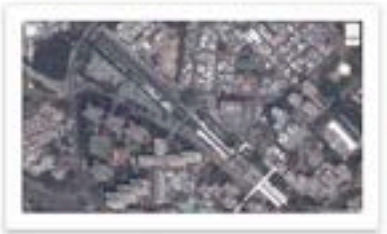


Sha Tin-I-沙田3 Tam Kon Po Street, Sha Tin.png

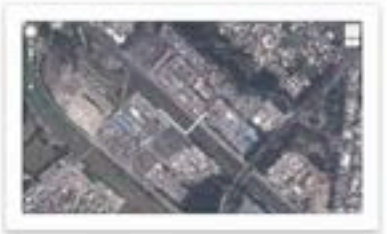
Sham Shui Po-I-深水埗.png



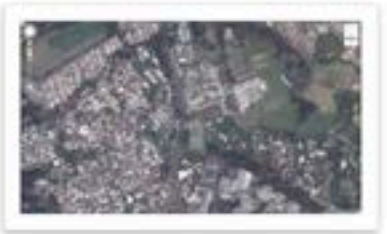
Shau Kei Wan-I-筲箕灣 33 Yiu Hing Road, Shau Kei Wan.png



Sheung Shui-I-上水 (鉛場) San Wan Road, Sheung Shui.png



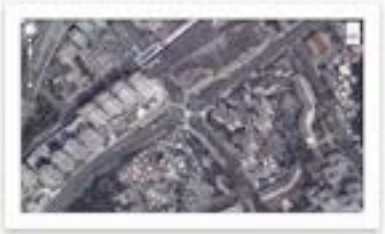
Sheung Shui-I-上水2 San Wan Road, Sheung Shui.png



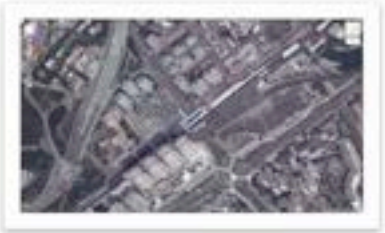
Sheung Shui-I-上水3 Jockey Club Road, Sheung Shui.png

Siu Sai Wan-I-小西灣 9 Siu Sai Wan Road, Siu Sai Wan.png

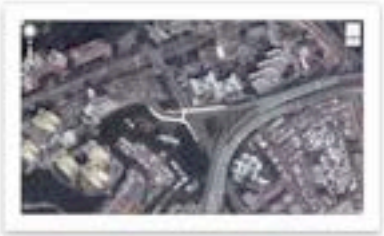
Tai Kok Tsui-I-大角咀.png



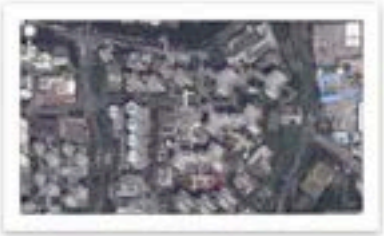
Tai Wai-I-大圍2 Che Kung Miu Road, Tai Wai.png



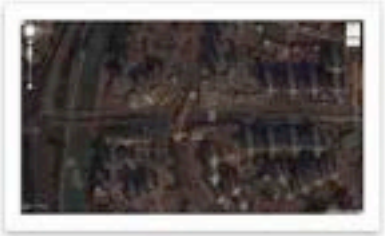
Tai Wai-I-大圍3 Chik Wan Street, Tai Wai.png



Tai Wai-I-大圍4 Mei Tin Road, Tai Wai.png



Tai Wo-I-大和 15 On Po Road, Tai Wo.png

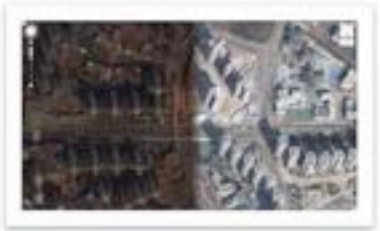


Tin Shui Wai-I-天水圍 Tin Wah Road, Tin Shui Wai.png

Tin Shui Wai-I-天水圍2 Tin Wah Road, Tin Shui Wai.png

Tin Shui Wai-I-天水圍3 Wetland Park Road, Tin Shui Wai.png

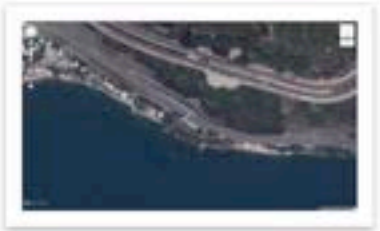
Tin Shui Wai-I-天水圍4 Wetland Park Road, Tin Shui Wai.png



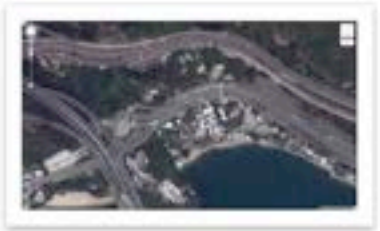
Tin Shui Wai-I-天水圍5 Tin Shing Road Tin Wah Road, Tin Shui Wai.png

Tin Shui Wai-I-天水圍6 Tin Shing Road Tin Wah Road, Tin Shui Wai.png

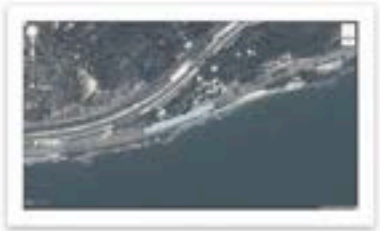
Tin Shui Wai-I-天水圍7 Ping Ha Road, Tin Shui Wai.png



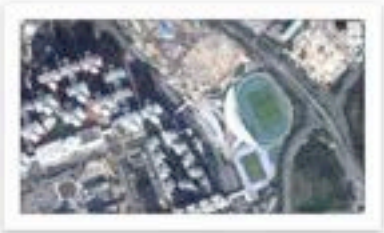
Ting Kau-I-新界 Castle Peak Road (new Ting Kau), New Territories.png



Ting Kau-I-新界2 Castle Peak Road (Ting Kau), Ting Kau.png



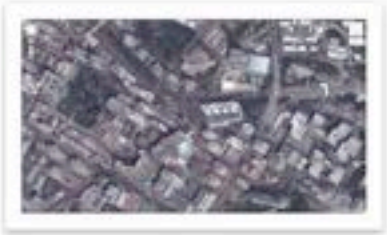
Ting Kau-I-新界2 Castle Peak Roa...sing Lung Tau), New Territories.png



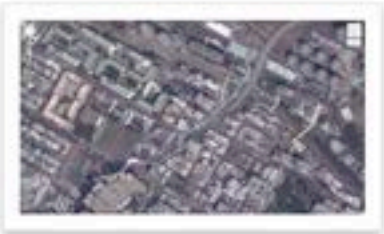
Tseung Kwan O-I-將軍澳.png

Tsing Yi-I-青衣.png

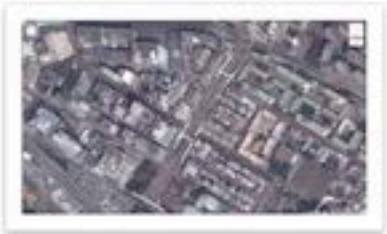
Tsing Yi-I-青衣2 1 Tam Kon Shan Road, Tsing Yi.png



Tsuen Wan-A-荃灣.png



Tsuen Wan-I-荃灣2.png

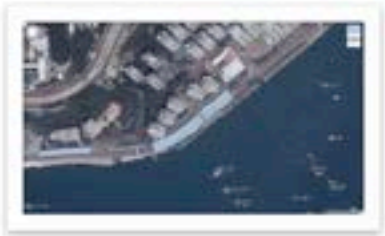


Tsuen Wan-I-荃灣3.png

Tsuen Wan-I-荃灣4 (高潮).png

Tsuen Wan-I-荃灣5 On Yuk Road, Tsuen Wan.png

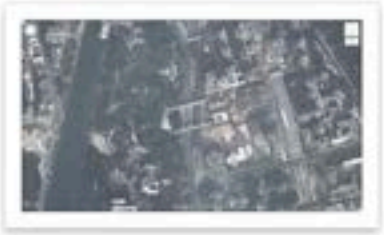
Tsuen Wan-I-荃湾6 Hoi On Road, Tsuen Wan.png



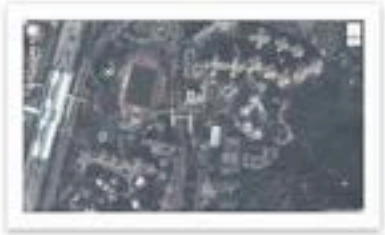
Tsuen Wan-I-荃湾7 Hoi On Road, Tsuen Wan.png

Tuen Mun-I-屯门.png

Tuen Mun-I-屯门2 Tsing Wun Road, Tuen Mun.png



Tuen Mun-I-屯门3 Tuen Mun Heung Sze Wui Road, Tuen Mun.png



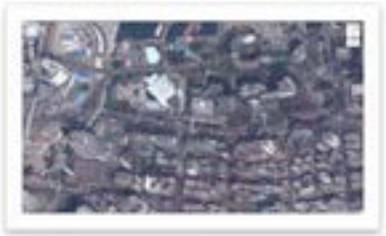
Tuen Mun-I-屯门虎地 Castle Peak Road (tam Mei), Fu Tei.png

Tung Chung-I-东涌2 Tung Chung Waterfront Road, Tung Chung.png

Tung Chung-I-东涌3 1 Kin Tung Road, Tung Chung.png

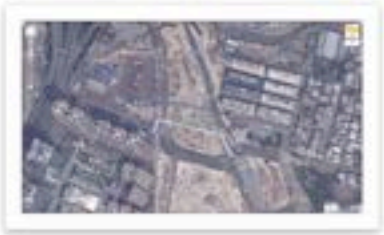
Tung Chung-S(S)-东涌 Wai Tung R..., Tung Chung, New Territories.png

Wan Chai-A-湾仔3 .png



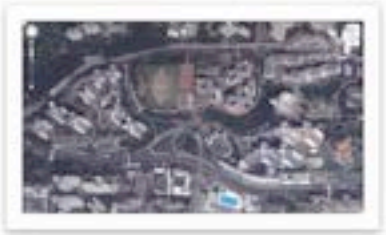
Wan Chai-I-湾仔.png

Wan Chai-I-湾仔2 .png

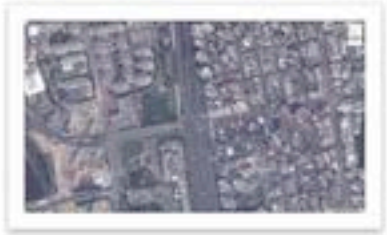


West Kowloon-I-西九龙.png

Wong Tai Sin-I-黄大仙.png



Wong Tai Sin-I-黄大仙2.png



Yau Ma Tei-I-油麻地.png

Yuen Long-I-元朗 Chun Yin Square, Yuen Long.png

Yuen Long-I-元朗2 Yuen Long On Lok Road, Yuen Long.png

Yuen Long-I-元朗3 Castle Peak Road (yuen Long), Yuen Long.png

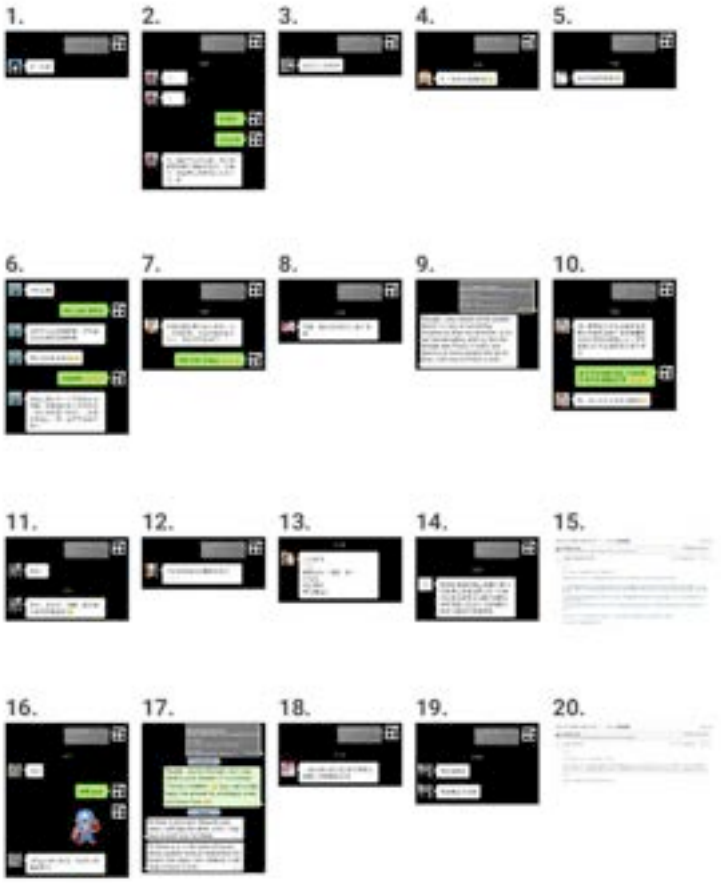
大圍 Hin Keng Street, Tai Wai.png

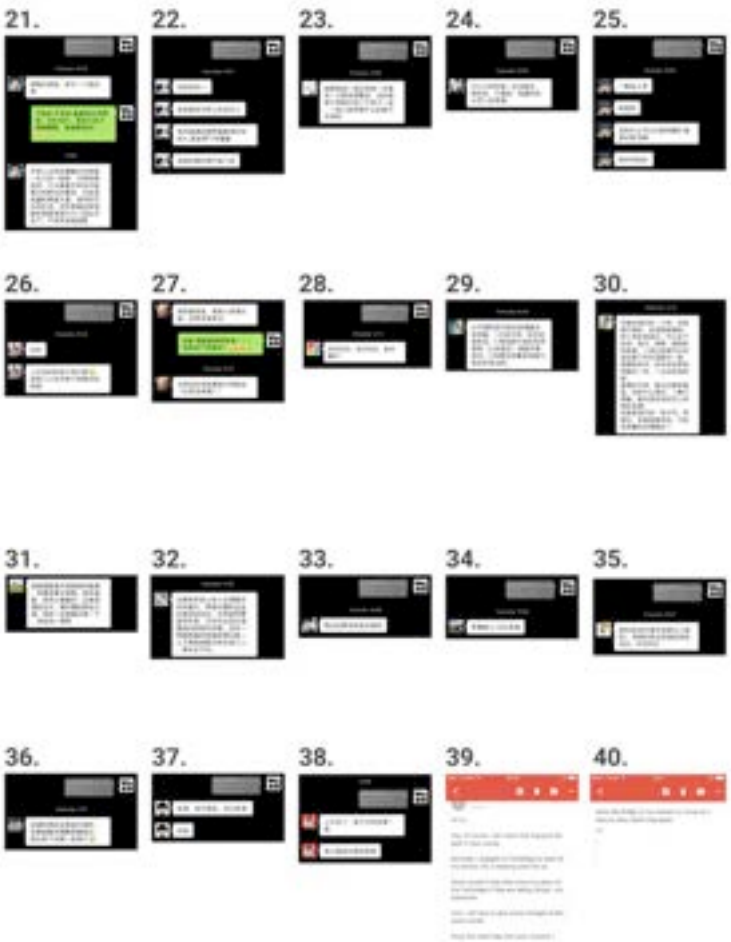
Appendix 3 Questionnaire and responses

When you are using footbridges in Hong Kong,
what will make you slow down your pace? Or even stop/stay for a while on the bridges?

當你在香港使用行人天橋時，
什麼會使你放慢腳步？或者甚至會使你在天橋上停留一會？

当你在香港使用行人天桥时，
什么会使你放慢脚步？或者甚至会使你在天桥上停留一会？





1. “桥下风景”；

2. “约了朋友在天桥等时，有小商贩卖我感兴趣的东西时，看景色（或者重大事情列入七月一号）时”；

3. “卖艺艺人的歌声”；

4. “桥上有东西卖的时候”；

5. “当外面出现彩虹”；

6. “街头表演，还有不认识路的时候，不知道往哪里走的时候，。。即使拥挤的天桥我也停下来发微信。。”；

7. “有漂亮的街景会停下来看一会，再拍张照，有感兴趣的街头艺人，或是找不到路了。”；

8. “风景，路边的有吸引力的广告牌”；

9. “Usually i stop simply some people block my way or something happening draw my attention..or like the bridge near PolyU..if traffic jam serious or many people line up for bus...i will stop and take a look”;

10. “我觉得看到好风景想拍照或者天桥上有有意思的的公共设计应该会停下来吧。。。嗯，那人太多也会放慢吧”；

11. “看车，看美女，抽烟，拍照会停留或放慢脚步”；

12. “可能是卖唱的活着卖东西的”；

13. “人流拥堵 下雨 观察天桥下的物体，事件 打电话 朋友聊天 看天桥演出”；

14. “1 手机有信息或者电话 2 过于拥挤或者前面的人乱穿行 3 是有买东西的小摊或者发传单的”；

15. “1. Foot bridges give me a good view, particularly the ones on HK island/central.It gives a good view of skycrapers along with the moving traffic. So sometimes I had stopped and taker pictures from the footbridge. Somtimes selfies, somtimes just the roads, skycrapers, and moving traffic. 2. When I am with my family, my daughter likes to stop on the bridge and she likes to see the traffic from the top. She likes the traffic moving underneath the bridge” ;

16. “1. 在看风景的时候， 2. 看导示找路的时候”；

17. “If there is plant pot (flowers) and seat, I will stay for while, even I may buy a lunch box for there. Or there is a multimedia bill board show update news, or interactive bill board (like Japan train station) I will stop to have a look.” ;

18. “一般天桥下不会停留 除非前面走的慢才会放慢脚步吧”；

19. “遇到唱歌的或者是答问卷的”；

20. “most of the time what makes me slow my pace or even stop is the crowds. Very seldom I will stop to have look if there’s a good sight from the bridge, and also seldom stop to look at sellers if there are any, but I rarely do that (My wife does). Oh, and also, some times I stop or slow down to spare a few coins (if I have any) with beggars or charity collectors when they are around”;

21. “天桥视野较好，可以看看平时没太六一过的附近的景色，尤其是夜里的高楼大厦，城市的灯光和车流；还有是被动放慢脚步那就是因为行人是在太多了，不得不减慢速度”；

22. “我觉得是天桥上的卖艺人，有时候遇到弹琴唱歌很好听的人，我会停下来看看”；

23. “一大群菲佣聚会，当时被那个阵势吓到了才停了一会，一般小贩传教什么的都不会太停的”；

24. “行人少的时候；适当阳光，稍有风，不潮湿；有趣的街头艺人在表演。”；

25. “没有什么可以让我停留的 着急赶路，除非有吃的”；

26. “人多的时候不得不听，或者人少但天桥下风景好的时候”；

27. “领免费报纸，看有人表演乐器，欣赏滚滚车流，当然还有领取免费至今等物品（议员选举推广）”；

28. “有好吃的，有好玩的，有好看的”；

29. “1.过街天桥，驻足观望车流，2.有时也开阔的自然景观 （比如日落）或城市景观时，3. 有展览或售卖等吸引驻足的活动时。”；

30. “一般不停留，除非是由民间一人的精彩表演。有冷气，有座位，有橱窗展览品，可能会停留和放慢脚步”；

31. “我会喜欢看天桥两旁的风景，如果是车水马龙，我也会看，但很少会留步；”；

32. “当看到天桥上有人在演奏好听的音乐，有感兴趣的企业在做促销活动，天桥被特意装饰布置，天桥外出现交通事故的时候会停留。还有一种被放缓和停留的情况是一上下班高峰期天桥挤满了人，根本走不动。”；

33. “两边有特色的建筑”；

34. “零售摊 or 乐队表演”；

35. “凑热闹 （好的演艺或者众人的围观），两侧的商业促销信息或活动，天空的云”；

36. “放慢的原因主要是太拥挤，如果能看到海景或者落日，我会停下来照一张照片”；

37. “街景，城市景观，街头表演”；

38. “人太多了，走不过去会慢一些，有小贩卖东西会看看”；

39. “normally I stopped on footbridge to wait for my friends. It’s a meeting point for us. Some vendors may slow down my pace on the footbridge if they are selling things I am interest. Also I will stop to give some changes to the street artists”;
40. “when the bridge is too crowed to move on, I have to slow down my pace”.

Appendix 4 露宿行人天橋：旺角鬧市「淪陷」 部門懶理. (2015, November 10). 東網.

Appendix 5 旺角專區縮開放 街頭樂隊申覆核. (2014, April 23). 雅虎香港.

Appendix 6 荃灣商戶呻趕客 天橋送走生意人流. (2012, August 10). 頭條日報

Reference

Abercrombie, P. (1948). *Hong Kong preliminary planning report*. Hong Kong: Hong Kong Government Printer.

Adhya, A. (2008). *The public realm as a place of everyday urbanism: Learning from four college towns* (Doctoral thesis). University of Michigan, Ann Arbor, MI, United States.

Alexander, C. (1965). A city is not a tree. *Architectural Forum, 122*, 58-62.

Alexander, C., Ishikawa, S., & Silverstein, M. (1977). *A pattern language: Towns, buildings, construction*. New York: Oxford University Press.

Altman, I., & Zube, E. H. (1989). *Public places and spaces. Human Behaviour and Environment. Volume 10*. New York: Plenum Press.

Amdur, L., & Epstein-Pliouchtch, M. (2009). Architects 'places, users' places: Place meanings at the New Central Bus Station, Tel Aviv. *Journal of Urban Design, 14*(2), 147-161.

Andranovich, G. D., & Riposa, G. (1993). *Doing urban research*. Thousand Oaks: Sage Publications.

Appleyard, D. (1981). *Livable streets*. Berkeley: University of California Press.

Arendt, H. (1958). *The human condition*. Chicago: University of Chicago Press.

Banerjee, T. (2001). The future of public space: Beyond invented streets and reinvented places. *Journal of the American Planning Association, 67* (1), 9-24.

Bard, S. (2002). *Voices from the past: Hong Kong, 1842-1918*. Hong Kong: Hong Kong University Press.

Barker, R. (1968). *Ecological psychology*. Stanford, CA: Stanford University Press.

Bennett, A. (2005). *Culture and everyday life*. Thousand Oaks, CA: SAGE Publications.

Bentley, I., McGlynn, S., Alcock, A., Smith, G., & Murrin, P. (1985). *Responsive environment*. London: Architectural Press.

Boyer, M. (1994). *The city of collective memory: Its historical imagery and architectural entertainments*. Cambridge, MA: MIT Press.

Brill, M. (1989). Transformation, nostalgia, and illusion in public life and public place. In I. Altman & E. H., Zube (Eds.), *Public places and spaces* (pp. 7-29). New York: Plenum Press.

Brill, M. (1990). An ontology for exploring urban public life today. *Places, 6* (1), 24-31.

Brown, A. (2006). *Contested space: Street trading, public Space, and livelihoods in developing cities*. Rugby: ITDG Publishing.

Burke, S. (2015, November 19). What if we built our bridges through placemaking?. *Project For Public Space*. Retrieved from http://www.pps.org/blog/bridges-and-placesmaking/

Byun, M., & Kim, M. (2008). *Comparison study of world major cities I and II*. Seoul Development Institute.

Calgarys Plus15 Skywalk. (2015). Retrieved from http://www.calgary.ca/PDA/pd/Pages/Centre-City/Calgarys-Plus15-Skywalk.aspx

Castells, M. (1989). *The information city: Information technology, economic restructuring, and the urban regional process*. Oxford, UK; Cambridge, MA: Blackwell.

Canter, D. (1977). *The psychology of place*. New York: St. Martin's Press.

Canter, D. (1988). Action and place: An existential dialectic. In D. Canter, M. Krampen & D. Stea (Eds.), *Environmental perspectives* (pp. 1-17). Aldershot: Avebury.

Canter, D. (1991). Understanding, assessing, and acting in places: Is an integrative framework possible? In G. Evans (Eds), *Environment, cognition, and action: An integrative approach*. New York: Oxford University Press.

Carmona, M., Heath, T., Oc, T., & Tiesdell, S. (2003). *Public places - urban spaces: The dimensions of urban design*. Oxford: Architectural Press.

Carmona, M., De Magalhães, C., & Hammond, L. (2008). *Public space: The management dimension*. New York: Routledge.

Carmona, M. (2010). Contemporary public space, part two: Classification. *Journal of Urban Design, 15*(2), 157-173. doi: 10.1080/13574801003638111

Carr, S., Francis, M., Rivlin, L. G., & Stone, A. M. (1993). *Public space (Cambridge series in environment and behavior)*. Cambridge: Cambridge University Press.

Cartier, C. (1999). The state, property development and symbolic landscape in high-rise Hong Kong. *Landscape Research, 24*(2), 185-208.

Casey, E. (1997). *The fate of place: A philosophical history*. Berkeley, CA: University of California Press.

Chan, H. Y. S. (2015). *Pedestrianized and elevated for the community? Review on how multi-layer pedestrian network changes a residential community in Hong Kong* (Phd thesis). University of Hong Kong, Hong Kong.

Charles Bridge. (2015). Retrieved from http://www.aviewoncities.com/prague/charlesbridge.htm

Chen, X. Y. (2004). The revelation of urban design of skyway in Hong Kong. *Huazhong Architecture, 2,* 80-82, 95. (In Chinese)

Ching, F. D. K. (2007). *Architecture - form, space, & order*. Hoboken, N.J: John Wiley & Sons.

Cho, I. S, Trivic, Z., & Nasution, I. (2015). Towards an integrated urban space framework for emerging urban conditions in a high-density Context. *Journal of Urban Design*, *20*(2), 147-168. doi: 0.1080/13574809.2015.1009009.

Choi, C. Y., & Chan, Y. K. (1978). *Public housing development and population movement: A study of Kwun Tong, Hong Kong*. Occasional Paper No. 72, Social Research Centre, The Chinese University of Hong Kong, Hong Kong.

City of Victoria: Hong Kong: Central area redevelopment. (1961). Hong Kong: The Government Printer.

Cities with the most skyscrapers. (2014) Retrieved from http://www.emporis.com/statistics/most-skyscraper-cities-worldwide.

Cllifford, N., Holloway, S., Rice, S. P., & Valentine, G. (Eds.). (2009). *Key concepts in geography* (2nd ed.). Thousand Oaks, CA: SAGE Publication Ltd.

Cox, W. (2012, August 8). Evolving urban form: Dhaka [Blog post]. Retrieved from http://www.newgeography.com/content/003004-evolving-urban-form-dhaka

Crawford, M. (1999). Blurring the boundaries: Public space and private life. In J. Chase, M. Crawford & J. Kaliski (Eds), *Everyday urbanism* (pp. 22-35). New York: Monacelli Press.

Crawford, M. (2008). Introduction. In C. John, M. Crawford & K. John (Eds.), *Everyday urbanism* (pp. 6-11). New York: The Monacelli Press.

Cress, T. (2009). Place. In N. Thrift & K. Rob (Eds.), *International encyclopedia of human geography* (pp. 169-177). Amsterdam: Elsevier.

Creswell, J. W. (1994). *Research design: Qualitative and quantitative approaches*. Thousand Oaks, CA: Sage Publishing Company.

Crowhurst-Lennard, S., & Lennard, H. (1987). *Livable cities – people and places: Social and design principals for the future of the city*. New York: Center for Urban Well-being.

Crowhurst-Lennard, S., & Lennard, H. (1995). *Livable cities observed*. IMCL Council. Carmel, CA: Gondolier Press.

Cullen, G. (1961). *The concise townscape*. New York: Reinhold Publishing.

Cuthbert, A. R., & McKinnell, K. (1997). Ambiguous cpace, ambiguous rights-corporate power and social control in Hong Kong. *Cities 14* (5), 295-311.

Cuthbert, A. R., & McKinnell, K. (2001). Public domain, private Interest - social space in Hong Kong. In P. Miao (Ed.), *Public places of Asia Pacific countries: Current issues and strategies* (pp. 171-190). The Netherlands: Kluwer Academic Publishers.

de Certeau, M. (1984). *The practice of everyday life*. London: University of California Press.

de Certeau, M., Giard, L., & Mayol, P. (1998). *The practice of everyday life: Volume 2: living and cooking*. Translated by Timothy J, Tomasik. Minneapolis, MN: University of Minnesota Press.

Definitions of terms. (2015). Hong Kong: Planning Department. Retrieved from

http://www.info.gov.hk/tpb/en/forms/dot_revised_index_ftoo.html#open_space

Deleuze, G. & Parnet, C. (2007). *Dialogues II*. New York: Columbia University Press.

Demographia. (2016). *Demographia World Urban Areas*. Retrieved from http://www.demographia.com/db-worldua.pdf

Dempster, E. (2008). The choreography of the pedestrian. *Performance Research, 13*, 23-28.

Dilthey, W. (1985). *Poetry and experience*. Princeton, NJ: Princeton University Press.

Dovey, K., & Symons, F. (2014). Density without intensity and what to do about it: reassembling public/private interfaces in Melbourne's Southbank hinterland. *Australian Planner, 51*(1), 34-46. doi: 10.1080/07293682.2013.776975

Dovey, K., & Wood, S. (2015). Public/private urban interfaces: type, adaptation, assemblage. *Journal of Urbanism: International Research on Placemaking and Urban Sustainability, 8*(1), 1-16. doi: 10.1080/17549175.2014.891151

Drummond, L. B. W. (2000). Street scenes: Practices of public and private space in urban Vietnam. *Urban studies, 37* (12), 2377-2391.

Eley, G. (1995). Foreword. In A. Ludtke (Eds.), *The history of everyday life: Reconstructing historical experiences and ways of life* (W. Templer, Trans.) (vii-xi). Princeton, New Jersey: Princeton University Press.

Ellin, N. (2006). *Integral urbanism*. New York: Routledge.

Ellis, W. C. (1978). The spatial structure of streets. In S. Anderson (Eds.), *On streets* (pp. 113-132). Canbridge, MA/London: The MIT Press.

Fan, S. C. (1974). *The population of Hong Kong (C.I.C.R.E.D. series)*. Paris: Committee for International Coordination of National Research in Demography.

Footbridges and subways of Hong Kong. (2014) Retrieved from http://www.hyd.gov.hk/en/publications_and_publicity/publications/hyd_factsheets/doc/e_Footbridges_and_Subways.pdf

Frampton, A., Solomon, J. D., & Wong, C. (2012). *Cities without ground: A Hong Kong guidebook*. Berkeley, CA: ORO editions.

Franck, K. A., & Stevens, Q. (2006). *Loose space: Possibility and diversity in urban life*. Florence, KY: Routledge.

Fraser, N. (1990). Rethinking the public sphere: A contribution to the critique of actually existing democracy, *Social Text, 25*(26), 56-80.

Friedmann, J. (1988). *Life space and economic space: Essays in third world planning*. Oxford: Transactions Books.

Friedmann, J. (2007). Reflections on place and place-making in the cities of China. *International Journal of Urban and Regional Research, 31*(2), 257–279.

Friedmann, J. (2010). Place and place-making in cities: A global perspective. *Planning Theory & Practice, 11*(2), 149-165. doi: 10.1080/14649351003759573

Gehl, J. (1987). *Life between buildings: Using public space*. Washington, DC: Island Press.

Gehl, J. (2013). *How to study public life*. Washington, DC: Island Press.

Gehl, J. & Gemzøe, L. (1999). *Public spaces public life - Copenhagen 1996.* Copenhagen: The Danish Architectural Press and The Royal Danish Academy of Fine Arts School of Architecture Publishers.

Gehl, J. & Gemzøe, L. (2000). *New city spaces*. Copenhagen: The Danish Architectural Press.

Gibson, J. (1979). *The ecological approach to visual perception.* Boston, MA: Houghton Mifflin.

Giddens, A. (1986). *The constitution of society: Outline of the theory of structuration*. Berkeley, CA: University of California Press.

Girouard, M. (1985). *Cities and people: A social and architectural history*. New Haven, CT: Yale University Press.

Giuliani, M. V. (2003). Theory of attachment and place attachment. In M. Bonnes, T. Lee, & M. Bonaiuto (Eds.), *Psychological theories for environmental issues* (pp. 137–170). Hants: Ashgate.

Gregory, W. G. (1964). An architect's comments on land use in Hong Kong. In S. G. Davis (Ed.), *Land use problems in Hong Kong* (pp. 20-39). Hong Kong: Hong Kong University Press.

Groat, L. (1995). Introduction: Place, aesthetic evaluation and home. In L. Groat (Ed.), *Giving places meaning* (pp. 1-26). London: Academic Press.

Groat, L. N. & Wang, D. (2002). *Architectural research methods*. New York, NY: John Wiley and Sons, Inc.

Guiton, J. (1981). *The ideas of Le Corbusier on architecture and urban planning*. Translated by M.Guiton. New York: George Braziller.

Guattari, F. (2008). *The three ecologies*. London, England: Continuum.

Hack, G. (2001). Place making and the new mobility of Asian cities: The Bangkok plan. In P. Miao (Ed.), *Public places in Asia Pacific cities: Current issues and strategies* (pp. 257-272). Boston: Kluwer Academic Publishers.

Hall, E. T. (1966). *The hidden dimension*. Garden City, NY: Doubleday.

Hass-Klau. (1990). *The pedestrian and city traffic*. London: Belhaven Press.

Hayden, D. (1995). *The power of place*. Cambridge, MA: MIT Press.

Harvey, D. (1993). From space to place and back again. In J. Bird, B. Curtis, T. Putnam, G. Robertson & L. Tickner (Eds.) *Mapping the futures: Local cultures, global change* (pp. 3-29). London: Routledge.

Harvey, D. (1997). The new urbanism and the communication trap, *Harvard Design Magazine* (Winter/Spring), 68-69.

Harvey, D. (2008). The right to the city. *New Left Review, 53*, 23-40.

Heidegger, M. (1971). *Poetry, language, thought*. (Translated by Albert Hofstadter). New York: Harper Colophon Books.

Hillier, B., & Hanson, J. (1984) *The social logic of space*. London: Cambridge University Press.

Hillier, B., Penn, A., Hanson, J., Grajewski, T., & Xu, J. (1993). Natural movement: or, configuration and attraction in urban pedestrian movement. *Environment and Planning B, 20*(1), 29-66.

Hillier, B. (1996). *Space is the machine: A configurational theory of architecture. Cambridge*: Cambridge University Press.

Hillier, B. (1996a). Cities as movement systems. *Urban Design International, 1*(1), 47-60.

Hidalgo, M. C., & Hernandez, B. (2001). Place attachment: conceptual and empirical questions. *Journal of Environmental Psychology, 21*, 273-281.

HKCSD (Hong Kong Census and Statistics Department). (1996). *1996 Population by-census: Main report*. Hong Kong: Government Printer.

HKCSD (Hong Kong Census and Statistics Department). (2000, March). *Hong Kong Monthly Digest of Statistics Government*. Hong Kong: Government Printer.

Holston, J. (1995). Spaces of Insurgent Citizenship. *Planning Theory, 13*, 35-51.

Hong Kong 1994: A review of 1993. (1994). Hong Kong: Government Information Services.

Hong Kong: The facts-highways. (2015). Hong Kong: Information Service Department. Retrieved from http://www.gov.hk/en/about/abouthk/factsheets/docs/highways.pdf

Hong Kong: The facts-population. (2015). Hong Kong: Information Service Department. Retrieved from http://www.gov.hk/en/about/abouthk/factsheets/docs/population.pdf

Housing in figures. (2014). Retrieved from https://www.housingauthority.gov.hk/en/common/pdf/about-us/publications-and-statistics/HIF.pdf

Hou, J. (2010). *Insurgent public space: Guerrilla urbanism and the remaking of contemporary cities*. London: Routledge.

Hou, J., Spencer, B., Way, T., & Yocom, K. (Eds.). (2015). Now urbanism: The future city is here. Abingdon and New York: Routledge.

Hsia, C. J. (1993b). Urban planning and living environment. In C. J. Hsia (Ed.), *Space, history and society* (Papers collection 1987-1992) (pp. 329-336). Taipei: Taiwan Social Research Studies-03.

Huang, C. C. (2001). *The research of connective passageway between buildings development phase and regulation control*. MD Dissertation, Department of Architecture and Urban Planning, Chung Hua University.

Jackson, J. B. (1984). The American public space. In N. Glazer & M. Lilla (Eds.), *The public face of architecture. Civic culture and public spaces* (pp. 276-291). New York: The Free Press.

Jacobs, J. (1961). *The death and life of great American cities*. New York, NY: Vintage Books.

Jacobs, A. B. (1993). *Great streets*. Cambridge, MA: The MIT Press.

Jarvis, R. (1980). Urban environment as visual art or social setting. *Town Planning Review, 151,* 50-66.

Jenks, M., Burton, E., & Williams, K. (1996). *The compact city: A sustainable urban form*. London: E&FN Spon.

Jorgensen, B. S., & Stedman, R. C. (2001). Sense of place as an attitude: Lakeshore owners attitudes toward their properties. *Journal of Environmental Psychology, 21,* 233-248.

Kamin, B. (2011, October 27). Ohio highway cap at forefront of urban design trend; retail complex atop Columbus expressway offers model for Chicago (Blog post). Retrieved from http://featuresblogs.chicagotribune.com/theskyline/2011/10/ohio-highway-cap-at-forefront-of-urban-design-trend-retail-complex-atop-columbus-expressway-offers-m.html

Kandinsky, W. (1979). *Point and line to plane*. Mineola, New York: Dover Publication.

Kelbaugh, D. (2008). Introduction: Further thoughts on the three urbanisms. In D. Kelbaugh & K. K. McCullough (Eds.), *Writing urbanism: A design reader* (pp. 105-114). London, New York: Routledge.

King, M. (1911). *King's views of New York*. New York: M. King.

Kinoshita, H. (2001). The street market as an urban facility in Hong Kong. In P. Miao (Ed.), *Public places in Asia Pacific cities: Current issues and strategies* (pp. 71-86). Boston: Kluwer Academic Pub.

Kinoshita, H., & Nishiie, Y. (2014). A study on the historical process of the elevated walkway network around of central district of Hong Kong. *Journal of Architecture and Planning (Transactions of AIJ), 79*(705), 2479-2486.

Konx, P. L. (2005). *Small town sustainability: Economic, social, and environmental Innovation*. Berlin: Birkhäuser Architecture.

Kyle, G. T., Mowen, A. J., & Tarrant, M. (2004). Linking place preferences with place meaning: An examination of the relationship between place motivation and place attachment. *Journal of Environmental Psychology, 24*, 439-454.

Krantz, J. H. (2014, January 8). Internet-based research method. Retrieved from http://knowledge.sagepub.com/view/researchdesign/n193.xml.

Kurokawa, P. A. (1988). *Rediscovering Japanese space*. New York, Tokyo: Weatherhill.

Lai, L. W. C. (1993). Hong Kong's density policy towards public housing. *Third World Planning Review, 15*(1), 63-85.

Lai, L. W. C. (1997). *Town planning in Hong Kong: A critical review (The Hong Kong economic studies series)*. Hong Kong: City University of Hong Kong Press.

Land Utilization in Hong Kong 2014. (2015). Hong Kong: Planning Department, The Government of the Hong Kong SAR. Retrieved from http://www.pland.gov.hk/pland_en/info_serv/statistic/landu.html

Lang, J. (1987). *Creating architectural theory: The role of the behavioral sciences in environmental design*. NewYork: Van Nostrand Reinhold Co.

Larson, P., & Kaufman, S. (1985). *The skyway cities*. Minneapolis: CSPI.

Lau, J. C. Y., & Chiu, C. C. H. (2003). Accessibility of low-income workers in Hong Kong. *Cities 20*(3), 197-204.

Le Corbusier. (1946). *Towards a new architecture*. London: Architectural Press. (Original work published in 1923)

Le Corbusier. (1967). *The radiant city: Elements of a doctrine of urbanism to be used as the basis of our machine-age civilization*. Translated by P. Knight. New York: Orion Press.

Le Corbusier. (1971). *The city of tomorrow and its planning*. London: The Architectural Press.

Le Corbusier. (1991). *Precisions on the present state of architecture and city planning*. Translated by E. S. Aujame. Cambridge, MA/London: The MIT Press.

Lefebvre, H. (1980). Marxism exploded. *Review IV* (1), 19-32.

Lefebvre, H. (1984). *Everyday life in the modern world* (S. Rabinovitch, Trans.). New Brunswick, London: Transaction Publishers.

Lefebvre, H. (1991). *The production of space*. Oxford and Cambridge, MA: Blackwell.

Lefebvre, H., & Regulier, C. (1985) Le Projet Rythmanalytique. *Communication*, 41. Paris.

Lefebvre, H. (1991). *Critique of everyday life, Vol. 1*. London: Verso.

Lefebvre, H. (1996). *Writings on cities* (E. Kofman & E. Lebas, Trands. & Eds.). Cambridge, Oxford, Mass: Balckwell.

Lehtovuori, P. (2010). *Experiences and conflict: The production of urban space*. Farnham: Ashagte.

Leith, J. A. (1991). *Space and revolution; Projects for monuments, squares, and public buildings in France 1789-1799*. Montreal: McGill-Queen's University Press.

Lin, H. B. (1995) *The Study on Pedestrian Skywalks and Subwalks Crossing Public pace*. MD Dissertation, Department of Architecture, Tung Hai University.

Loukaitou-Sederis, A., & Banerjee, T. (1998). *Urban design downtown: Poetics and politics of form*. Berkeley, CA: University of California Press.

Lofland, L. (1973). *A world of strangers: Order and action in urban public space*. New York: Basic Books.

Lofland, L. (1998). *The Public Realm: Exploring the City's Quintessential Social Territory*. New York: Aldine De Gruyter.

Lombard, M. (2014). Constructing ordinary places: Place-making in urban informal settlements in Mexico. *Progress in Planning, 94*, 1-53.

Low, S. M. (2000). *On the Plaza: The politics of public space and culture*. Austin, TX: University of Texas Press.

Low, S. M., & Altman, I. (1992). Place attachment: A conceptual inquiry. In I. Altman, & S. M. Low (Eds.), *Place attachment* (pp. 1–12). New York and London: Plenum Press.

Lublin, J. (1984, July 11). Cities are embracing skyways to foster downtown revival. *Wall Street Journal*, 1.

Ludtke, A. (1995). Introduction: What is the history of everyday life and who are its practitioners. In A. Ludtke (Ed.), *The history everyday life: Recontructing historical experiences and ways of life* (W. Templer, Trans.) (pp. 3-44). Princeton, NJ: Princeton University Press.

Lynch, K. (1960). *The image of city*. Cambridge, Mass., London: The MIT Press.

Lynch, K. (1984). *Good city form*. Cambridge, MA: MIT Press.

Madanipour, A. (1996). *Design of urban space*. New York: Wiley.

Madanipour, A. (2003). *Public and private spaces of the city*. London: Routledge.

Madanipour, A., Knierbein, S., & Degros, A. (Eds.). (2014). *Public space and the challenges of urban transformation in Europe*. Abingdon and New York: Routledge.

Manzo, L. C. (2003). Beyond house and haven: Toward a revisioning of emotional relationships with places. *Journal of Environmental Psychology*, *23*, 47–61.

Marcus, C.C. (1995). *House as a mirror of self*. Berkeley, CA: Conari Press.

Marshall, S. (2005). *Streets and patterns*. London and New York: Spon Press.

Massengale, J., & Dover, V. (2014). *Street design: The secret to great cities and towns*. Hoboken, NJ: Wiley.

McLaughlin, L. (1993). Feminism, the public sphere, media and democracy. *Media, culture and society, 1993, 15*(4), 599-620.

Mehrotra, R. (Eds.). (2004). *Everyday urbanism: Margaret Crawford vs. Michael speaks*. Ann Arbor, MI: Michigan Debates on Urbanism I.

Mehta, V. (2006). *Lively streets: Exploring the relationship between built environment and social behavior* (Doctoral dissertation). University of Maryland, College Park, Maryland.

Merriam, S. B. (1988). *Case study research: A qualitative approach*. San Francisco, CA: Jossey-Bass.

Mid-year Population in Hong Kong 1961-2013. (2015). Hong Kong: Department of Health, The Government of the Hong Kong SAR. Retrieved from

http://www.healthyhk.gov.hk/phisweb/en/healthy_facts/popn_char/popn_size/

Miao, P. (2001). *Public places in Asia Pacific cities: Current issues and strategies.* Boston: Kluwer Academic Pub.

Miller, G. E., & Dingwall, R. (1997). *Context and method in qualitative research*. London: Sage.

Miller, K. F. (2007). *Designs on the public: The private lives of New York's public space*. Minneapolis, MN: University of Minnesota Press.

Mok, N. H. B. (1959). *A study of population of Hong Kong*. Mumbai: Demographic Training and Research Centre.

Montgomery, J. (1995). The story of temple bar: Creating Dublin's cultural quarter. *Planning Practice and Research, 10*(2), 135-163.

Moudon, A. V. (1987). *Public streets for public use*. Portland: VNR.

Moudon, A. V. (1997). Urban morphology as an emerging interdisciplinary field. *Urban Morphology*, *1*, 3-10.

Mumford, L. (1961). *The city in history: Its origins, its transformations and its prospects*. London: Secker & Warburg.

Neal, Z. (2010). Relocating public space. In A. M. Orum & Z. P. Neal (Eds.), *Common ground?: Readings and reflections on public space* (pp. 201-211). New York: Routledge.

Neal, Z. (2010b). Locating public space. In A. M. Orum & Z. P. Neal (Eds.), *Common ground?: Readings and reflections on public space* (pp. 1-10). New York: Routledge.

Neal, Z. (2010c). Seeking common ground: Three perspectives on public space. *Proceedings of the Institution of Civil Engineers: Urban Design and Planning 000 Issue DP000*,1-8.

Ne´meth, J., & Schmidt, S. (2011). The privatization of public space: Modeling and measuring publicness. *Environment and Planning B: Planning and Design, 38* (1), 5-23. doi: 10.1068/ b36057

Newman, P. (1992). The compact city: an Australian perspective. *Built Environment, 18* (4), 285-300.

Nicholson, S. (1972). The theory of loose parts: an important principle for design methodology. *Studies in Design Education Craft & Technology 4*(2), 5-14.

Ng, M. K. & Cook, A. (1996). Are there feasible alternatives to the reclamation-led urban development strategy in Hong Kong?. Occasional Paper No. 12, Centre of Urban Planning and Environmental Management, The University of Hong Kong, Hong Kong.

Oldenburg, R. (1989). *The great good place: Cafes, coffee shops, bookstores, bars, hair salons, and other hangouts at the heart of a community*. New York: Marlowe & Company.

Olmsted, F. L. (1870). Public parks and the enlargement of towns. In N, Glazer & M, Lilla (Eds), *Public face of architecture. Civic culture and public spaces* (pp. 222-263). New York: The Free Press.

Oranratmanee, R. (2012). *The use of public space for pedestrian streets in Thailand*. Bangkok: Thailand Research Fund.

Oranratmanee, R., & Sachakul, V. (2014). Streets as public spaces in Southeast Asia: Case studies of Thai pedestrian streets. *Journal of Urban Design, 19* (2), 211-229. doi: 10.1080/13574809.2013.870465

Orum, M. A. (2010). Introduction. In A. M. Orum & Z. P. Neal (Eds.), *Common ground?: Readings and reflections on public space* (pp. 13-17). New York: Routledge.

Orum, M. A. & Neal, Z. (2010). *Common ground?: Readings and reflections on public space*. New York: Routledge.

Oxford English Dictionary 11th ed., (2004).

Pai, J. T., Lee, C. P., & Cheng, J. J. (2007). Exploring issues and strategies of developing skyway systems: A case study of the Taipei Shin-Yi District. *Journal of the Eastern Asia Society for Transportation Studies, 7*, 1781-1793.

Parkes, D. N., & Thrift, N. J. (1980). *Times, spaces, and places*. New York: Wiley.

Pasaogullari, N. & Doratli, N. (2004). Measuring accessibility and utilization of public spaces in Famagusta. *Cities, 21*(3), 225-232.

Peacock, M. M. (2009). Early modern Dutch women in the city: the imaging of economic agency and power. In A. Classen (Ed.), *Urban space in*

the middle ages and the early modern age (pp. 667-711). New York: Walter de Gruyter.

Pedestrian schemes for Mong Kok. (2015). Hong Kong: Transport Department. Retrieved from http://www.td.gov.hk/en/transport_in_hong_kong/pedestrianisation/pedestrianisation/mong_kok/

Petroccioli, A. (1998). Exoteric polytheistic fundamentalist typology. In A. Petroccioli (Eds.), *Typological processes and design theory. Aga Khan program for Islamic architecture*. Harvard University and Massachusetts Institute of Technology.

Planning Department. (1990). *Metroplan: the foundation and framework.* Hong Kong: Hong Kong Government Printers.

Planning Department. (2015). *Chapter 4: Recreation, open space and greening*. Retrieved from http://www.pland.gov.hk/pland_en/tech_doc/hkpsg/full/ch4/ch4_text.htm#1.7

Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. New York: Simon and Schuster.

Pont, M., & Haupt, P. (2010). *Space matrix*. Rotterdam: NAI.

Rahmi, D. H., Wibisona, B. H., & Setiawan, B. (2001). Rukin and Gotong, Royong: Managing public space in an Indonesian Kampung. In P. Miao (Ed.), *Public places in Asia Pacific cities: Current issues and strategies* (pp. 119-134). Boston: Kluwer Academic Pub.

Rapoport, A. (1987). Pedestrian street use: Culture and perception. In A. V. Moudon (Eds), *Public streets for public uses*. Portland: VNR.

Relph, E. (1976). *Place and placelessness*. London: Pion.

Relph, E. (1978). Book review of D. Canter, `The psychology of place'. *Environment and Planning A, 10*, 237-238.

Recreation, open space and greening. (2015). Hong Kong: Planning Department. Retrieved from http://www.pland.gov.hk/pland_en/tech_doc/hkpsg/full/ch4/ch4_text.htm#1.6

Robertson, K. A. (1994). *Pedestrian malls and skywalks: Traffic separation strategies in American downtowns*. London: Avebury Press.

Robson, C. (2002). *Real world research: A resource for social scientists and practitioners-researchers*. Oxford: Blackwell.

Rotmeyer, J. A. (2010). *Publicness of elevated public space in Central, Hong Kong: An inquiry into the publicness of elevated pedestrian walkway systems asplaces and non-places* (Phd thesis). University of Hong Kong, Hong Kong.

Rowe, C., & Slutzky, R. (1992). *Transparence reele et virtuelle*. Paris: Editions du Demi-cercle.

Rossi, A. (1982). *The architecture of the city*. Cambridge, MA: MIT Press.

Rubenstein, H. M. (1992). *Pedestrian malls, streetscapes, and urban space*. New York: Wiley.

Rudofsky, B. (1969). *Streets for people*. New York: Doubleday.

Salingaros, N. A. (1998). Theory of the urban web. *Journal of Urban Design, 3*(1), 53-71. doi: 10. 1080/13574809808724416

Salingaros, N. A. (1999). Urban space and its information field. *Journal of Urban Design, 4*(1), 29-49. doi: 10.1080/13574809908724437

Sanoff, H. (1992). *Integrating programming, evaluation and participation in design: A theory Z approach*. Aldershot, UK: Ashgate.

Sartre, J. P. (1985). *Existentialism and human emotions*. New York: Citadel Press.

Sennett, R. (1992). *The Fall of Public Man*. New York: W.W. Norton.

Sennett, R. (1994). *Flesh and stone: The body and the city in western civilization*. London: W.W. Norton & Company, Inc.

Sevtsuk, A., Ekmekci, O., & Nixon, F. (2013). Capturing urban intensity. In R. Stouffs, P. Janssen, S. Roudavski & B. Tunçer (Eds.), *Open systems: Proceedings of the 18th International Conference on Computer-Aided Architectural Design Research in Asia* (CAADRIA 2013) (pp. 551–560). Singapore.

Shane, G. (2002). The machine in the city. In P. Madsen and R. Plunz (Eds), *The urban life world: Formation, perception, representation* (pp. 218-236). London and New York: Routledge.

Shelton, B., Karakiewicz, J., & Kvan, T. (2010). *The making of Hong Kong*: *From vertical to volumetric*. New York: Routledge.

Shields, R. (1999). *Lefebvre, love and struggle: Spatial dialectics*. London, New York: Routledge.

Sime, J. D. (1986). Creating places or designing spaces? *Journal of Environmental Psychology, 6*, 49-63.

Simpson, P. (2011). Street performance and the city: Public space, sociality, and intervening in the everyday. *Space and Culture, 14*(4), 415-430. doi: 10.1177/1206331211412270

Sitte, C. (1889). *City planning according to artistic principles.*

Sitte, C. (1889). Monuments and plazas. In N, Glazer & M, Lilla (Eds), *The public face of architecture. Civic culture and public spaces* (pp. 48-59). New York: The Free Press.

Siu, K. W. M. (2003). Users' creative responses and designers' roles. *Design Issues, 19*(2), 64-73.

Siu, K. W. M. (2007). Guerrilla wars in everyday public spaces: Reflections and inspirations for designers. *International Journal of Design, 1*(1), 37-56.

Snedcof, H. R. (1985). *Cultural facility in the mixed-use development*. Washington, D.C.: Urban Land Institute, USA.

Soja, E. (1980). The socio-spatial dialectic. *Annals, Association of American Geographers 70*, pp. 207-225.

Southworth, M., & E. Ben-Joseph. (1997). *Streets and the shaping of towns and cities*. New York: McGraw Hill.

Spurr, S., & Kwok, E. (2013). Skywalking in Hong Kong: Dosrupting flows in the consumerist wonderland. *Lusofona Journal of Architecture and Education, 8-9*, 387-406.

Staeheli, L. & Mitchell, D. (2008). *The people's property? Power, politics, and the public*. New York, Routledge.

Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Ground theory procedures and techniques*. Newbury Park, CA: Sage.

Sugiyama, T., & Ward Thompson, C. (2007) Measuring the quality of the outdoor environment relevant to older people's lives. In C. Ward Thompson & P. Travlou (Eds.), *Open space: People space* (pp. 153-162). London: Taylor & Francis.

Sztompka, P. (2008). The focus in everyday life: A new turn in sociology. *European Review, 16*(1), 1-15. doi: 10.1017/S1062798708000045

Talen, E. (2011). Sprawl retrofit: Sustainable urban form in unsustainable places. *Environment and Planning B: Planning and Design, 38*(6),952-978.

Tan, Z., & Xue, Q. L. (2014). Walking as a Planned Activity: Elevated Pedestrian Network and Urban Design Regulation in Hong Kong, *Journal of Urban Design, 19*(5), 722-744. doi: 10.1080/13574809.2014.946895

Tan, Z., & Xue, Q. L. (2015). The evolution of an urban vision: The multilevel pedestrian networks in Hong Kong, 1965–1997. *Journal of Urban History, 0096144214566962*, 1-21. doi: 10.1177/0096144214566962

Taylor, N. (1998). *Urban planning theory since 1945*. London: Sage.

Tibbalds, F. (1992). *Making people friendly towns: Improving the public environment in towns and cities*. Harlow, UK: Longman.

The Demographic Situation in Hong Kong. (1974). Bangkok: ESCAP (Economic and Social Commission for Asia and the Pacific, United Nations).

The world's most crowded place. (2015). Retrieved from http://www.reuters.com/news/picture/the-worlds-most-crowded-place?articleId=USRTR2SRF6

Thomas, M. (1991). The demise of public space. In V. Nadin & J. Doak (Eds.), *Town planning responses to city change* (pp. 209-224). Avebury: Aldershot.

Tong, C. O., & Wong, S. C. (1997). The advantages of a high-density, mixed land use, urban development. *Transportation, 24* (3), 295-307.

Tornaghi, C., & Knierbein, S. (Eds.). (2015). *Public space and relational perspectives: New challenges for architecture and planning*. London and New York: Routledge.

Tse, R. Y. C. (1995). City growth and land policy: special reference to Hong Kong. *Australian Land Economics, 1*(2), 34-39.

Tsui, E. (2000). *Hyperdencity*. Proceedings of International Conference Megacities 2000. Hong Kong.

Tuan, Y. F. (1977). *Space and place: The perspective of experience.* Minneapolis, MN: University of Minnesota Press.

Tuan, Y. F. (1974). *Topophilia: A study of environmental perception, attitudes, and values*. Englewood Cliffs, N.J: Prentice Hall.

Turner, A., Doxa, M., O'Sullivan, D., & Penn, A. (2001). From isovists to visibility graphs: a methodology for the analysis of architectural space. *Environment and Planning B: Planning and Design, 28*(1), 103-121.

Urban design guidelines. (2015). Hong Kong: Planning Department, The Government of the Hong Kong SAR. Retrieved from http://www.pland.gov.hk/pland_en/tech_doc/hkpsg/full/ch11/ch11_text.htm

Urban population growth. (2015) Retrieved from http://www.who.int/gho/urban_health/situation_trends/urban_population_growth_text/en/

Urry, J. (2007). *Mobilities.* Cambridge, UK & Malden, MA: Polity Press.

Van Maanen, J. (1988). *Tales of the field: On writing ethnography*. Chicago: University of Chicago Press.

van der Voordt T. J. M., Vrielink, D., & van Wegen, H. B. R. (1997). Comparative floor plan analysis in programming and architectural design. *Design Studies, 18*: 67-88.

Van Melik, R., Van Aalst, I., & van Weesep, J. (2007). Fear and fantasy in the public domain: The development of secured and themed urban space. *Journal of Urban Design, 12* (1), 25-42.

Varna, G. & Tiesdell, S. (2010). Assessing the publicness of public space: The star model of publicness. *Journal of Urban Design, 15*(4), 575-598. doi: 10.1080/13574809.2010.502350.

Venturi, R., Scott, B. D., Rattenbury, K., & Hardingham, S. (1972). *Learning from Las Vegas*. Cambridge, MA: MIT Press.

Vidler, A. (1977). The idea of type: The transformation of an academic idea 1750-1830. In K. M. Hays (Ed.), *The oppositions reader* (pp. 437-459). New York, NY: Princeton Architectural Press.

Wang, W., Siu, K. W. M., & Wong, K. (2014). *The Changing Role of Pedestrian Bridges in Everyday Urban Life: Case Study of Pedestrian Bridges in Hong Kong. Proceedings: International Journal of Arts and Sciences, 7*(1), 347-356 (CD-ROM).

Wang, W., Siu, K. W. M., & Wong, K. C. K. (2015a). Pedestrian Bridges and Urban Landscape: A Case Study of Hong Kong Pedestrian Bridges' Aesthetics and Their Effects on the Urban Landscape. *The International Journal of Architectonic, Spatial, and Environmental Design, 9*(4), 35-53.

Wang, W., Siu, K. W. M., & Wong, K. C. K. (2015b). Loose Space, Inclusive Life: A Case Study of Mong Kok Pedestrian Bridge as an Everyday Place in a Densely Populated Urban Area. *The International Journal of Constructed Environment, 5*(2), 1-15.

Wang, W., Siu, K. W. M., & Wong, K. C. K. (2016). The pedestrian bridge as everyday place in high-density cities: An urban reference for necessity and sufficiency of placemaking. *URBAN DESIGN International, 21*(3), 236-253. doi: 10.1057/udi.2016.3

Watkin, D. (2009). *The Roman forum*. Cambridge, MA: Harvard University Press.

Webb, E. J., Campbell, D. T., Schwartz, R. D., & Sechrest, L. (1966). *Unobtrusive measures: Nonreactive research in the social sciences.* Dallas: Houghton Mifflin.

What is placemaking? (2015). Project for Public Spaces. Retrieved from http://www.pps.org/reference/what_is_placemaking/, accessed April 10 2015.

Whyte, W. H. (1988). *City: Rediscovering the center*. New York: Doubleday.

Whyte, W. H. (2005). *The social life of small urban spaces*. Santa Monica, CA: Direct Cinema Ltd.

Wickham, C. (2005). *Framing the early middle ages: Europe and the Mediterranean, 400-800*. New York: Oxford University Press.

Willensky, E. (1985). *Design Quarterly, 129*, 15-16.

Woo, P., & Malone-Lee, L. C. (2013). Evaluating skywalk systems as a response to high-density living in Hong Kong. In M. hibbard., R.

Freestone., & T. Ø. Sager (Eds.), *Dialogues in urban and regional planning 5* (pp. 264-279). Abingdon and New York: Routledge.

Xue, Q. L., & Manuel, K. K. (2001). The quest for better public space: A crtitcal review of urban Hong Kong. In P. Miao (Ed.), *Public places in Asia Pacific cities: Current issues and strategies* (pp. 171-190). Boston: Kluwer Academic Pub.

Xue, Q. L., Manuel, K. K., & Chung , R. H. Y. (2001). Public space in the old derelict city area - a case study of Mong Kok, Hong Kong. *Urban Design International, 2001*(6), 15-31.

Yeh, A. G. (2000). The Planning and Management of a Better High Density Environment. In A. G. Yeh & M. K. Ng (Eds.), *Planning for a better urban living environment in Asia* (pp. 116-143). Aldershot: Ashgate Publishing Limited.

Yin, R. (1994). *Case study research: Design and methods*. Thousand Oaks, CA: Sage Publications.

Zhang, X. Q. (2000). High-rise & high-density compact urban form: The development of Hong Kong. In M. Jenks & S. R. Burges (Eds.), *Compact cities: Sustainable urban forms for developing countries* (pp. 245-254). London: Spon Press.

Zeisel, J. (1981). *Inquiry by design: Tools for environment-behavior research*. Cambridge University Press.

Zukin, S. (1991). *Landscapes of power: From Detroit to Disney World*. Berkeley, CA: University of California Press.

Zukin, S. (1995). *The cultures of cities*. Oxford: Blackwell Publishers.

中文參考文獻：

露宿行人天橋：旺角鬧市「淪陷」 部門懶理. (2015, November 10). 東網. Retrieved from http://hk.on.cc/hk/bkn/cnt/news/20151110/bkn-20151110204430811-1110_00822_001.html

旺角專區縮開放 街頭樂隊申覆核. (2014, April 23). 雅虎香港. Retrieved from https://hk.news.yahoo.com/%E6%97%BA%E8%A7%92%E5%B0%88%E5%8D%80%E7%B8%AE%E9%96%8B%E6%94%BE-

%E8%A1%97%E9%A0%AD%E6%A8%82%E9%9A%8A%E7%94%B3%E8%A6%86%E6%A0%B8-221141008.html

荃灣商戶呻趕客 天橋送走生意人流. (2012, August 10). 頭條日報. Retrieved from http://news.stheadline.com/dailynews/content_hk/2012/08/10/202324.asp