

Spatial Organization and Evolution of Shophouses in Cambodia

- focused on Phnom Penh -

캄보디아 쇼하우스의 공간조직과 변천에 관한 연구

- 프놈펜을 중심으로 -

얌 속 리*
Yam, Sokly

주 서 령**
Ju, Seo Ryeong

Abstract

Shophouse is a unique feature of Southeast Asian cities, particularly in their historical cities. Throughout phases of urban development, this archetype has evolved dramatically due to the influences of western urban development and building technology, cultural influence, and massive increasing of urban population. Accordingly, the spatial organization of shophouses had evolved from a traditional shop combined with a dwelling unit into a more complex and diverse spaces to satisfy the need of newly planned city and their occupants. In the case Phnom Penh, where shophouses are built more than half of built up surfaces of a city, there is a lack of attention to study and understand the evolution of shophouses in the aspects of spatial organization.

The aims of this study is to define a shophouse and analyze the space organization of shophouses, which decide relations between spaces inside of a house. Finally this will identify the uniqueness of shophouses in Cambodia in comparison with shophouses in other Southeast Asian cities.

Keywords: shophouse, spatial organization, Cambodia, Phnom Penh

주요어: 캄보디아, 프놈펜, 쇼하우스, 공간조직

1. Introduction

Phnom Penh, the capital city of the Kingdom of Cambodia, is one of the biggest Chinese cities in South East Asia. Historically, Chinese accounted about half of the population of this capital city. In addition, the vast influences of the Chinese architecture to the urban planning, principally the Chinese districts, are obvious. Specially the shophouse, a narrow and long in depth which was designed with central courtyard or an open air well were found in this districts. The shophouse has dual functions, a shop where the owners can display goods to the public at ground floor and a residential

space upstairs.

Throughout different phase of urban development, this archetype has been developed due to the influences of various reasons such as the adoption of western architecture, new construction technology, particularly the concrete structure, and a heavy influx of population into to the city.

The morphology and the spatial arrangement of the shophouses have been evolved and modified in order to satisfy the need of the newly planned city, particularly at the end of the Protectorate and the Independent period. However the lack of attention to study the historical value of this unique architecture and destruction of shophouses in cities is rapid.

The aims of this study are, first, to learn what are the basic principles of shop-houses in Phnom Penh's three main Chinese districts, historically,

* 정희원(주저자), 경희대학교 대학원 주거환경학과 석사과정

** 정희원(교신저자), 경희대학교 주거환경학과 교수, 생활 과학연구소 연구원

functionally and morphologically. Second is to find out what are the significant evolution phenomenon in the aspects of spatial organization and morphology. Third is to identify the uniqueness of shophouses in Cambodia in comparison with other shophouses in Southeast Asian cities.

II. Research Methodology

Phnom Penh's three main Chinese districts were selected as case study area due to its varieties of diverse examples. Nevertheless, due to the permission matter, only the limited houses were selected. This study has been conducted with various ways such as literature reviews, on site surveying, interview and sketches, and photo documentations.

During the fieldwork, we have surveyed 19 selected cases and observed about 30 different sites throughout the three Chinese districts.



<그림 1> Map of Central Phnom Penh



<그림 2> Location of Cases Surveyed

III. Urban Development of Phnom Penh

Urban Development of Phnom Penh could be classified into three periodic phases: the "Pre-Protectorate", "Protectorate", and

"Independent" period. During these phases, Phnom Penh has experienced massive destruction, demolition, reconstructions, modernization, and large-scale urban redevelopment. The early Protectorate period, Phnom Penh was constituted of ethnic villages, mainly Khmer Chinese, Cham, and Vietnamese, located along the riverbank. The modern city was formed during the middle of French Protectorate period around in 1890s, shophouses were well aligned with street, canal systems, modern administrative buildings and new Royal Palace. After the Independence in 1953, under the royal patronage of the H.M. The King then (who became) the Prince Head of State, Norodom Sihanouk, there were wide range of urban renewal and development in Phnom Penh. The city was extended to westward with new public facilities and social housings that were aimed to provide a better living condition. Shophouses were one of the most dominant and trendy architecture which lead the city's commercial activities after the industrialization and remarkable economic development of Cambodia. At the same time, such large-scale redevelopment was possible by demolishing the narrow and high density colonial city, as the result, it was almost impossible to find shophouses in the city during French colonial period (Wakita and Shiraishi, 2010). From 1970s to early 1990s, urban development was suspended due to the internal civil war. However, thanks national consolidation and economic development, vibrant developments in Phnom Penh starts again.

IV. Shophouse of Phnom Penh

The definition of Shophouse

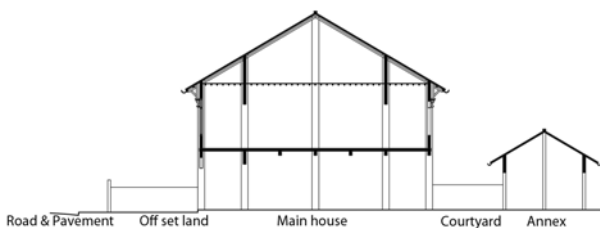
The term of shophouse is different from a country to another.

In Cambodia, the term "shophouse" is called "Pteas Lvaeng" which means a 'bay house' or "Pteah Tiam" which means a house with a shop ('shophouse') depending on its location and physical look. However, Pteas Lvaeng gives us some information about how it is built and the term, "Pteas Tiam" is determined by the functions of the building.

According to Blancot and Goldbum(1993), a shophouse is houses aligned along the road which are divided by a shared masonry wall, composed

with two different parts; one part is the ground floor which house commercial activities with a direct relation to the main street and its habitation part is on the first floor.

The more detail aspects of shophouses were given by Heritage Mission's report on the shophouses in Siem Reap (2011). Shophouse is composed of a main house, a courtyard and an annex. Main house is one or two stories and the façade is largely open to the public and faced to the main street. At facade, a gallery (five-foot-way) is used as a transitional space between a street and a main building, as well as to protect both the sun and rain for the pedestrian. A courtyard offers a daylight and ventilation inside of a house. An annex building, which is usually only one level, serves as a sanitation purpose, a storage, or a complementary habitation space. The annex building normally situated at the back of a shophouse and orientated inside urban block. The construction is based on the 4m width bay with a simple structure with brick supporting wall, a wooden floor and staircase as well as the roof structure, covered by clay roof tile. The variations of space organization between main building, courtyard, and annex determines its typology. This definition gives us a clear explanation for both of a function and a basic spatial organization of shophouses in Siem Reap. However, it did not cover variety of shophouses that were built at the end of the Protectorate and the Independent period. In this context, it is important to conduct further researches about the shophouses built on later periods.



<그림 4> A Section of a typical shophouse

Early shophouses of Phnom Penh

There are a few accounts for us to summarize the early shophouses of Phnom Penh both the record by Royal Chronicle of Cambodia, the Protectorate official records and historical photos. The early shophouse was built with wood and

bamboo and aligned the main street of Phnom Penh. In the early 1870s, King Norodom decided to modernize the city by demolishing the wooden shophouses and building a stronger and brick wall to prevent the spread of fire from one to another. However, these shophouses were demolished again in the early 1893 as noticed on a post-card about the plan to demolish - the Chinese shophouses before its demolition. Right after the demolition, a well aligned and a better quality of construction shophouses were arosed with the newly planned districts of Phnom Penh. Anther demolition was starting by the end of 1930s and eventually more and more demolition during the 1950s and 1960s. The new designs as the replacement of old shophouses are at larger scale, a more complex spatial organization, to house bigger communities, accessibility to each units has changed dramatically, a better adaptation to climate, and a more functionally well defined use of space.

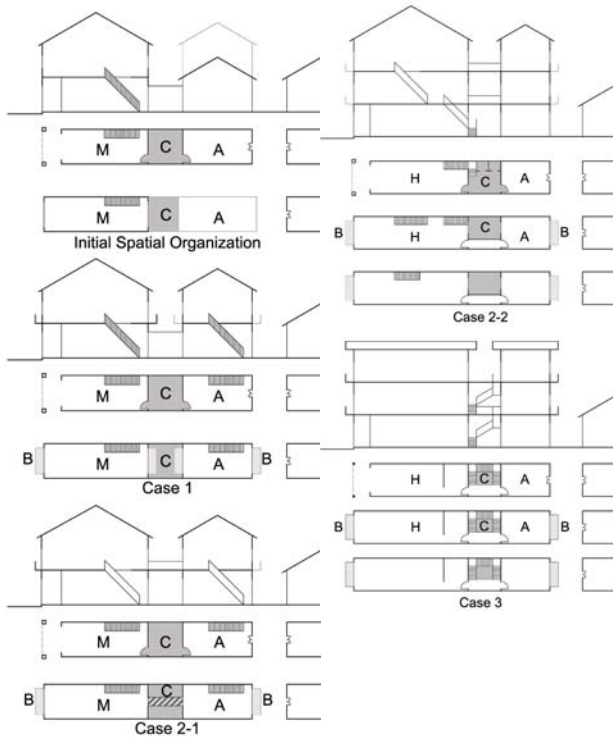
Shophouse Spatial Organization

Based on field survey, spatial arrangement of shophouse could be classified into two categories; the first is composition of main house (M), courtyard (C) and annex (A), and the second is the composition of only main house (M). These spatial organizations gave great influences on the design varieties of shophouses built later. Proportionally, each of spaces of a house is varied, however M is the biggest space in size, follow by C and A is relatively similar or 1-to-2-proportion respectively. This paper focus on the spatial organization of type 1 (SOT1).

Spatial organization type 1 could be classified into two sub-categories according the number of spans of buildings; single span or multiple span shophouse.

Single span shophouses, built between early 1890s and early 1920s strictly followed the original archetype of earlier shophouses. M is occupied by shop and attached with a staircase at the back which lead up the dwelling area on the upper floor. In front of M, there a five-foot-way or covered gallery, a transitional space between the public and the semi-private space inside the M. Main elevation is entirely open to the public. Courtyard is typically an empty space for the purpose of ventilation and lighting, where the A is a place for a storage,

workshop, toilet or kitchen, this area could either one or two floor. There is a door that lead to C or the back lane.



<그림 5> Spatial Organization of Single Span Shophouses

With the influence of new construction technique from the early 1910s, the design of shophouse has slowly evolved as observed on site. Balcony was added to the M both front elevation or the internal elevation (case 1). Shophouses, dated in the 1930s, started to build higher and both main house and annex. The connecting bridge was added inside C to form an easy access from the front part of the house to the back. Most of the observed cases, the bridge is layed in the middle of courtyard (case 2-1), but there are a few cases that the bridge is layed attached to the wall (case 2-2), in addition, toilet was introduced to C which typically built attached to the staircase. From the late 1940s, staircase is occupied about 1/3 of courtyard (case 3) which lead all access to each floor and each part of the house. The most significant spatial organizations of single span shophouses are the repositioning the staircase, from a part of the M into C. And also, the modification of occupation status, from a single family dwelling unit into a multi-family unit. This repositioning of stairs means to provide light to the

staircase, at the same time, it is a unique way to gain more space inside the main house. Furthermore internal balcony and courtyard is become a public space where the tenants could meet, to get light and ventilation, and being used as a multi-purpose area. However, when the single span shophouse is built up higher vertically and a limited width of courtyard has caused a dark space and uncomfortable access area.

The first multiple-span shophouse of SOT1 is dated in the 1920s where multiple private courtyards have become a public area to provide access to main house from rear or front of the annex as well as to equip public utilities such as toilet and storage. In the case of a multiple-span shophouse that located on the corner, typically, access could be made of either from the front entrance or side entrance (case 1-1 and 1-2). However, there are some cases where the entrance is depend on the neighboring courtyard (case 1-3). Furthermore, front entrance, which could be a half of a span or one span, will lead to the common courtyard and stair case (case 2-1).

The important features of this type are similar to the single span category. But a combined courtyard is the unique feature and significant modification factor to transform the shophouse from traditional long and narrow plot pattern to modern apartment type which has common courtyard and main common access and stairs.

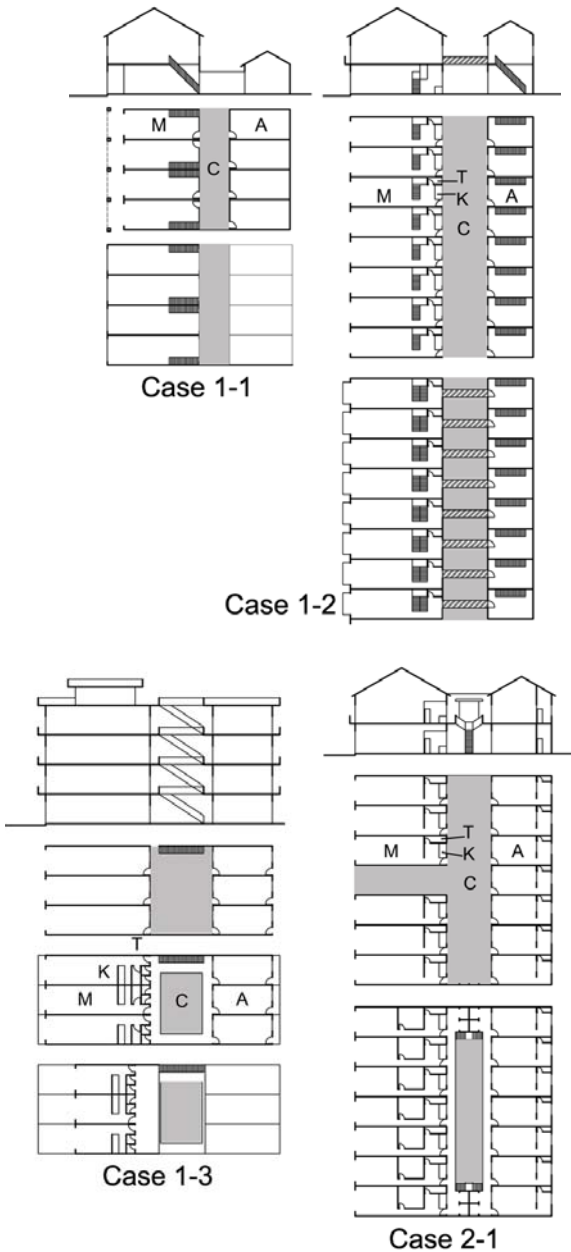
There is one case in multiple courtyards connection that has a public access lane where tenants who live at the ground floor could operate small business.



<그림 6> Different types of courtyard arrangement

V. Conclusion

After conducting the field survey, article review, the result shows that the spatial organization of shophouse has progressively evolved by phases due to the influence of construction technique, materials availability, and demographical increasement. This



<그림 7> Spatial Organization of Multiple-span Shophouses

change has a great influence to the relation of spaces, particularly the repositioning staircase, balcony, toilet, kitchen, and storage. As a conclusion, there are two types of shophouse in the aspect of spatial organization; first is the composition of main house (M), courtyard (C), and annex (A). And the second is the composition of only main house (M). Spatial organization of the first type is the most complex and has shown the clear evolution process. whether the spatial organization of the second type is rather simple and has evolved slowly. The spatial organization of the first type is divided into two sub-categories, single span and multiple-span shophouse. Each of this

sub-categories has shown diverse modifications, particularly the repositioning of staircase from main house to the courtyard. In addition, transformation of courtyard incredibly effected the approach way of residents, from different private courtyards to a public and shared courtyard, yet remained well lighted and ventilated. This diverse trials and modifications of spatial organization of shophouses reflect the socio-cultural and climatic factors caused in the process of modernization of Cambodia.

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