

A Comparative Study of a Difference in the Spatial Structure of Vietnam Village

PHI PHUONG PHAM

PhD Candidate

Chonnam National University, Gwangju City, South Korea

NGOC QUYNH GIAO PHAM

PhD Candidate

Tomas Bata University, Zlin City, Czech Republic

SE-GYU OH

Professor

Chonnam National University, Gwangju City, South Korea

Abstract

This study aims to explore a difference in the settlement characteristics of native people in North and South Vietnam that have been existed for a long time ago. Frist, this research summarizes the main factors in the history and geography of Vietnam that lead to a change in culture and society in Vietnam and directly affect the spatial structure of the village. Second, the precious experiences in choosing a residential site have been inherited from generation to generation are presented in terms of settlement characteristics, public space, and site layout. That experiences will be the key diver of urban planning in the future. Finally, the results show the structure of village in North is clustered form, while the spatial structure of South's village observes the linear form. These explorations are helpful knowledge for urban designers in the urbanization process. The research results will be detailed when the case study concentrates on the comparison between two ancient villages in each region, which are Duong Lam ancient village in Northern Vietnam and Long Tuyen ancient village in Southern Vietnam.

Keywords: Settlement characteristics, Historical features, Local cultural geography, Clustered form, Linear form.

INTRODUCTION

Urbanization is the necessary development of a country including Vietnam. These days, many new cities in Vietnam have appeared with the same structure because the historical and cultural urban and geography are ignored in the urban planning process. As Kossoff points out “The city as the diagram is a top-down imposition, and in the end, argues Kossoff, all these ideal city forms are dehumanizing because they are a cerebral concern with order and discipline” (Short, 1996). This study will address the question of whether what is appropriate for urban planning among cities in Vietnam. Because each of the cities in Vietnam has various geography and unique culture which should be considered as an important key in urban planning.

Moreover, during four years (2001-2005), an estimated 360.000 hectares of agricultural land (Van Suu, 2009). That change in land use is unreasonable, and the consequence is the new urban formation which is planned as the mass production of manufactured goods and the new urban has lost its identity. Also, the unplanned urban growth interferes, with the environmental conditions such as all surface layers being covered by concrete instead of keeping a part of natural geography (Pervin et al., 2020). As a result, citizens will cope with flooding, traffic congestion, environmental pollution. Because the aforementioned issues are intensifying pressure on urban designers who play an important role in the development of the city, they have started to rethink and find a solution to existing problems in urban areas.

For this reason, the study selected two ancient villages to explore the identity of spatial structure through a variety of historical and cultural influences that have influenced the current urban development process. For this aspect, the core elements of history are considered as a key to explain why the urban form has differed among the cities of Vietnam. Therefore, to illustrate the relationship between history, culture, society, and urban form, two ancient villages in Vietnam – Duong Lam ancient village in the Northern, Long Tuyen ancient village in the Southern – are presented to clear up the mentioned issues. Both of two case studies have existed in the unique features of each region, which is worth keeping them as a precious experience.

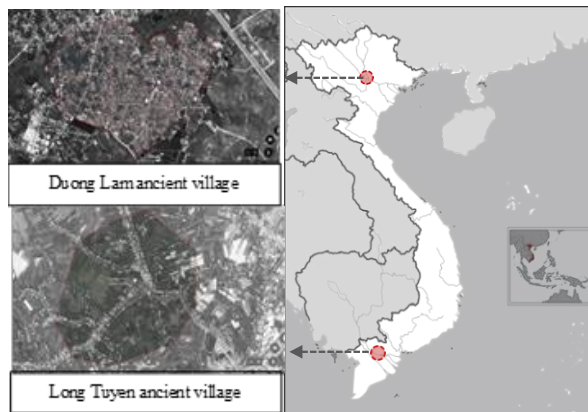


Figure 1 - Location of two ancient villages in Vietnam.

METHODS AND STRUCTURE

According to William Lund (1886-1971)- A historian- “We study the past to understand the present, we understand the present to guide the future”. And so, this study focuses on the difference in socio-culture between North and South in terms of the context of formation, the territorial expansion, and the change of nation invaded Vietnam, which is studied systematically from past to present. As a result, there are differences in history and culture of North and South Vietnam which has led to the change in the spatial structure of villages from North to South. The historical method also helps to clarify the personality of local people in both South and North which is original to form two completely different lifestyles.

Additionally, the observation method was built from 2007 up to now to collect data that reveal the similarities in the characteristics of spatial structure between two ancient villages and current rural areas in North and South. The observation process should be included in the recording of the formation of a spatial structure in the village of local residents-focusing on three main elements- settlement characteristic, public space, and residential space. The result shows that the experiences in residential choosing, which doesn't fall into oblivion. In contrast, the experiences are widely spreading in North and South Vietnam for a long time because they have been deep into the subconscious of local people. This research process follows three main steps:

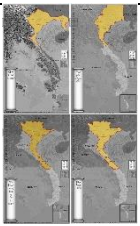
- The first part of this study shows the difference in socio-culture between North and South Vietnam. Form that, the study will explain the reason why urban forms are different from North to South.
- The second part chooses and surveys two ancient villages for comparison; one is Duong Lam ancient village in the North which has existed for 400 years and it is considered as the unique museum with a rural lifestyle, ancient houses, communal buildings, wells, and lotus pond...etc. The other is Long Tuyen ancient village in the South which contains the various typical characteristics of the local culture through its existing architecture, urban form.
- The final part, the discussion of the application of the rule in settlement characteristics and house layout in Northern and Southern Vietnam will be indicated for the current urban planning process.

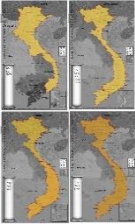
DESCRIPTION OF STUDY AREA

Overview of the history of Vietnam

Originally, the Vietnamese group was formed and developed early in the Red River in the Northern part present-day Vietnam.(Taylor, 2013) A location brings many benefits to the life of the Vietnamese ancestors such as supplying water for farming and ranching. Because of the favorable location, Vietnam has gone through many stages of aggression, especially in the period when Vietnam was invaded by the Chinese and French. (see Table 1).

Table 1- The Change in Border of Vietnam and The Period of Invaded Vietnam (Source: <https://lichsunuocvietnam.com>)

Change in border	Nation invaded Vietnam	The characteristic of border
	China invaded Vietnam for a period of a thousand years. (Amer,2010)	During the Chinese invasion, the territory of Vietnam was one of the northern part of the Socialist Republic of Vietnam.(Amer,2010) The 1400s, the territory is expanded toward the south. However, the territorial of Vietnam did not include the South of Vietnam. That caused the Chinese cultural strongly influences on Northern Vietnam.

	France invaded Vietnam for a period of eighty years.	Vietnam's territory at this time relatively similar to the current territory. French culture affects to both South and North in this period.
	South of Vietnam was under the control of American for a period of twenty years	Before 1975, Vietnam was divided into South and North. The South has dominated by the United States for nearly 20 years. That's the reason why western culture strongly impacted the Southern.

The natural condition

Vietnam is a country of tropical lowland, filled and densely forested highland. The country has two major deltas: The Red Delta in the North and the Mekong River Delta in the South(Hays,2008). Both of them are known as the rice baskets among cities in Vietnam. Table 2 is the comparison of the natural condition between North and South.

Table 2- Comparison of the Natural condition of North and South Vietnam.

The natural conditions		North Vietnam (Red River Delta)	South Vietnam (Mekong Delta)
Location		Red River Delta is located in North Vietnam	Mekong Delta location is in the South Vietnam
Because of the different location, it leads to different climate and topography.			
Geography		The terrain is relatively flat and it has been filled in by the enormous alluvial deposit of the rivers, and the delta accounted for almost 70 percent of the agriculture(Hays,2008).	Mekong Delta is a large area with a dense river system, creating favorable conditions for the development of the waterway system in the region(Hays,2008).
The terrain of both of deltas are flat. However, the dense river system in Mekong delta makes a variety of culture in the South.			
Climate		Northern Vietnam has a humid subtropical climate, with a full four seasons in a year and the winter is cold, the summer is hot and dry(Thành,2013).	In contrast, with the rather hotter temperatures in the South has only two main reasons: a sunny and a rainy season (Ly, Birkeland, and Demirbilek,2010). The weather is characterized by tropical monsoon climate and equatorial, where it has plentiful sunshine, the solar radiation time is long. Therefore, the region has a temperate, pleasant and cool climate all year round.
The climate in the North is harder than the South with the cold winter and the hot summer. The spatial structure of houses in the North avoid the cold wind in winter and need to be cool in summer, while houses in the South should be opened to get the benefits from the natural condition.			

The culture of Society

Because agriculture in Vietnam plays an important role in economic development, especially the wet rice cultivation, the culture in wet rice has been marked on the Vietnamese subconscious (Hillier and Hanson,1989). The wet rice cultivation is not a simple demand for eating but also economic development in the region. Thus, agriculture activities have created Vietnamese culture both of North and South.

In the North Vietnam

Influence of Chinese culture: As the previous mention, China colonized Vietnam for around one thousand years, so Vietnam was always influenced by China, especially North Vietnam. In fact, one thousand years is long enough time for Vietnamese absorb, filter in accordance with the culture of China (McLeod, Dieu, and Nguyen,2001). One of the great impacts on Vietnamese is the influence of Confucianism that has deeply affected to Vietnamese mentality. So, Vietnamese village culture is considered as the cultural identity of the North which has been maintained since ancient times. Due to many enemies launching attacks on Vietnam, the local people have rallied around the region to resist the attack and protect their families. Thus, the village in the North has a fixed population without the transformation that leads to having high connectivity among the community. One more reason is the village area for gathering a group of people who have the lineage. Their life based on the blood-relationship so the distinction of the village is not quite clear in the hamlet culture and everyone adheres to the rules of the village more than state laws.

In the South Vietnam

Multicultural society-open community(Quang and Nghi,2016): South Vietnam is a new land, in the process of expanding, many ethnics come to live in this region such as Viet migrants move from the North (mostly prisoners, returnees, and so on), Chinese people come to for trading and they explore and settle down, and the Khmer people(Taylor,2001). There has co-existed the cultural interchange among the ethnic groups to accept the norms of cultural difference to live in the same village during a long period(Elliott,2016).

On the other hand, when France attacked Vietnam, the South of Vietnam became the first French territory where France occupied in Asia. During the nearly 80 years of French rule, France has progressed

to exploit the colonization, built the infrastructure, and has spread the Western culture to the South of Vietnam. After the French colonization, the South of Vietnam is under the control of the United State for nearly 10 years. At this period, the United States also introduced Western culture into the South of Vietnam. Thus, it can confirm that the Chinese culture has gradually faded in the South, and Western culture is a profound influence on the Southern.

Thus, the village in the South is a gathering of many residents who come from different regions, having various religions, and they can come and go uncertainly. As an effect, the habitation always changes to lead to no binding force among residents and they keep close-connection between people in the same hamlet and among hamlets by “the neighbor relationship”. Therefore, the village in the South has a combination of many cultures, they easily accept, absorb, and get on well the culture of each other. As a result, the hamlet structure in the South is open structure.

RESULTS

The different form of residential area

The village structure in North is tightly closed layout

Duong Lam ancient village

The Duong Lam ancient village is located next to the Red River, in Son Tay province, Hanoi capital. There are many ancient architectural works in the village where its buildings are marked culture of local residents in the past. In fact, Duong Lam ancient village has been presented with the award of the UNESCO Asia-Pacific Awards for Cultural Heritage Conservation in Hanoi on February 18. The village is a tight layout with three layers, and each layer has a unique function. The layer outside is the field where support their life (see Fig 2). At the center of the village is a public space where is often used for community activities on festival day. This space is considered the soul of the village. The next layout is residential areas. The outside is fences and fields to protect the village. The fences are usually made of bamboo that is planted very thick to protect the village or brick is built with thick dimensions.



Figure 2 - Duong Lam ancient village structure.

The current urbans in the North Vietnam

Today, under the huge pressure of the population many new urbans have appeared, but the settlement characteristics have not changed because this habit has been inherited from generation to generation and become a precious experience. In fact, although much new urban planning is performed, they still focus on clusters around the old village or form a new residential area that has the same structure to settle down. The study observed an area with a dimension of 1.4 kilometers in length and 1.4 kilometers in width in the suburb of Hanoi capital (see Fig.3). These new residential areas are organized in the clustered form with three spatial layers-public space in the center- residential area and the field (see table 3). Also, all local residents in the residential area have the same family name. That proves that the identity of lineage has still existed in the Northern village.

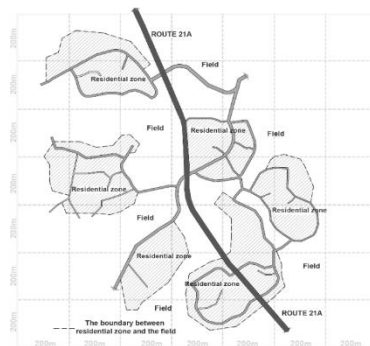




Figure 3 -The survey of the Northern region with location dimension (1.4 kilometers length x 1.4 kilometers wide)

Table 3- The trend of residential space in North Vietnam

The new residential zone	Residential zone cluster	Characteristics
Dong vien Village		<p>Residential zones are formed into closed clusters and are surrounded by the field (yellow zones are accommodation zone). Also, the residential area is located near the main road or far from the main road.</p> <p>These images on the left were taken in 2017 that show that local people did not live along the main road. Northerners are still familiar with the way the village gathers into a closed cluster.</p> <p>The phenomenon doesn't only appear in one city but also many cities in the North. So, urban form in the North is the cluster.</p>
Trung Mau village		

From observed results (see Fig.3), it is clear that the residential areas along the highway 21A in the suburb of Hanoi are formed the clustered type with a road to connect between the main transportation and the center of the residential area. In this way, the residential area has ensured privacy and controlled the local resident.

The village structure in South is the linear layout

Long Tuyen ancient village reveal a dispersed layout

The Long Tuyen ancient village has existed for over two centuries in the south of Vietnam, is located along the Binh Thuy River, Can Tho city, the Mekong Delta. This village is considered the model of the typical style of life in the Mekong Delta with a traditional local lifestyle. Most of the local residents live near the rivers or roads where they can be easily accessed to the house.

In the south, the residential zone is also called the village, but it has existed in a different form. The reason is new land where has many ethnic groups, they have lived in based on 'neighbor relationship'. Thus, they only pay attention to the convenience of moving to trade with other people, they chose the location where it is an intersection or at the confluence of two rivers. Therefore, when moving to the South, the village has a tendency of creating open spaces where people live friendly with the natural environment. That is revealed through the characteristics of Long Tuyen ancient village (Fig 4)

Long Tuyen ancient village is formed in a line shape. The population spread out a wide area, taking the river and transportation as the main axis. The residential district forms a protective belt for the field. In contrast to the North, public space is a group of markets and schools that are located at the confluence of two rivers. In addition, religious spaces such as pagodas and temples... are often intermingled with residential areas where can be peaceful in nature.

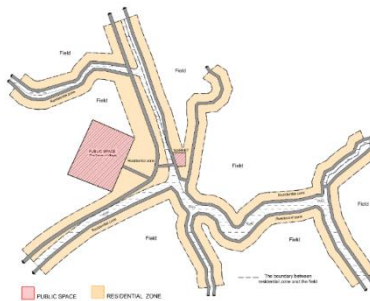

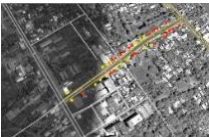






Figure 4 -Long Tuyen ancient village structure in South Vietnam

The current urbans in the South of Vietnam

This study observed two streets at two cities in Mekong Delta (Vinh Long city and Can Tho city) from 2001 to 2011; the results show that the local people live near the road to travel easily that set up a residential zone in a linear shape. The new roads are built and right away for following of new residential area (see table 4). While the government already planned for residential location at the other place and it has led to the no residents in planned urban by government. These existing problems do not imagine by urban designers. It has created a messy development in urban that is not urban aesthetic. The cases are occurring in new urban in Vietnam where urban managers cannot restrain the development of the residential zone.

Table 4- The trend of residential space in South Vietnam

Area studies	The residential area in 2001	The residential area in 2009	The residential area in 2011
Vinh Long City			
Can Tho City			

One of the important way in residential choosing in the South is the accommodation zone along the street or river. These images were taken from 2001 to 2011 at Vinh Long and Can Tho city in Mekong Delta. The yellow is representing the residential zone in 2001 that is located along the street. In 2009 (residential zones are marked in red), when the street in Vinh Long is widely opened, the density of population increases gradually along the street. Can Tho city is in the same way. Undoubtedly, the density of the population rapidly increases in 2011 and the space along the street fulfilled by houses -which is marked by blue circles.

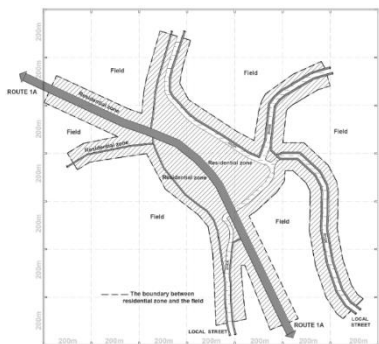


Figure 5 -The survey of Hau Giang province South Vietnam with location dimension (1.4 kilometers length x 1.4 kilometers wide)

From Figure 5, one province along the national highway 1A in Mekong Delta, South Vietnam, it can be seen that the local residents have settled down along the streets and the rivers which are formed in linear type. It is essential to mention that this lifestyle has rooted in a local culture which has maintained until now.

Various model of the unit housing

The people of the South and North have different cultural and social, or in other words the way, the life of each region has its own

characteristics. This has led to the layout of space on the site where also has differences between the two regions of south and north as well. Northerners organize a private space for their life, while the residential space in the South opens completely with nature and neighbors.

Closed space in the Northern

The layout of a unit house of northerners is closed layout because of two factors. First, the weather has a hard winter, therefore they gather to form closed space to avoid the cold in the winter. As a result, all the functions are surrounded by a brick fence with a single entrance in front of the house. Secondly, due to the effecting of ancient lifestyle which is the high defensive lifestyle- it is affected by war, each household creates a private space for their family.



Figure 6 -Models of traditional house in Duong Lam village are in two ways. 1-Main house, 2-Sub-house, 3-Yard, 4-5- Garden, 6- Well.

Arranging functions in the site are reasonable and suitable for living needs and it is also an advantage to the wet rice planting (Fig 6). In the center is the yard where the store and dry agricultural products. The main house and sub-house are surrounded by the yard. The local people concern the direction of the main house that is usually toward the south direction. Gardens are located around the house. A solid brick fence surrounds the house to protect with gates open to the main road.

Open space in the South

In contrast, the South is a peaceful land with beautiful scenery, blue sky, and fresh air. People can choose various ways of living because they vary folks. However, the space of the house is always open to welcome nature and the guests.

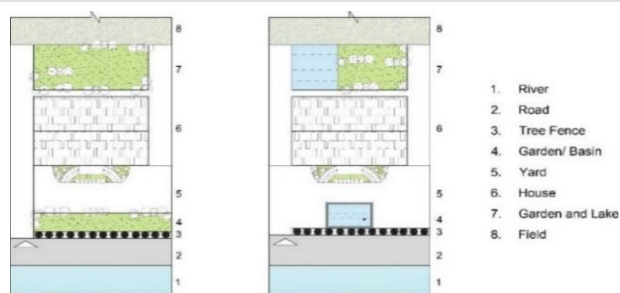
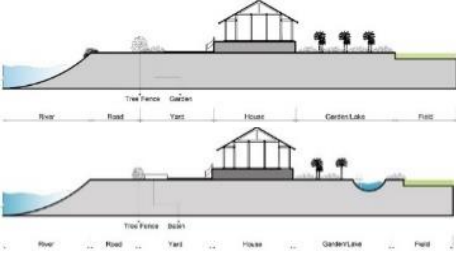


Figure 7 -Models of traditional house in Long Tuyen village are in two ways.

In a site layout in the South, the layout of functions is in harmony with natural conditions and it is convenient for living. In fact, the site is a large area, and the landscape surrounding the house is also the concern of local residents. (Fig 7). House is opened many windows to welcome the cool wind. House locations are along the road and river. So, the direction of the house is less important than in Northern Vietnam. The tree fence is planted surrounding the house that is as decoration without protection. Therefore, houses in the South have harmony between humans and nature. Table 5- the longitudinal-section of the house reveals that Southerners try to get the most out of the advantage of nature carry into the house.

Table 5- The settlement characteristics in the South Vietnam.

The Longitudinal-section of House in South Vietnam	The difference in spatial layout
	Case 1- The direction of the house is toward the road and river. The back of the house is the fruit garden and filed. Case 2- In the same way with case 1, but the back of the house is fruit garden, lake areas for fishing and filed.

CONCLUSION AND DISCUSSION

The different form of residential zone

The history of Vietnam leads to a variety of cultures and societies of each region. Especially, the difference in the way local people create a

residential area. Therefore, the results show that there is not only a different location but also the various residential form between the North and South of Vietnam. These different characteristics will play an important role in planning for the new urban of each region. Because these characteristics are formed on the basis of natural conditions, local culture, which is the precious experiences. Moreover, the results indicate that difference has already existed in the current urban that urban planners often ignore when they make planning. Hence, this study helps the urban designer have the vision to lead them to confirm the cultural identity of each urban in the urbanization process.

Various model of the unit housing

The different cultural geographic features will form various forms of architecture in each region. Thus, the architecture or urban space has contained the value of culture and features of natural conditions in each region. It will make diversity in the architectural form of each region and each country. This study also reveals the differences in the spatial structure for living in two regions of South and North that based on natural and cultural conditions. More specifically, native people are directly affected by the environment where they are living through the way they behave, their way of life makes them suited to survive. In this case study, the local people in North and South Vietnam had the experience to adapt to nature on their own.

In addition, the research data help designers refer to design the house model that it will adapt to the lifestyle of each region. Because the ultimate aim of architecture is to create a comfortable living space and suitable for humans.

Conclusions

This study has identified the layout characteristics of the accommodation space of the local people through the historical, cultural differences between North and South Vietnam. According to the observation, these characteristics have maintained in the current residential formation process and it has a main role in the promotion of the qualities of urban life.

This study was analyzed two villages in the North and South of Vietnam to show that type of residential area spatial structure is in the centralized clustered form in North, and linear form in South Vietnam. These results should be considered as the main criteria in urban design.

In fact, the settlement zone of local people has specific features that become the custom of local people. This custom completely adapts to the historical, socio-cultural, and environmental conditions in the present which will create a unique identity for each city. So, for the question of what is appropriate for urban planning among cities in Vietnam, the answer is the geography of each region. In addition, the paper also gives the new findings of the village model, unit house model in the North and South of Vietnam that make a significant contribution to urban planning.

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