The Research and Application of the Urban Organic Update Theory in Historic Conservation Districts Regeneration

Author: Yuan Zhou
Supervisor: Ana Mafalda Madureira
Karlskrona, Sweden
Submitted to Blekinge Tekniska Högskola for the Master of Science Programme in Spatial Planning with an emphasis on Urban Design in China and Europe
May 2012
Acknowledgment

This is a diploma thesis made by a Chinese student for the master’s degree of Science Programme in Spatial Planning with an emphasis on Urban Design in China and Europe at Blekinge Institute of Technology in Karlskrona, Sweden. This thesis was supported by lots of people that gave me a lot of important and useful help, suggestions and encouragements during the process. Without their help, I could not have accomplished this work successfully.

I would like to give my heartfelt gratefulness to my supervisor Ana Mafalda Madureira for her patient guidance in the process of my thesis work. With her worthy guidance, I have been successful in dealing with varieties of difficulties in the research and accomplishing the thesis work. I also would like to thank Lina Berglund-Snodgrass, who has given me many useful advices about the structure and writing technique at the beginning of my work.

I want to show my extra thanks to my partners who work in the Nanjing Bolai Urban Planning Design and Research Limited Company. I cannot finish my work successfully without their help during the investigation phase and I would like to thanks for their sincere assistance that provide the very useful suggestions and data during the writing process of my work.

At the same time, I would like to thank the Blekinge Institute of Technology for giving me such a supportive study atmosphere and completed facilities to support me to accomplish this thesis. What's more, I would like to take this opportunity to thank Gunnar Nyström and other staffs working in BTH.

Finally, I also want to thank my family and lots of friends for their support and encouragement to enjoy the wonderful period time in Sweden.
Abstract

With urbanization happening at high-speed throughout China, the issue of how to restore vitality in a historic conservation district and to re-use these districts according to the demands of the modern city has been paid more and more attention by scholars from different fields. Nowadays, local residents and scholars focus on the problem of how to combine local history and culture, the special characteristics and traditions of an area with modern city life while keeping its historic essence. The historic conservation districts regeneration does not resume itself to total reconstruction.

The paper focuses on the questions: what is the Urban Organic Update Theory and how can it provide a theoretical framework to guide the regeneration of historic conservation districts; how to maintain these districts space texture and integrity while updating the function of historic conservation districts and improving the living environment for the local inhabitants.

The thesis begins with of the challenges faced by historic conservation districts in a background of high-speed urbanization. It points out that an important challenge nowadays is that many valuable heritages and historic districts are disappearing in the process of a large-scale of transformation of the old city in China. Then it introduces the Urban Organic Update Theory as a theoretical perspective to address the problem of how to conciliate the preservation of historical districts, with the demands of the current modern city, in China. Some primary methods of Urban Organic Update Theory will be discussed, and further applied in the design proposal for Longxi Street area, in the Dafeng metropolitan area, Jiangsu Province, in China.

The research analyses the example of Ju'er Hu Tong in the South LuoGu Lane area in Beijing, mainly introduced in Professor Wu Liangyong's book, to argue that the
Urban Organic Update Theory is a suitable theory and method for the regeneration of the historic conservation districts where there exists relatively completed urban texture, original space patterns, and traditional feature buildings. By interviewing and visiting the municipal government and local inhabitants, I got the official information and done my design.

The Urban Organic Update Theory emphasizes an adaptive method to achieve the goals of improving and upgrading the living environment for the inhabitants, and explores the potential of the local historical and cultural resources at the same time. The theory is a practical method that argues for preserving, rehabilitating, transforming or removing the buildings in accordance with their comprehensive evaluations. It really has a positive meaning to preserve and update the historic conservation districts organically, dividing the existing buildings into different categories, making different levels of the transformations to the constructions.

The respect for traditional features and the original space patterns will contribute to improve the environment and living conditions for the inhabitants and enhance the value of the districts for local inhabitants and tourists. However, this paper mainly discusses the regeneration of historic conservation districts from the view of urban morphology. Economic and environmental issues are not discussed here, and issues such as gentrification and other social consequences of urban regeneration are not addressed either.

**Keywords:** historic conservation district, Urban Organic Update Theory, urban renewal, China
CONTENTS

ABSTRACT...........................................................................................................................................3

CHAPTER I INTRODUCTION.................................................................................................................7

CHAPTER II HISTORIC CONSERVATION DISTRICTS REGENERATION.................................11

2.1 DEFINITIONS OF THE HISTORIC CONSERVATION DISTRICTS..............................................11
2.2 PROBLEMS AND CHALLENGES OF THESE DISTRICTS IN THE CITY OF TODAY..............16
2.3 THE SIGNIFICANCE OF THESE DISTRICTS RENEWAL FOR THE CITY AND ITS INHABITANTS.19
2.4 SUMMARY......................................................................................................................................21

CHAPTER III - URBAN ORGANIC UPDATE THEORY.................................................................23

3.1 DEFINITIONS AND DEVELOPMENT OF THE THEORY..............................................................23
3.2 APPLICATION OF THE THEORY IN HISTORIC CONSERVATION DISTRICTS REGENERATION....26
   3.2.1 The Location of the South LuoGu Lane Area in Beijing.........................................................26
   3.2.2 Background of the district renewal.......................................................................................28
   3.2.3 Participants of the district renewal.......................................................................................31
   3.2.4 Significance of the district renewal.......................................................................................35
3.3 SUMMARY......................................................................................................................................36

CHAPTER IV DESIGN PROPOSAL..............................................................................................37

4.1 INTRODUCTION TO THE CASE- THE LONGXI STREET IN DAFENG, JIANGSU.................37
   4.1.1 Historic development of the site............................................................................................37
   4.1.2 Goals of the project...............................................................................................................37
4.2 DETAILED INFORMATION AND ANALYSIS OF THE SITE..................................................38
   4.2.1 Location and boundary of the site..........................................................................................38
   4.2.2 Evaluation of spatial patterns................................................................................................40
   4.2.3 Ancient elements conservation status.................................................................................41
   4.2.4 Buildings and functions.........................................................................................................43
   4.2.5 Current land uses..................................................................................................................48
4.3 POTENTIAL AND CHALLENGES WITH THE REGENERATION OF THE LONGXI STREET.....49
4.4 DESIGN PROPOSAL.................................................................................................50
  4.4.1 Spatial pattern.................................................................................................50
  4.4.2 Landscape Design............................................................................................51
  4.4.3 River with street pattern..................................................................................54
  4.4.4 Buildings and functions..................................................................................56
  4.4.5 Traffic.............................................................................................................62
  4.4.4 Land use........................................................................................................63

4.5 SUMMARY.............................................................................................................65

CHAPTER V - CONCLUSION.........................................................................................67

REFERENCES.............................................................................................................70

IMAGE SOURCES AND IMAGE INDEX.......................................................................73
Chapter I Introduction

Historical and cultural districts are often rich in built heritages that testify to a city's long history. However, along with the high-speed urbanization and the transformation of economic and social structures in the past few decades, the life-style of people changed a lot so its demands over the built heritage have also changed. City dwellers and city authorities frown upon old historic districts, with their poor living conditions, the apparent inflexibility of their structures and morphology, and the outdated usages when compared to the standards of living and functional spaces of modern cities.

Numerous ancient buildings and streets with great historical and cultural value are being demolished or rebuilt in the urban modernization process and in this process much of a country's built heritage is being irremediably lost and transformed. Therefore, how to preserve and regenerate the historic conservation districts has become an urgent issue to address, by the city authorities, because there are a lot of historical buildings and districts that are falling into disuse and disappearing. In this process, China and its people loose part of their cultural and built heritages.

The regeneration of historic conservation districts can bring economic benefits to the city and its inhabitants and contribute to the promotion of social and human development. The renewal of historic conservation districts is not the creation of a new space pattern or fabricating a fake history or image for these places. In the historic conservation districts renewal in China, the problem is essentially how to combine the local history and culture, the special characteristics and traditions with modern city life while keeping its historic essence, rather than about indulging on a large scale reconstruction. This problem is misunderstood by lots of urban planners and architects. Buildings in historic conservation districts should be defined from detailed aspects, such as their construction time, architectural style, quality of construction and so on. Then they should be transformed according to different
degree in order to ensure its continued existence, rather than by the method of "one size fits all" mode to reform.

The research questions of this thesis are: What is the Urban Organic Update Theory and how can it provide a theoretical framework to guide the regeneration of historic conservation districts; how to maintain these districts space texture and integrity while updating the function of historic conservation districts and improving the living environment for the local inhabitants.

Even though urban modern life style is spreading, the redevelopment of historic conservation districts needs the traditional, historical and cultural heritages, because they explain the rich cultural, political, social and educational values to generations yet unborn, and shares and exhibits the local unique history and culture to the outside world. I will argue here that it needs more preservation than innovation or creativity. Preservation is defined as "the act or process of applying measures necessary to sustain the existing form, integrity and materials of an historic property." (Weeks and Jandle, 1996, pp.7-22)

However, some authors seem to argue that innovation or creativity are more important in the historic conservation districts regeneration. Lynch states that the renewal "by following all existing spatially located activities, with their physical requirements and linkage, and modifying to accommodate the existing activities, according to some general standards of reasonableness in regard to accommodation and linkage" is "an activity outside the urban design process" (1995, p. 431). He argues that renewal is the creative design, not just preservation. New and old are contrasted to bring out the meaning of each, and so the depth of time is made visible. While in the author's opinion, during the historic conservation districts regeneration process, preservation is more important than creativity for these districts are the memory from the past, their authenticity represents the special cultural, political, social
and educational values for the generations to come.

In China, recent scholars have criticized how urban planners and architects misuse or misinterpret the significance of the historic districts for the history, culture and identity of the city and its inhabitants (Sun, 2005). In the next Chapter, I will point out the problems and challenges that the regeneration of historic conservation districts meets in contemporary China and discuss its definitions by scholars from different fields.

In Chapter three, I will discuss the meaning of Urban Organic Update Theory, first put forward by Wu Liangyong (1994) and discuss the theory, its methods and its challenges in the urban design field. Also in this chapter I will use the example of Juer Hutong neighborhood in the South LuoGu Lane area in Beijing to illustrate that the theory stresses the establishment of a new organic order based on adaptation rather than on complete replacement in historic conservation districts (Zhu, 1996).

In chapter four I will use a case study approach to analyze the case for my design proposal. Additional methods include on site visits and interview to collect the relevant information and data for my design proposal, including: the districts historical background, current conditions, land use, and relationship with neighboring regions. Then on the basis of research on the existing conditions, I will apply the Urban Organic Update Theory and the theoretical methods in an urban renewal project proposal for the Longxi Street in Dafeng metropolitan area, Jiangsu Province, an old historic street area with a long history and rich cultural wealth. In my design proposal, I will take a multi-scale perspective, starting by an analysis of the regional level, for traffic issues and district accessibility, down to the building level, where I discuss preservation and reconversion potentials.

This thesis aims to discuss the positive influences of Urban Organic Update Theory
in the process of historic conservation districts regeneration. It argues that in order to build a sustainable city, it is important to look into the future of the city while preserving and respecting its history. In order to come up with a proper solution to solve the questions mentioned before, this paper tries to introduce the Urban Organic Update Theory as a theoretical guidance and method to figure out the questions. On the base of the example study and the theory research, this paper also give a detailed analyze and a detailed design proposal for a typical historic conservation district in China. However, this paper mainly chooses a theoretical perspective to address the problems which occur in the historic conservation districts regeneration process in China, from an urban design and urban morphology perspectives. It talks more about the regeneration from a physical view, while a comprehensive urban renewal should combine the physical, economic, social, cultural and many other aspects because the regeneration of a historic conservation district is a complicated and complex task.

It’s difficult to investigate historic conservation districts regeneration profoundly from all aspects. Further research on the application of this theory to these cases is required to understand its application and shortcomings. Other methods which could be introduced to support the historic conservation districts regeneration process still need to be implemented in future research.
Chapter II Historic Conservation Districts Regeneration

2.1 Definitions of the Historic Conservation Districts

I consider that historic conservation districts are increasingly regarded as human centered, socially constructed, more of a public than a private good, and a common legacy belonging to all mankind. The world has begun to pay attention to the issue of historic conservation district regeneration in the 1960s. In 1964, the "Venice Charter for the Conservation and Restoration of Monuments" was agreed on by different representatives from the participating nations in UNESCO. It explained in detail that not only the great and old buildings needed protection, but also the general buildings which could be representative of a past time or a particular cultural or historical moment:

_The concept of a historic monument embraces not only the single architectural work but also the urban or rural setting in which is found the evidence of a particular civilization, a significant development or a historic event. This applies not only to great works of art but also to more modest works of the past which have acquired cultural significance with the passing of time. (The Venice Charter, 1964)_

In 1976, the "Nairobi proposal" was passed by UNESCO, expanding the connotation of the word "protection", to include identification, protection, preservation, restoration and regeneration. It pointed out the role and value of the historic areas. It regarded the historic areas as:

_The most important witness to a reflection of religious, cultural and social diversity. They should be passed on to our offspring. Their protection, restoration, and combination with modern life must be thought as one of the basic principles in urban design rules and land development (The Nairobi Proposal, 1976)._
The "Washington Charter" approved in 1987 by the International Council of Ancient Ruins, revised and enriched the concept of the historic areas:

*The historic urban areas, large and small, including cities, towns and historic centers or quarters, together with their natural and man-made environments. Beyond their role as historical documents, these areas embody the values of traditional urban cultures. (The Washington Charter, 1987)*

This Charter determined the principles of historic districts protection and renewal. It is the first time the concept of historic conservation districts regeneration is used.

The historic conservation district in the UK is called "village", which is characterized by its relatively small scale, mixed functions, good walking environments that encompass a mixed use for pedestrians and drivers but do not encourage the use of cars, different types and scales of construction, and different uses of space, combining residential, work, and leisure activities (Tiesdell, Oc and Heath, 1996). The "village" includes all kinds elements of historic conservation districts, such as historically architectural appearance, their historical functions and the surrounding environment.

In China, the concept of historic conservation districts developed from the relevant concepts "historic region", "historic urban areas" and "historic blocks"(Figure 1). On the basis of a research on the related concepts by the domestic and foreign authorities, the Chinese government provided a definition of historic conservation districts officially in 2005, and the concept was defined to mean:

*Group buildings, towns and others where historical heritages are more concentrated, or could reflect the traditional style and ethnic characteristics of a particular historical period. (The Ministry of Construction of the People's Republic of China,*

12
This official documents that formulate the historic conservation districts should be given preferential protection by law. According to the legal document, the historic conservation district should be defined that from the traditional buildings, historical space texture, environments and many other aspects. It is the foundation of the historic conservation districts renewal for the urban planners and scholars in China.

In the book *Design and Historic Preservation*, David and Richard (2009) state that
the regeneration of the historic conservation districts includes three main features: transformation, rehabilitation and conservation. (Figure 2)

**Transformation**, rebuilding, or redevelopment, defined by David and Richard (2009, p. 8) is "the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance of a specific period of time in its historic location." Take the Avenue des Champs-Élysées as an example, it rejected the preliminary planning as the star radial pattern, re-planned in 1838 to broaden the sidewalks on both sides and two rows of trees on both sides. It has become the historical axis of the west of Paris.(Figure 3)

![Figure 3: The Avenue des Champs-Élysées](image)

**Rehabilitation**, defined by Stephen J (1954, p. 9) is "the process of accurately depicting the form, features and character of a property as it appeared at a particular period of time by means of removal of features from other periods in its history and reconstruction of features from the restoration period."(Figure 4)
Conservation, defined by Stephen J (1954, p. 9) is "the act or process of applying measures necessary to sustain the existing form, integrity and materials of an historic property." Take the old city of Rome as an example, in the process of the historic conservation districts regeneration, city authorities try to preserve the integrity of the buildings and street patterns to the fullest. (Figure 5)
According to the definitions and features of historic conservation districts given by the scholars and authorities in urban design, the characteristics of these districts should be defined as the **integrity** of their original styles and features, the **continuity** of history and the **authenticity** of life. The clear definition for historic conservation districts offered by the academic and the Chinese government to provide a theoretical foundation for the protection and regeneration of these districts in China.

### 2.2 Problems and Challenges of these Districts in the City of Today

Historic conservation district regeneration confronts lots of problems and contradictions in the process of a city's modernization. Along with the social, economic and cultural transformations, the traditional city characteristics do not always easily accommodate those of the modern city. The traditional pattern and function of historic conservation districts are also different from the pattern and function of modern city. The city’s spatial structure and function are undergoing a process of modernization, and historic conservation districts are unavoidably experiencing a process of revitalization and modernization as well.

Additionally, an inevitable problem of historic conservation districts is that the existing buildings in these areas are often in decline due to its long usage. Most of ancient buildings are made of brick or wood and more prone to degradation. The living conditions in historic conservation districts can't meet the requirements of the modern city life (Figure 6). Because of the long time of disrepair and neglect use of streets, the physical environment in the areas is deteriorating, for example, the old and shabby street pavement, the damaged buildings, dense population, poor quality housing, the lack of infrastructure and lack of green space, etc (Li, 2003). Therefore, Ruan and Sun (2001) in their research paper found that a wave of historic and old zones reconstruction and redevelopment broke out along with the evolution of the
real estate market since the mid 1990s in China. Facing to the impact of the large-scale transformation of the old city, the landscape, building images, space texture and other aspects of historic conservation districts had been damaged and they need urgent regeneration.

![Image](image.png)

*Figure 6: The Pingyao historic conservation district before renewal*

Thirdly, some investors consider that the historic conservation districts can bring great economic benefits as tourism resources. They tear down old buildings and built new in the name of the tourism industry protection and development and it turns a lot of valuable historic conservation districts into "fake antiques" (Wu and Wang, 2007) meaning buildings that look old in style but are merely a copy of something that existed before, such as The Daowai historic conservation district in Harbin (Figure 7). The Chinese Baroque historic conservation district in Harbin, China used to be a relatively complete collection area of Chinese Baroque buildings. The Chinese
Baroque building refers to a typical building combining the Chinese and Western architecture styles, with the Chinese style of courtyard inside and the Western style of facade. It has a high historical and cultural value. However, in the process of the district renewal and transformation, a large number of buildings with high value were demolished. They were replaced by many new European-style buildings, which completely lost the feature of the original historic conservation and lost their precious historical value. This behavior may obtain a certain economic benefits in short-term, but it will not attract people's interest in the long run for lack of the historical meaning and without any traditional features. The final result is the real historic conservation districts are lost.

![Figure 7: The Daowai Historic Conservation District in Harbin](image)

Finally, the local government forces the original residents in the historic conservation districts to move out, transforms the original houses into shops and other commercial buildings (Figure 8), or into cultural and entertainment facilities in order to increase the land values and attract more rich people to come and invest, which lead to these districts losing their traditional way of life and customs.
2.3 The Significance of these districts renewal for the city and its inhabitants

The historic conservation districts renewal is the combination of individual parts, like houses, public buildings, trees, people and events that form the area's overall characteristics, together with the passing of time and with local history. The renewal of historic conservation districts can help protect their local landmarks and architectural styles and features with high value.

Historic conservation districts have high historical and cultural value. They are the reflections of city's culture and image. They play an important role in the inheritance of city culture and in shaping a city's image. At the same time, they are the living city heritages and always involved in city life, providing for the important substantial and spiritual function service to their inhabitants (Zhong, 2011). Historic conservation districts regeneration is not only to protect the material aspects of the heritages, but to maintain and enhance its vitality, make it become a part of city life once more.
Bridges between academic disciplines as well as between heritage stakeholders, sectors, and scales are to be built in order to achieve a better understanding of the complexity behind historic conservation districts protection, regeneration and its multiple interactions, "no one wants to save or to destroy everything. But the proper balance between preservation and replacement, it is hard to assess; it varies with the durability or evanescence of everything around us; with changing needs for permanence and for novelty, and with economic, cultural, and aesthetic costs and benefits."(Lowenthal, 1985, p.400 ). Lowenthal (1985) states that the preservation and regeneration of historic conservation districts can conserve energy and materials, create jobs and save money. The historic conservation districts are a showcase of a special period in history within the limited space. The contradiction between them and urban modernization is possible to coordinate. Historic conservation districts are conducive to achieve a proper treatment when there is a balance between the relationship of urban renewal, protection and development (Geng, 1998).

It would be impossible to define heritage or culture independently from humans and their history(Muller, 1998). Similarly, historic conservation districts become meaningless if they care only for objects instead of human beings, because “preservation is sought, not for the sake of the objects, but for the sake of the people for whom they have a meaningful life.” (Elizabeth, 1997, p.16)

To local inhabitants, I consider that more local job opportunities and a better quality of life will be created by the renewal of historic conservation districts. The renewal can promote local economic development through, for example, an increase in tourism activities and tourism-revenues. It encourages the adaptive reuse of historic buildings and create the financial benefits to the local municipality, such as the tax benefit, commercial benefit and so on. By reusing existing buildings and improving the public infrastructure, less municipal funds are spent on the construction of new roads, sewer and water lines, and other utilities that support sprawl on the edge of
town, and more funds can be redirected to traditional neighborhoods and downtown development, the identification and evaluation of historic resources, and public education. The variety of housing types, sizes, and features within historic neighborhoods typically leads to greater diversity in the race, occupation, and education level of the people who live there. (Robert, 2003)

2.4 Summary

The traditional historical cities in China are composed of many districts rich for their historical and cultural value. They create a unique sense of place, identity and a particular architectural style, and make a contribution to the city continuity and sustainable development. Through the implementation of the definitions and principles on the historic conservation districts protection and renewal at home and abroad, and the research by scholars in related fields, we can find that people nowadays care more about the problem of historic conservation districts protection and regeneration.

There are many positive reasons for us to invest our attention on the historic conservation districts protection and renewal. The history itself has a unique aesthetic value. The buildings show their valuable architectural diversity. This is not just the aesthetics and visual continuity, but the continuity of cultural memory and of the urban landscape. Historic conservation districts are a symbol of the historical changes of the city. They are the fossil of the city life.

With the rapid economic development and large scale of transformation on old cities in China, large number of historic conservation districts, traditional houses and traditional stores are disappearing, like the Hu Tong in Beijing, or the Long Tang in Shanghai and others with high historical and cultural value heritages. The living conditions and public infrastructure in these areas needs to be improved to meet the
requirements of modern city life. However, the protection and renewal does not mean the completed demolition and rebuilding, or constructing new buildings as a fake historical and cultural atmosphere. We need to think more about how to combine the local history and culture, the special characteristics and traditions and how to reshape the historical and cultural vitality of these districts in the contemporary era on the basis of respecting their history and memory. This is the position taken by the Urban Organic Update Theory, to which I turn to next.
Chapter III - Urban Organic Update Theory

3.1 Definitions and Development of the Theory

In Jane Jacobs work on the urban renewal of American cities, she stated that “Intricate minglings of different uses in cities are not a form of chaos. On the contrary, they represent a complex and highly developed form of order.”(1992, pp.222-230). This intricate complexity of the city was also discussed in the Organic City Theory put forward by Eliel Saarinen. He (1943) points out that any living organism will maintain healthy only when it is in accordance with the basic principles of nature. For these same reasons, towns and cities will develop into balanced areas in the material and spiritual way and only when they are in accordance with the basic principles of their natural and cultural aspects.

The Urban Organic Update Theory follows in these footsteps. It was first put forward by the Liangyong, Wu. In his research on the old city of Beijing and its Juer Hutong neighborhood, he (1994) states that:

"According to the internal rule of the urban development, conform to the texture of the city, on the basis of sustainable development, to explore the city's renewal and development."

Wu emphasizes that the city is a harmonious and unified whole. The historic conservation districts regeneration should pay attention to maintaining the integrity of the city. In other words, it requires to research into the urban pattern and context features of these districts and the surrounding areas. During the renewal process, it needs to follow the rules of history of the urban development in order to maintain the relative integrity of the urban texture of these areas, and guarantee the harmonization and integrity of the whole city. The main features of the urban organic update theory are as follows (Figure 9):
It stresses that the city is a coherent whole. The historic conservation districts regeneration should focus on the study of urban patterns and context features, to maintain the integrity of the urban texture;

- It stressed the participation of local inhabitants. The urban planning department and urban designers ideas should be combined with those from the inhabitants;

- To respect the history, culture and continue the folk-customs. It is better to set up reasonable rebuilding standards, take full advantage of the current situation, reduce the scale of demolition and lower housing cost. In the scale, it should be close to the original scale single story-house and keep the original atmosphere of districts. Maintain the human scale in order to achieve the unity of society, economy, environment and urban cultural benefits.

The Urban Organic Update Theory shows that if solutions could be uniquely tailored for every building quality and historic value style, then a quite complex problem may be broken down into some simpler parts, each of which could proceed with a suitable strategy even though with limited available money. Therefore, the Urban Organic
Update Theory initially comes up with to design the special case of Juer Hutong (Chrysanthemum Lane), a conventional housing area in the old city of Beijing. The principles as Wu stresses, could be applied to the preservation and regeneration of historic conservation districts as a whole. More important, Wu argues that conservation does not completely exclude development (1994, pp. 180-183):

"conservation of the physical order does not imply a negative attitude towards development in the present. On the contrary, successful conservation may only be achieved through well-development."

The development of city happens through a process of "metabolism" (Wu, 1994). It is like the old and new cell update, an organic update. The Urban Organic Update Theory is also a method, suggesting that when protecting historic buildings, it is important to maintain a neighborhood space texture features and their integrity, simultaneously making full use of the historic building’s image. By upgrading the functions of buildings, regenerate the traditional appearance as its historical features, and improve the living environment status, it is possible to enrich the city's community space and to develop the old districts. Simultaneously, it helps to preserve the historic buildings and allow the interior structures of buildings or part of them to be renewed in order to meet the requirements of modern urban life. Different historic and cultural cities have different geographical characteristics and cultural connotations. Their urban style and texture are varied as well, for example, the urban texture of Suzhou is quite different from that of Beijing, but both of them can make full use of the Urban Organic Update Theory to protect and renewal themselves' urban textures and soul of the ancient cities.

The Urban Organic Update Theory (Wu, 1994) advocates that the construction of the historic district should be divided into five categories according to the general maintenance of the building, its height, its year and style of construction and its
aesthetic qualities. Each category is treated differently: the first category is the **cultural relics zone**; the second is the **well-protected area of the traditional styles**; the third one is **mixed area with buildings in different qualities and heights**; the fourth is the **area with buildings in poor quality**; the fifth is the **area mainly with high buildings**. The method of defining and transforming the constructions in historic conservation districts with these five categories will be specific application in the author's design proposal part. By upgrading the constructions organically, the renewal of historic conservation districts can achieve the goals not only low investment and fast benefit, but well preservation of the historical and traditional features and historical images of these districts.

### 3.2 Application of the Theory in Historic Conservation Districts Regeneration

#### 3.2.1 The Location of the South LuoGu Lane Area in Beijing

The South LuoGu Lane area is located in the east part of Beijing and close to the east side of central axis of the city. It is one of oldest historic district in Beijing. The main street of the South LuoGu Lane area, Nanluoguxiang Street is north from the Gulou East Street, south to Di'anmen East Street. The South LuoGu Lane area is regarded as the main backbone of the whole region. Both the east and west sides of the street have eight standardized

![Diagram of South LuoGu Lane Area in Beijing](image)
Hu Tong, which is showed as a form of "fish skeleton" and the texture of Hu Tong with unique features (Figure 10).

The South LuoGu Lane area was built at the same time as the capital of Yuan dynasty 742 years ago. In the city structure of the capital of Yuan dynasty (1271-1368), the South LuoGu Lane area used to be a bustling commercial district. During the Ming dynasty (1368-1644) the region was divided into two parts, named Jing Gone Square and Zhao Hui Square, the main street, Nanluoguxiang Street was the boundary lane of the region. In the Late Ming dynasty, the two squares merged as one part and the main street was the north-south center line of the region. In the Emperor Qianlong period of Qing dynasty (1711-1799), this place was called Ling Zhong Square, while in the Emperor Guangxu to the Emperor Xuantong period (1871-1967), it belonged to the inner left three districts and then belonged to the inner five districts at the beginning of Republic of China. (Figure 11)
There are twenty Hu Tongs in the South LuoGu Lane area and with well-preserved traditional courtyard houses (Figure 12, Wu, 1994), the former houses of celebrities, private gardens, and other landscapes. Nowadays, there are seventeen units of cultural relics protection this area. According to different class, they are divided into different levels from state to district.

![Figure 12: Traditional Beijing courtyard house](image)

### 3.2.2 Background of the district renewal

The rapid development of society and economy in Beijing brought great demand for the land. Due to the increase of population, population density became larger and the old houses became crowded. After 1970, many courtyards had become disorganized, such as a small courtyard of 300 m² was often inhabited by more than 10 families. The traditional courtyard had been occupied by temporary buildings such as improvised kitchens and wash-rooms. They completely lost their original space
features. The Tsinghua University research on the South LuoGu Lane area (1996) found that 18% residents' per capita living space was less than 4 m², while 33.7% of the per capita living space was between 4 m² and 6 m². In other words, that is over 50% of inhabitants in the South LuoGu Lane area had less per capita living space than the average level in Beijing city. (Figure 13, Wu, 1994, p.62)

![Figure 13: The evolution of the floor space of the tradition Beijing courtyard house](image)

Most housing aging phenomenon was serious because of the large resident population and lack of reasonable rehabilitation and upgrading in a long-term. On the basis of Yu's (2009) investigation about the historic conservation districts regeneration in Beijing, she states that almost 75% of the buildings in the South LuoGu Lane area had poor construction condition.

Municipal public facilities were inadequate. Because the construction of municipal
facilities had been long neglected in the district, most families did not have a separate toilet and bathroom. There was no centralized heating equipment in the area and most kitchens were temporary structures. It brought not only more and more narrow-small space, but a considerable fire threat to inhabitants and the historic heritages in the district, hampering the renewal process of the South LuoGu Lane area.

The Juer Hutong renewal made a great influence on the regeneration of the South LuoGu Lane area. Juer Hutong is located in the northeast corner of the South LuoGu Lane area. There exist lots of typical courtyards for residence in Beijing. Its planning and renewal were carried out independently from the South LuoGu Lane area regeneration. The Juer Hutong design and renewal combined with the "neighborhood" of south residential feature and the "fish bone" type characteristics of Beijing urban texture. It was organized by the corridors as the skeleton, form the yards from north to south, east to west (Figure 14, Wu, 1994). The Juer Hutong covers a small area and the entire renewal project is a pilot project. While the South LuoGu Lane area has the similar basic situation, this historic conservation district
regeneration has become most directly affected by the Juer Hutong renewal.

### 3.2.3 Participants of the district renewal

The transformation of the courtyards located in the Nanluoguxiang Street in South LuoGu Lane area for commercial purposes was done by the owners of the shops and commercial establishments, not by any public authority. They paid for the renewal of the courtyard or the old houses they rented, according to their needs, based on the premise of protection and restoration of the traditional historical and cultural features. According to the author's observation of the commercial shops in the main street of the South LuoGu Lane area, the facades and materials selection of most buildings basically respect the local historical and cultural characteristics and the ancient capital features, without very abrupt decoration. Their doors and windows are basically selected sandal wood color and the decoration facing the street mostly used green plants, red lanterns or other natural and traditional elements. It is in harmony with the ancient style of the entire historic conservation district. (Figure 15-17, the main street, Nanluoguxiang Street shops facade, n.d.)

The same with the update of the courtyard for commercial uses in the main street, the
traditional courtyards for inhabitants in the South LuoGu Lane area also gradually began self-updated activities. The local residents updated their houses mostly by themselves, the content including: upgrading, the internal transformation, maintenance cleaning and the renovation of the housing courtyard.

Meanwhile, the municipal government conducted an urban regeneration intervention in part of the South LuoGu Lane area. The entire district has not had a large-scale unified planning or reconstruction since this intervention by the municipal government. This is because when the local government is involved in the district regeneration, it must respect and conform to the pre-existing regional characteristics in the area, with regards to urban integrity, building style, space structure, legislation, etc. The elements which were involved in by the local government include: sanitation facilities, municipal facilities, green space, courtyard facade upgrading and so on. Their renewal and small-scale transformation have promoted the South LuoGu Lane area regeneration and transformation better in the process:

- **Sanitation Facilities**: The local government has taken a series of measures to improve the local public health condition since 1997. The government invest nearly three million RMB to transform 93 public toilets and purchase an extrusion car to collect garbage instead of 6 garbage stations.

<table>
<thead>
<tr>
<th>Year</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>Invest 2.3 million RMB to reform 73 public toilets in the area; Take away 6 garbage stations, invest 185000 RMB to purchase an extrusion car to visit and collect garbage at regular time;</td>
</tr>
<tr>
<td>1999</td>
<td>Transform 20 public toilets in the area</td>
</tr>
</tbody>
</table>

*Table1 The measures in sanitation facilities field by the local government*

*Source: Adapted by the author from The 2009 Yearbook of the East District in Beijing*

- **Municipal Facilities**: The local municipal department has started to repair the fluctuation water facilities, underground pipeline, rain sewage pipelines and
updated the electric wire, electric circuit device system since 1997. It was completed 8000 households to use the electricity for heating instead of using coal fire heating. The conditions of the road and car parking were also improved as well.

<table>
<thead>
<tr>
<th>Year</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>Reform the fluctuation water facilities in the Mao'er Hu Tong market, update the electric wire electric circuit device</td>
</tr>
<tr>
<td>1995</td>
<td>Laid 800 meters water pipe</td>
</tr>
<tr>
<td>2005</td>
<td>Repair and reform the underground pipeline of 30 leaky courtyard and modify a door has separated table for 30 yards</td>
</tr>
<tr>
<td>2006</td>
<td>Invest more than 10 million RMB for the pavement of antique floor tiles in the area and the rain sewage pipelines</td>
</tr>
<tr>
<td>2007</td>
<td>Completed 8000 households in the coal to electricity engineering to allow the residents to bid farewell to nearly years of heating stove in winter, use the electricity for heating; July to September completed the municipal roads renovation and facade restoration in the area;</td>
</tr>
<tr>
<td>2008</td>
<td>Coordinate the surrounding social units, remit the parking problem of the South LuoGu Lane area; Completed the network reconstruction, door line transformation, houses renovation, housing insulation, etc</td>
</tr>
<tr>
<td>2009</td>
<td>Competed the road rehabilitation of Heizhima Hu Tong, Shajing Hu Tong, Fuxiang Hu Tong and Suoyi Hu Tong.</td>
</tr>
</tbody>
</table>

Table2 The measures in municipal facilities field by the local government

Source: Adapted by the author from The 2009 Yearbook of the East District in Beijing

- **Green space**: The local government has paid attention to the improvement of the local surroundings, combining with the regional characteristics and features. Over 1000 square meters new green space were added within the whole district area.
### Year | Measures
--- | ---
2000–04 | Reform the Fuxiang community and its surrounding environment, combining with the regional characteristics, added a total of 700 square meters of new green space and the reconstruction of green space of 720 square meters
2005 | Add the equipments for 500 square meters green space in the Mao'er Hu Tong, and replant shrubs for 100 square meters green space in the area
2007 | Concentrated clip twice for street trees on both sides in the district

*Table 5 The measures in greenery space field by the local government*

*Source: Adapted by the author from The 2009 Yearbook of the East District in Beijing*

- **Courtyard facade upgrading**: The local government has cost 3.1 million RMB to repair the traditional buildings as their original style and features since 1999. The facade of the walls in the Hu Tongs were re-painted. In 2008, the South LuoGu Lane area was listed as one of the eight specialty commercial streets of Beijing to welcome the Olympics Games. In the same year, the historical heritages exhibition project of the God of Wealth Temple was completed and it was regarded as one of the landmarks in the district, and almost 700 square meters building facade on the both sides of the main street, Nanluoguxiang street was completed repair.

<table>
<thead>
<tr>
<th>Year</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>Paint the Hu Tongs wall facade about 13500 square meters</td>
</tr>
<tr>
<td>2000–04</td>
<td>Repair and rebuild the original buildings, and added landmarks in Hu Tongs</td>
</tr>
<tr>
<td>2007</td>
<td>Cost of 3.1 million RMB in feature and style repair, whitewash the wall space about 4500 square meters, repair the doorsteps of 200 yards and shops, repair 120 doors and windows, liquidate not reasonable tablet 120 pieces, remove 50 dilapidated awnings</td>
</tr>
<tr>
<td>Year</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
</tr>
<tr>
<td>2008</td>
<td>The South LuoGu Lane area was listed as one of the eight specialty commercial streets of Beijing to welcome the Olympics; Complete archaize floor brand construction at south gate of the district and finished the historical heritages exhibition project of the God of Wealth Temple; Completed 700 square meters building facade repair on the both sides of the Nanluoguxiang street; Completed the comprehensive implementation of Banchang Hu Tong, Dongmianhua Hu Tong and some other Hu Tongs; Paint the 60000 square meters doors and walls, standardized 95 commercial shops and courtyard gates to improve the whole environment of the district.</td>
</tr>
</tbody>
</table>

*Table 4 The measures in courtyard facade upgrading field by the local government*

*Source: Adapted by the author from The 2009 Yearbook of the East District in Beijing*

### 3.2.4 Significance of the district renewal

Under the tendency to the large-scale of urban transformation in modern city in China, the regeneration of the South LuoGu Lane area is undoubtedly a successful project. Standard regeneration projects in China often focus on large-scale reconstruction, but the Urban Organic Update Theory argues for small-scale reconstruction and attention to preservation instead. It emphasizes the user’s interests primarily, with the local government assistance and many other parties involved in. It not only preliminarily improved the problem of local inhabitants' living conditions, but protected the historical and cultural characteristics of the ancient street in the historic conservation district.

Today with the strong historical and artistic atmosphere in the South LuoGu Lane area, it attracts a lot of people to visit and play. A large number of foreigners settle down, which help the district to add numerous cultural landscapes, and make them
into one of the most famous spots in Beijing.

3.3 Summary

Generally speaking, because functions of the ancient districts are relatively simple, and the constructions are of a same period and same system, it is not difficult to form their unique "organic order", which refers to their integrity texture and features beauty.

The main emphasis of the Urban Organic Update Theory is to conform to the existing integrity of the urban texture and respect its inherent order and regularity in the historic conservation districts regeneration. The theory about old buildings regeneration in the districts stresses that they should be treated differently according to the present situation of houses: maintaining the houses in good quality, with a high heritage value; upgrading and repairing the houses in mid level quality; removing houses damaged or in poor quality.

The South LuoGu Lane area regeneration fully reflects the Urban Organic Update Theory. On the basis of protection of the integrity the structure and keeping the ancient city special features, regenerate the historic conservation districts of the by different levels of transformation in order to make the entire district reborn.
Chapter IV Design Proposal

4.1 Introduction to the case- The Longxi Street in Dafeng, Jiangsu

4.1.1 Historic development of the site

The Longxi street is located in the Caoyan town, which has a long history with great cultural values. Local people were engaged in fishing activities in the Qin Dynasty (221BC-207BC). Two salt fields were set up in the Tang Dynasty (618-907). This area is the south entrance of Dafeng metropolitan area and a very important political, cultural and economic district.

In February 2001, the Caoyan town was named by the People's Government of Jiangsu Province as "the protection zone of ancient salt transportation and distribution center". Nowadays, the historic conservation district still maintains the original characteristics and structure of "combination of water and land, river and street neighborhood".

4.1.2 Goals of the project

This design will follow the guidance of Urban Organic Update Theory, consider the historical origins, and be attentive of the restoration of the street, buildings and landscape pattern, and bring together these three aspects to regenerate the Longxi Street area in the town of Caoyan, in Dafeng metropolitan area. It will begin with the analysis of the features and characteristics of historical elements, in order to reconstruct the historical landscape and the original space patterns. The goals with this design proposal are the following:

1. To improve the living condition for the inhabitants, updating the public facilities;

2. On the basis of historical and cultural resources protection, explore the
tourism potential to develop the local economy;
3. Combined with the present space texture, regenerate the historical scene pattern of the district;
4. Focus on the structures and historical space elements to create the scene of daily life.

4.2 Detailed information and Analysis of the site

4.2.1 Location and boundary of the site

The Longxi Street area is located in the town of Caoyan, in the south west of Dafeng metropolitan area, where there is the coastal area and belongs to the sub-tropical maritime monsoon climate. The weather is warm and humid with abundant rainfall. The town of Caoyan is about 30 kilometers away from the downtown metropolitan area of Dafeng. The town has always been known as the "Golden Triangle" and the
"southern gate" of metropolitan area of Dafeng. The area is less than one hour driving distance from the surrounding cities of Yancheng, Dongtai and Xinghua,. The area is also from within two hours by car Shanghai and within three hours driving from Nanjing. The whole area is influenced by Shanghai’s urban circle, Nanjing’s urban circle and Xuzhou’s urban circle and has great potential in the economic and social developments in the future.(Figure 18)

The locational advantages of the town of Caoyan provide convenient traffic connection to the historic conservation district of the Longxi Street area. The development of the town of Caoyan, which is more and more closely involvement with the surrounding bigger cities, provides a financial support to the Longxi Street area regeneration. It also offers an opportunity for protecting and updating the district organically.

Figure 19: Location and boundary of the site
Longxi Street area has its own historical and cultural protection and regeneration area range: South from the Longmen Bridge; North to the river junction of Jia Gou and Chuanchanghe; the local inhabitants’ houses as the borders of both the East and West sides. The total area is 5.87 hectares and this area is also the author's designed range. (Figure 19)

4.2.2 Evaluation of spatial patterns

The Longxi Street area was regarded as one of the key sites for the ancient salt transportation. In the Ming Dynasty (1368-1644), it formed its unique characteristic of spatial patterns that rely on the canal as axes, extend to both sides and add the specific department for the salt transportation management (Figure 20).

![Spatial patterns in Ming dynasty](image)

Figure 20: Spatial patterns in Ming dynasty

In the Qianlong emperor period of Qing Dynasty (1711-1799), the area increased the public building element on the basis of the spatial patterns of Ming Dynasty (1368-1644). The historical spatial elements came from the process of evolution of the space form and its historical function, such as river, bridge, alley, square and the
like(Figure 21). The combination of the historical landscapes and the original space pattern is the essence of this historic conservation district. They will be the focus of my design proposal.

![Figure 21: Spatial patterns in Qing dynasty](image)

### 4.2.3 Ancient elements conservation status

The Longxi Street area has still retained a large number of historical and cultural heritages. There are six Municipality Protected Historic Sites in the area, like Yongning Bridge, Longmen Bridge, Zhu's House, Qian's House, Ancestor's House, Qian's exhibition, which have very high historical and cultural value. What is more, there exists many well-protected traditional style buildings, seven ancient wells, two ancient bridges and 14 ancient piers in this historic conservation district. The protection and reuse of these ancient elements in the Longxi Street area are the precondition to regenerate this historic conservation district, according to the Urban Organic Update Theory. (Figure 22)
Figure 22: Historical Heritage in the site
Made by author

<table>
<thead>
<tr>
<th>Water</th>
<th>Chuanchanghe, Jia Gou (ancient river for salt transformation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridge</td>
<td>Yongning Bridge, Longmen Bridge</td>
</tr>
<tr>
<td>Alley</td>
<td>Street and Courtyards</td>
</tr>
<tr>
<td>others</td>
<td>Well</td>
</tr>
</tbody>
</table>

Table 5: The historical elements in the site

Figure 23-28: Photos of the historical heritages in Longxi Street area
Taken by author

Longmen Bridge

Zhu's House

Ancestor's House

Qian's House

Qian's exhibition

Yongning Bridge
4.2.4 Buildings and functions

1. Buildings defined by period

The existing buildings are defined, according to their styles and features into four periods: the Ming and Qing dynasty (1368-1840), the period of the Republic of China (1912-1949), the period of 1949 to 1979 and the period after 1980s. Most of buildings in this historic conservation district were constructed during the period of 1949 to 1979. The buildings constructed from the Republic of China and the period of Ming and Qing dynasty are mainly located on both sides of Jia Gou (the ancient river for the salt transportation). According to the analysis the buildings' periods, we
can conclude that almost 80 percent of the buildings in the area were constructed before 1979, there were only a few buildings from the period after the 1980s. (Figure 29)

<table>
<thead>
<tr>
<th>Year</th>
<th>Ming&amp; Qing dynasty</th>
<th>Republic of China</th>
<th>1949~1979</th>
<th>After the 1980s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount</td>
<td>121</td>
<td>3</td>
<td>392</td>
<td>6</td>
</tr>
<tr>
<td>Ratio(%)</td>
<td>23.2</td>
<td>0.6</td>
<td>75.1</td>
<td>1.1</td>
</tr>
</tbody>
</table>

Table 6 The numbers and ratio of buildings from different periods
Made by the author

2. Buildings defined by architectural styles

![Map showing buildings with different architectural styles]

Figure 30: Buildings with different architectural styles
Made by author

The existing buildings are defined into four levels in accordance with their architectural styles (Figure 30).
The buildings in the first level are those with typical characteristics, which can reflect the original history of this historic conservation district. These buildings are in the Chinese classical style. They are the fabric roofs covered with the Chinese-style tiles, small-type hard-hill buildings with the original-wood color windows and doors (Figure 31-33).

![Figure 31-33: the Chinese classic architecture features of the buildings in the Longxi Street area
Taken by the author](image)

The buildings in the second level are those with little construction changes during the usage, but where the overall pattern can reflect the historical patterns in the area. The buildings in the third level are those with a very little part in architectural styles with the original historical style. The buildings in the last level are those with larger size or poor styles, conflicting with the original historical architectural style in the area.

According to the analysis the buildings' architectural styles, it indicates that the first-level buildings mainly exist in the banks of the both sides of the ancient river. The buildings in the fourth level are the industry factory in the south area. The original architectural style of the buildings in the first level in the Longxi Street area should be protected. In addition, a large number of the buildings in the secondary and
third levels are continuing the original history scene pattern. The protection and regeneration of these buildings should be focused on to continue the historical and cultural texture in this historic conservation district.

<table>
<thead>
<tr>
<th>Style</th>
<th>The First level</th>
<th>The Second level</th>
<th>The Third level</th>
<th>The Fourth level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount</td>
<td>90</td>
<td>75</td>
<td>271</td>
<td>86</td>
</tr>
<tr>
<td>Ratio(%)</td>
<td>17.2</td>
<td>14.4</td>
<td>51.9</td>
<td>16.5</td>
</tr>
</tbody>
</table>

Table 7 The numbers and ratio of buildings from different levels of the architecture styles
Made by the author

3. Buildings defined by floors

Figure 34: Buildings with different floors buildings
Made by author
The buildings in the Longxi Street area are no more than three floors. Most of the buildings are just one or two-floors high. The only building with three floors is the courthouse for the district tax office. (Figure 34)

The status of the buildings' height and floors is continuing the basic of the historical space pattern. The buildings with no more than two floors account for more than 90% of the total number of the buildings in the area. It thus makes sense that the protection and regeneration of the traditional and historical characteristics in the area keeps the height of the buildings to maximum two floors.

<table>
<thead>
<tr>
<th>Floors</th>
<th>One Floor</th>
<th>Two Floor</th>
<th>Three Floor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount</td>
<td>488</td>
<td>32</td>
<td>2</td>
</tr>
<tr>
<td>Ratio(%)</td>
<td>93.5</td>
<td>6.1</td>
<td>0.4</td>
</tr>
</tbody>
</table>

*Table 8: The numbers and ratio of the different floors buildings*

Made by author

4. The comprehensive evaluation of the buildings

By analyzing the years of constructions, the architectural styles and the heights of the buildings, we can give the buildings different an comprehensive evaluation in accordance with their historical and existing values (Figure 35). They can be divided into five categories:

1. Buildings are the historical and cultural relics units which should be conserved;
2. Buildings are traditional style with good quality which should be rehabilitated;
3. Buildings are traditional style with poor quality which should be transformed;
4. Buildings are with a very little partially traditional style, which should get a large-scale transformation;
5. Buildings are conflict to the historical features which should be removed or rebuilt.
4.2.5 Current land uses

The Longxi Street area is 5.87 hectares and the land use for cultural relics is approximately 0.10 hectares. Almost half of the land is mainly used for residence. Other plots are used by the municipality (the district tax office), mixed with residence and commercial uses, industry, etc. There is a lack of the green spaces, only 0.20 hectares covering only 3.4% of the total land area (Figure 36)

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Area (hectare)</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residence</td>
<td>2.90</td>
<td>49.40</td>
</tr>
<tr>
<td>Cultural Relics</td>
<td>0.10</td>
<td>1.70</td>
</tr>
<tr>
<td>Municipality</td>
<td>0.07</td>
<td>1.19</td>
</tr>
<tr>
<td>Land Use</td>
<td>Area</td>
<td>Proportion</td>
</tr>
<tr>
<td>----------</td>
<td>------</td>
<td>------------</td>
</tr>
<tr>
<td>Mixed</td>
<td>0.08</td>
<td>1.36</td>
</tr>
<tr>
<td>Industry</td>
<td>0.16</td>
<td>2.72</td>
</tr>
<tr>
<td>Water</td>
<td>1.78</td>
<td>30.32</td>
</tr>
<tr>
<td>Greenery</td>
<td>0.20</td>
<td>3.4</td>
</tr>
<tr>
<td>Road</td>
<td>0.58</td>
<td>9.91</td>
</tr>
<tr>
<td>Total area</td>
<td>5.87</td>
<td>100</td>
</tr>
</tbody>
</table>

*Table 9: Area and proportion of Land use*

*Made by author*

*Figure 36: Current Land Use*

*Made by author*
4.3 Potential and Challenges with the Regeneration of the Longxi Street

According to the specific analysis and research on the existing situation of the historic conservation district, the Longxi Street area, we can see that the location of the area is convenient. More important, there we encounter many municipally protected historical and cultural relics. A large number of traditional style buildings exist on the banks of the both sides of the Jia Gou, the ancient river for salt transportation. Various historical spatial elements, such as water, ancient bridges, alleys are relatively complete in the area. The Longxi Street area has great potential for historical and cultural regeneration and promotion.

However, due to the long-term use and lack of repair, most of the buildings and historical heritages are not well preserved in the area. They cannot meet the requirements for the modern life. The buildings which can reflect the original historical characteristics but are in poor conditions, or the buildings partially not harmonious with the whole traditional patterns need some transformation. The industrial factory has been abandoned for a long time, which results in a waste of land. Then, the historic conservation district lacks of some commercial and entertainment facilities, which can bring the economic benefits and improve the living conditions for the inhabitants. The whole area has not made full use of the existing historical heritages to develop the tourism potential. There is not enough green space. All of the challenges discussed above are the main problems that should be solved in the design part that I turn to next.

4.4 Design Proposal

4.4.1 Spatial pattern

According to the existing space texture and the traditional courtyard style of the buildings in the Longxi Street area, I divide the spatial pattern of the area into three
basic categories (Figure 37):

- Open space
- Semi open space
- Courtyard space

![Diagram of different space structures]

Figura 37: Three basic space structures
Made by author

According to the basic spatial patterns, I will use the following combinations, which formed by space and path, to form the units. A variety of the traditional elements will be put into these units to reshape the original landscape and the historical space patterns. (Figure 38)

![Diagram of different scene unit combinations]

Figura 38: The different scene unit combination
Made by author

4.4.2 Landscape Design

On the basis of the main axis the ancient salt transportation river, Jia Gouan, and the existing municipal historical and cultural relics, I will set the Yongning Bridge, the main street, Longxi Street and the Longmen Bridge as the three main landscape nodes (points 1, 5 and 7 in figure 33). The whole area will be divided into five parts: Zhu's Alley protection part, Longxi Street protection part, Qian's Alley protection part, Liu's Alley protection part and Taiping Alley protection part (Figure 39).
1. Zhu's Alley protection area.

This part will be focused on the municipal units of the cultural relics, with Zhu's House, as a core. I will maintain its traditional features and style, restore the historical scene elements like the ancient dock and the pavilion, in order to shape the open and semi open space landscape and build a waterfront landscape.(Figure 40)
2. **Longxi Streets protection area.** This part will emphasize the municipal units of the cultural relics as well, the main street Longxi street. The ancient river for salt transportation, Jia Gou as the main axis, the design will set up the street landscape, repair the dock and retore the commercial vitality.(Figure 41)

![Figure 41 Hand-drawing by the author](image)

3. **Qian's Alley protection area.** This part will focus on the most representative traditional residence house, Qian's House and the oldest well, Tang well as the landscape core to add pavilions and other landscape elements, restore the ancient dock, form a space scene combining ancient river, ancient dock and ancient buildings. (Figure 42)

![Figure 42 Hand-drawing by the author](image)
4. **Liu's Alley protection area.** This part will establish the local exhibition, combining several courtyard spaces, to present the history and culture of the Caoyan region.

5. **Taiping Alley protection area.** This part will remove the municipal government building because the style of the building conflicts with the traditional features of the whole historic conservation district. The site will be instead with a new greenery park, providing a public space for the residents to have a talk and relax. The area will create the waterfront public space scene and add commercial activities to achieve both the protection and regeneration in the historic conservation district.

4.4.3 **River with street pattern**

*Figure 43: The relationship of the river and street*

*Made by author*
According to the original layout of street and river, the design recreate the landscape of "bridges with people". The relationship between the river and the street has three categories (Figure 43):

- One is the street along the river, which will be mainly located on the west side of the river. People can get close to the river in these areas;
- One is the street along the river, which will be mainly located on the east side of the river. In these areas, people will not have the access to the river;
- One is with buildings aligned along the river, but with no street along the river. This is located on the north-east of the river.

At the same time, the design will use different materials to manage both sides of the ancient river, Jia Gou. The west side of the river will be handled with soft materials like plants and the other side will be covered by some hard materials (Figure 44) to achieve a changeful spatial pattern.

Figure 44: The formations of the river and streets
Made by author
4.4.4 Buildings and functions

On the basis of the research on the Urban Organic Update Theory and the analysis of buildings above, the design will take different levels of the measures to organically regenerate different situations of the buildings in the area. According to the situations and qualities of the buildings, I define the buildings with five levels: the first-level buildings need to be preserved; the second-level buildings need to be rehabilitated; the third-level buildings need to be transformed; the forth-level buildings are similar with the third ones, while they need to be much transformed; the last-level buildings need to be removed (Figure 45).

Figure 45: The plan of buildings
Made by author
- **Conservation**: keep the original styles and features of the municipal historical and cultural relics, and renovate the buildings with the same materials and styles as they looked like in the past. In the plan of the buildings, it indicates that the Zhu's Alley (Figure 46-47) and Qian's Alley (Figure 48-49) will be repaired for their facades faced the street, clean the walls, remove the extra shelters, cover the little blue bricks on the facades, repair windows and doors with the traditional wood color. The goal is to restore the historical appearance of the buildings.

*Figure 46-47: The conservation of the Zhu’s Alley facade
Made by author*
- **Rehabilitation**: renovate the traditional style buildings, make a small scale changes and maintain what they look like originally. I will rehabilitate the walls of these buildings bringing back the traditional features and styles, cover small blue bricks on the facades, and add the false roof on the roof of buildings, use the original wood color doors and windows instead of those existing.(Figure 50-51)
- **Transformation**: change the general buildings in conflict against the original historical scene. The part of the buildings that influence on the whole historical scene will be transformed in accordance with the traditional architectural style. I will use the Chinese classical style architecture features, such as the grid-type wood door and windows, the decorative pattern type door and windows to replace the existing ones, add the false Chinese classical eaves on the roof of house (Figure 52), and remove the stairs outside the house, paint the white wall to regenerate the buildings appearance (Figure 53-56). Here I will use the similar methods to transform the buildings in the third and forth levels.
Figure 52: The Chinese classical style of doors, windows and roof
Made by author
Figure 53-54: The transformation of the general buildings
Made by author
4.4.5 Traffic

In the design proposal, I will strengthen the traffic cohesion of the internal and external road, maintain the existing traditional space texture, and complete the pedestrian traffic system. The external roads surrounding the Longxi Street area will keep the two main roads, one secondary road and third roads for drivers, and the circular road system. The internal road includes the main pedestrians streets which cross the main alleys and limited access to cars along both sides of the ancient river.
for salt transportation. Three parking areas will be built, combining street and the open green space (Figure 57-58).

![Diagram showing traffic system and road width](image)

*Figure 57-58: The traffic system and the width of the inner roads
Made by author*

### 4.4.6 Land use

The regeneration of the historic conservation district will preserve the main function of the residence. It will take full advantage of the historical and cultural heritages and renew their function. I prefer to add more commercial and business land area on the both sides of Jia Gou, the ancient river for salt transportation, and combine the waterfront landscape in order to attract tourists and investors to come. At the same, I would like to add three areas for culture and entertainment facilities. They are the
local library, the museum for the ancient salt transportation history and the stadium for the youth. Because the height and architectural style of the courthouse clash with the traditional features and the whole historical landscape design, the site of the original courthouse for the local government will be replaced by a public greenery park, which gives a good choice for the local inhabitants to do some activities and relax. Then more greenery space will be added to improve the overall landscape of the historic conservation district and beautify the living environment.(Figure 59)

Figure 59: The plan of Land use
Made by author
<table>
<thead>
<tr>
<th>Land Use</th>
<th>Area(hectare)</th>
<th>Proportion(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residence</td>
<td>1.73</td>
<td>29.47</td>
</tr>
<tr>
<td>Cultural Relics</td>
<td>0.22</td>
<td>3.75</td>
</tr>
<tr>
<td>Entertainment</td>
<td>0.19</td>
<td>3.24</td>
</tr>
<tr>
<td>Commercial</td>
<td>0.48</td>
<td>8.18</td>
</tr>
<tr>
<td>Water</td>
<td>1.61</td>
<td>27.43</td>
</tr>
<tr>
<td>Greenery</td>
<td>0.34</td>
<td>5.79</td>
</tr>
<tr>
<td>Road</td>
<td>1.30</td>
<td>22.15</td>
</tr>
<tr>
<td>Total area</td>
<td>5.87</td>
<td>100</td>
</tr>
</tbody>
</table>

*Table 10 The ratio of Land use*

*Made by author*

### 4.5 Summary

There are well-preserved historical spatial texture and traditional characteristics in the historic conservation district of the Longxi Street area. It provides the necessary conditions for the organic regeneration of the whole area. The Urban Organic Update Theory emphasizes that the historic conservation districts with their surroundings are a harmonious and unified whole. The organic regeneration of the historic conservation districts should pay more attention to make different degrees of transformation with respect and protect the historical and spatial integrity as much as possible. The aim of the organic regeneration of the historic conservation district is to upgrade the buildings' conditions to meet the requirements of the modern life, as well as to improve the living environment of the inhabitants and explore the potential of the tourism and commerce, so as to develop the local economy.

The design proposal and plan of the regeneration of the historic conservation district, the Longxi Street area mainly analysis and research on the upgrading of the traditional characteristics and functions of buildings, as well as the recovery and
restructure of the historical spatial texture. However, it does not analysis much about the interior structure of the buildings because it will depend on the owners how to use it. Then, the research on the municipal infrastructure planning is very limited as well, due to it is related to a more specific knowledge while the author does not know much and/or does not have access to information of current infrastructures which would allow for the elaboration of an informed proposal. This design proposal does not introduce much about how the inhabitants participate in the whole process of the Longxi Street area regeneration because of the limited time and information, while I also think activities of the participants are an important aspect in the historic conservation districts regeneration, especially according to the Urban Organic Update Theory, and I will doing a further research on it in the future.(Figure 60)

![Image](image_url)

*Figure 60: The bird view of the Longxi Street area after the regeneration*

*Made by author*
Chapter V - Conclusion

The regeneration of the historic conservation districts is an urgent problem in China. Facing to the challenges of a large-scale transformation and reconstruction in modern times, many new problems are coming up. This study applies a theory of regeneration of historic conservation districts to a specific case in China, in an attempt to discuss possibilities to preserve and reuse these districts more adequately in modern cities.

On the basis of the protection of the well-preserved historical buildings and maintaining the space texture features and their integrity, the applications of the Urban Organic Update Theory emphasizes an adaptive method to achieve the goals of improving and upgrading the living environment for the inhabitants, and explores the potential of the local historical and cultural resources at the same time. Meanwhile, the theory is a practical method that argues for preserving, rehabilitating, transforming or removing the buildings in accordance with their comprehensive evaluations from the constructions' periods, their existing qualities, their architectural styles and the height of the constructions, which is specifically applied into the design proposal, the regeneration of the Longxi Street area.

The regeneration of the historic conservation districts should be recovered the historical landscape and the original space pattern. It is aimed at giving the historic conservation districts a new life and vitality, enriching the formation of the city's space patterns and upgrading the whole city's environment, in order to meet the requirements of the modern city life. It really has a positive meaning to preserve and update the historic conservation districts organically, dividing the existing buildings into different categories, making different levels of the transformations to the constructions, and replacing the elements totally conflict to the entire traditional features with the historical and classical styles elements. This method will realize
both the city and society development by respecting to the existing layout and the traditional characteristics.

Through this method, the historic conservation districts avoid a blindly large-scale reconstruction, which maybe lead to destruction and huge losses to the historical districts space texture and its original landscape. The historic conservation districts regeneration should be transformed from small parts, or at least in the beginning of the regeneration process. Designers and planners should aim for the renewal of the historic conservation districts in this way, step by step to the entire area, so that it will achieve the protection and regeneration of the historic conservation districts finally.

The Urban Organic Update Theory also give us an idea that the organic transformation in the historic conservation districts requires and will not destroy the original features and the integrity of the traditional space texture. But, most of the historic conservation districts have a long history, with complex conditions and functions, such as the Longxi Street area. A variety of factors, like the cultural status, the geography of the site, the inhabitants' educational level, the habits and customs of the inhabitants, and etc need research and study. The regeneration of the historic conservation districts is really a long-term and complicated task. There are many problems appearing unexpectedly during the actual implementation process. The idea of the Urban Organic Update Theory just started to be put forward in China. It needs more practices and cases to further understand its reach and limitations, so the author will do more research and analysis on it in the future.

This paper mainly discusses the regeneration of historic conservation districts from the view of urban morphology. There is limited discussed in the economic and social issues here, other consequences like gentrification after the historic conservation districts regeneration are not addressed either, which will be the further and
continuing study by the author.
References


*The Ministry of Construction of the People's Republic of China 2005/GB50357 1st October 2005 on the conservation planning for historic cities*


UNESCO (United Nations Educational, Scientific and Cultural Organization), 1976. *Recommendations on the protection of the historic district and its contemporary role*


Image Sources and Image Index

Figure 1, The relationship of the related concepts, Made by the author

Figure 2, Three main features of the historic conservation districts regeneration, adopted by the author relationship of the related concepts, Made by the author

Figure 3, JSquare, 2011. A view of the Champs-Élysées from the Arc de Triomphe. Available at: http://en.wikipedia.org/wiki/File:Champs-%C3%89lys%C3%A9es_from_the_Arc_d_e_Triomphe.jpg [Accessed 22 June 2011].

Figure 4, [The Macau Historical and Cultural Street] n.d. [image online] Available at: <http://renjiang911.photo.hexun.com.tw/91409885_d.html> [Accessed 16 October 2011].

Figure 5, The Navona Square in Rome, Taken by the author

Figure 6, [The Historic Conservation District before Renewal] n.d. [image online] Available at: http://image.baidu.com.cn [Accessed 5 October 2009].


Figure 8, [1912 Historic conservation district, Nanjing] n.d. [image online] Available at: http://imgsrc.baidu.com/forum/pic/item/a71ea8d3fd1f4134ce0d6b38251f95cad1c85eb9.jpg [Accessed 11 October 2011].

Figure 9, The features of the Urban Organic Update Theory, Made by the author

Figure 10, Location of the South Lane area, Adopted by the author

Figure 11, [The maps in the history of the South Lane area] n.d. [image online] Available at: http://imgsrc.baidu.com/forum/pic/item/a71ea8d3fd1f4134ce0d6b38251f95cad1c85eb9.jpg [Accessed 11 October 2011].


Figure 13, The evolution of the floor space of the traditional courtyard house, Wu,


Figure 18, The location of town of Caoyan, Made by the author

Figure 19, Location and Boundary of the Longxi Street area. Available at: [http://www.google.com/earth/index.html](http://www.google.com/earth/index.html) [Accessed 14 May 2011]

Figure 20, Spatial patterns in Ming Dynasty, *Hainanzi*

Figure 21, Spatial patterns in Qing Dynasty, *Hainanzi*

Figure 22, Map of the historical heritages in the sites, Made by the author

Figure 23-28, Photos of the historical heritages in the sites, Taken by the author

Figure 29, Map of the buildings from different periods, Made by the author

Figure 30, Map of the buildings with different architectural styles, Made by the author

Figure 31-33, Photos of the Chinese classic architecture features of the buildings in the Longxi Street area, Taken by the author

Figure 34, Map of the buildings with different floors buildings, Made by author

Figure 35, Map of the buildings comprehensive evaluation, Made by author

Figure 36, Map of the current Land Use, Made by author

Figure 37, Three basic space structures, Made by author

Figure 38, The different scene unit combination, Made by author

Figure 39, The idea of the landscape design proposal, Made by author

Figure 40-42, Pictures of the Longxi Street perspective, Hand-drawing by the author

Figure 43, The relationship of the river and street, Made by author

Figure 44, The formations of the river and streets, Made by author
Figure 45, The plan of buildings, Made by author
Figure 46-47, The conservation of the Zhu's Alley facade, Made by author
Figure 48-49, The conservation of the Qian's Alley facade, Made by author
Figure 50-51, The rehabilitation of the traditional features buildings, Made by author
Figure 52, The Chinese classical style of doors, windows and roof, Made by author
Figure 53-56, The transformation of the general buildings, Made by author
Figure 57-58, The traffic system and the width of the inner roads, Made by author
Figure 59, The plan of Land use, Made by author
Figure 60, The bird view of the Longxi Street area after the regeneration