A study on Establishing a General Theory and an Operational Model with the Settlement Preservation in Taiwan's Historical Urban Area

Hung-Chi Song¹
Shih-Ming Chen²

ABSTRACT

In order to prevent the decay of the architecture cultural assets from the old building facing rebuilt. This study attempts to establish a general theory and an operational model with the settlement preservation in Taiwan's historical urban area, to probe into the architectural double-sided issue about the cultural preservation and the building volume. The main topic is that Taiwan's settlement preservation work has to response two conditions: one is owners have the rights for their building volume because of the historical building being privately-owned, the other is owners also needs a fast preservative method for rebuilding their old house because of the Cultural Heritage Preservation Law being long-winded process. From a practical point of view, Taiwan's settlement preservation work can use the ideal of "current-preservation" to set up an operational mechanism on conditions of existing architectural laws and "volume control", and also answer for the double-sided issue about the cultural preservation and the building volume. Then we can proper to prevent the decay of the architecture cultural assets from the old building facing rebuilt.

The conclusion is that Taiwan's settlement preservation work can use the ideal of "current-preservation" to set up an operational mechanism on conditions of existing architectural laws and "volume control", and also answer for the double-sided issue about the cultural preservation and the building volume. Then we can proper to prevent the decay of the architecture cultural assets from the old building facing rebuilt.

KEYWORDS

settlement preservation, current-preservation, operational model

¹. Ph.D Candidate of National Cheng Kung University · Lecture of Department of Interior Design, Shu-Te University
puma@mail.stu.edu.tw

². Associate Professor of Department of Architecture, National Cheng Kung University
chensm@mail.ncku.edu.tw
1. INTRODUCTION

In “the Implementation Rules for the Cultural Heritage Preservation Law” of 2006, settlement is defined as “Structures and ancillary equipment group which have history of geographical features or characteristics, including Taiwan’s indigenous settlement, the Holland-Spain Occupation’s street area, Han’s street area, residence of foreigners during the end of the Qing Dynasty, settlement during the period when Japanese immigrants, Modern dormitories and residential military community and so on”. This article is mainly discuss about the methods of Preservation for the street area during from the Qing Dynasty to the Japanese Occupation, and used Taiwan’s historical urban area as title for research and discussion, and to discuss about the pattern of Han’s street during the end of Dynasty Qing, and also the historical buildings inside the urban development area since the Japanese Occupation until now, especially to which set to be the historical buildings of high volume area, because the preservation for these type of buildings involve old building which need to reconstruct as soon as possible to fulfill the modern life style and quality. At the same time, the result of urban development that gave housing with high building capacity. This has cause people’s discussion on both preservation and development problems.

However, some unusual phenomenon occurs during heritage Preservation work on both historical buildings and historical monuments. This includes 1. Building was destroyed repeatedly before, after or during the assignation process. 2. Government was criticized by all circles because process to set up the preservation law was slow. 3. The cultural property of all people becomes Liabilities for both of owner or administrator. 4. Historical monuments are always out of bound with the development of the area, and becoming the development crisis of the area. 5. After a space is defined as historical space, it becomes the lost space in the city (Liou, S.C. & Chien : 2002 ). Now, the preservation of historical buildings, even though, these historical buildings are as preservation target, but after investigation, registration until to form a complete law set. Also need central government and local government to agree with related act than the problem can be solve, within this period historical building maybe destroy because owner worry about their building will be defined as public wealth, they will lost their private property disposition, so this cause the historical building to be destroy before legal preservation. Due to the above incident, we have to think enthusiastically: settlement preservation in historical urban area may be preserved under existing buildings act, and how to respond to the owners about the needs of building capacity and also the suitable way to reconstruct the preservation building. This is to save the historical buildings in an urban city from being destroyed.

This research is to address; through “investigation method” find out the value of historical building environment and to explore the basic of “minimum preservation spaces”, after the control of current construction act “volume control” and “simulation rebuild mode” for reconstructing the preservation design, estimate all rebuild type of possibility of “part preservation, part reconstruction”, as the beginning of the preservation work and participation by local residents.

1.1 The Review of Taiwan’s Preservation Act

The cultural heritage preservation Law of Taiwan begin during the Japanese occupation period of 1896 “The Protect Rules For Temple Palace of The Island” and the announce of “Taiwan’s Statute for preservation of Natural Monument and historical landmarks” at 1922.

Table 1: The related idea and development of Taiwan Cultural Assets Preservation

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<tr>
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<tr>
<td>Coverage</td>
<td>Point</td>
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<td>Area</td>
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<tr>
<td>Subject</td>
<td>Monument</td>
<td>Historical Buildings</td>
<td>Cultural Park</td>
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<td>Strategic</td>
<td>Appointed</td>
<td>Mark out area</td>
<td>Registration</td>
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<td>Tools</td>
<td>• Law for the Preservation of Antiquities • The Cultural Heritage Preservation Law</td>
<td>• Zoning, • Urban design • The Cultural Heritage Preservation Law</td>
<td>• Zoning, • Urban Design, • TDR, • The Cultural Heritage Preservation Law • Community Development</td>
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<tr>
<td>Target</td>
<td>• Fully Preservation</td>
<td>• Fully Preservation, Conservation and Reused, Partly Preservation</td>
<td>• Fully Preservation, • Conservation and Reused, Partly Preservation And Partly Reconstruct</td>
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1.2 Summary:

From the above discussion, shows that the heritage preservation work in Taiwan have slowly improve from freezing preservation of single building to living style of overall cultural environment preservation. Other than respect the historical value and the authenticity of the building, in other hand it also respect the redevelopment of the social environment. Preservation methods was announce by mark down, appraisal from the top-down of the appointed mechanism, change to the bottom-up of the registered mechanism method, and preservation tools like “Zoning”, “Urban Design” and “TDR” are commonly used internationally to get the preservation work and to form multiple preservation tools. This have clearly show that the heritage preservation work of Taiwan is gradually walking toward the objective of taking care on overall cultural environments such as cultural of building,
community life, economic development, and used flexibility and multi-level, dynamic way to preserve their culture assets.

2. THE RESULT AND DILEMMA OF TAIWAN’S SETTLEMENT PRESERVATION

2.1 Experience Of Taiwan’s Settlement Preservation

In Taiwan there are always entanglements on both preservation and development during the progress of private historical building preservation. So the execution of preservation is not easy because the law has no clearly standardized it. However, from the following three case studies of “old street in Lugang Township, Changhua County”, “old street in Sanxia Township, Taipei County” and “old street in Dadaocheng, Taipei County,” we knew that heritage preservation work is done by using urban planning act of zoning as tools. Through wards the overall review of urban planning method, to mark out the area as either preservation area or private area. Than subscribe another urban design act to restrict the architecture behavior on historical area. Sometime during the progress, continuous resistance of the residence causes a lot of conflict. Later on, TDR methods can solve the problem of building capacity. This has brought heritage preservation work moving for over 20 years. To the residence for willing to coordinated with the historical preservation work policies and regulations.

2.1.1 Three Case Studies Of Taiwan’s Settlement Preservation And The Guildline Of Reconstruct

Case study 1: the preservation plan for the old street in Lugang Township, Changhua
Project Period : 1973～1986
Preservation Plan : “The revised zoning of Lugang urban planning”
Rules of Restriction: there are 4 types of preservation and reconstruction methods;
“completely preservation” (façade of the building, interior of the building and related garden), “façade preservation” (façade of the building and related garden), “partly preservation” (whole building of part 1 and 2, further are above the view of the part of the building, it cannot exceed the viewing sight), “normal preservation” (renovate, reconstruction, increase according to the original style, the building height is not allow to exceed 2 floor or 7 meters height).

Case study 2: the preservation plan for the old street in Sanxia Township, Taipei County
Project Period: 1989～2003
Preservation Plan : “The revised zoning of Sanxia urban planning”
Rules of Restriction: style preservation, original outlook, style restriction, and tie with 50%~240% reward of the capacities.

Case study 3: the preservation plan for the old street in Dadaocheng, Taipei City
Project Period: 1988～2000
Preservation Plan: “The revised master plan & detail plan of Dadaocheng area”,
Rules of Restriction: separate into three types, part 1 and atrium preservation, façade preservation, veranda preservation
Figure 1: Diagram about the control of building preservation and rebuilt of Lugang & Sanxia & Dadaocheng.

2.1.2 Taiwan’s Settlements Preservation Methods

From the review of the above case studies, preservation idea and method can be sum up into 7 methods as below,

1. Maintain the width of the street: this is to protect the historical context of the city and the pattern of the street space.
2. Preserve the façade and the arcade: preserve building outlook to benefit the old building behind to be reconstructed.
3. Control the height of reconstruction: allow reconstruction at specific area; strongly restrain the scenery of the preservation area.
4. Control the style of reconstruction: used “style preservation”, restriction the style of the reconstruction behind the façade to control overall historical scenery.
5. Control the view of streetscape: used “historical landscape preservation line”, restrain the height of the building behind the façade building maintain the streetscape scenery.
6. Capacities Rewards
7. TDR

Table 2: Taiwan’s settlements preservation methods

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<tr>
<th>Method</th>
<th>Lugang’s old street</th>
<th>Sanxia’s old street</th>
<th>Dadaocheng’s old street</th>
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<td>Maintain the width of the street</td>
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<td>Control the height of reconstruction</td>
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2.2 Four Dilemmas Facing By Historical Preservation in Taiwan’s Settlement

1. The main problem of settlement preservation comes from both topics of preservation and development
2. It is very easy to encounter obstacles and rejections from local residents during the process of Heritage Preservation Work thus causing rapid damages to the cultural assets.
3. The revised “Implementation Rules for the Cultural Heritage Preservation Law” on Heritage Preservation inspective Work is by “Registration”, in other words it means “Preservation Will of people”, so it still remains on the level of moral persuasion and lack of effective preservation strategy and execution tools.
4. Enforcing Preservation Work is not easy and time-consuming. Before Preservation Law is established, many Historic Buildings had already been pulled down thus losing their value of preservation.
2.3 Current Issues Of Taiwan’s Settlement Preservation

The main topic is that Taiwan's settlement preservation work has to response two conditions: one is owners have the rights for their building volume because of the historical building being privately-owned, the other is owners also needs a fast preservative method for rebuilding their old house because of the Cultural Heritage Preservation Law being long-winded process. Now, we face two current issues:

1. Think about the two sided problem of “preservation” and “renew” from the discussion of historical building. How to create a dual win situation?
2. Think about the “strategic” and “tools” during historical buildings preservation. How can be benefit to settlement preservation work?

3. THE STRUCTURE OF CURRENT-PRESERVATION ON SETTLEMENT PRESERVATION

The main topic is that Taiwan's settlement preservation work has to response two conditions: one is owners have the rights for their building volume because of the historical building being privately-owned, the other is owners also needs a fast preservative method for rebuilding their old house because of the Cultural Heritage Preservation Law being long-winded process. From a practical point of view, Taiwan's settlement preservation work can use the ideal of "current-preservation" to set up an operational mechanism on conditions of existing architectural laws and "volume control", and also answer for the double-sided issue about the cultural preservation and the building volume. Then we can proper to prevent the decay of the architecture cultural assets from the old building facing rebuilt.

The theory we need for preservation discussion are about “current, local, simple, basically, multiple, variety, dynamically, continuously”. “current, local”, is because old building which need to reconstruct is getting much, but there are not appropriate guidelines of preservation for different housing; “simple, basic”, is because the rules of preservation is too disorderly and cause the owner resist; “multiple, variety”, because the different preservation degree and different historical value of the building, there for the level of preservation and method are different. “dynamically, continuously”, because the concept of preservation and development maybe change according to the change of environment, only good response mechanism can help preservation and development work more effectively. The significance of the preservation theory is below.

1. To value great importance to contemporary life
2. Heritage Preservation Work： “limited” in rebuilding control.
3. Preservation policies： “variety, multiple, soft, zoning”
4. Strategic： “current-preservation”

4. THE OPERATIONAL MODEL OF THE SETTLEMENT CURRENT-PRESERVATION

4.1 The 4 Principles Of Operational Model For Current-Preservation Will Be Explained As Below:

1. The idea of ”Minimum preservation space” means “limited preservation work”, is partly
conservation, partly reconstruction.

2. The basis of legal norms for preservation is the Building Act not by “Implementation Rules for the Cultural Heritage Preservation Law”

3. Preservation tools: "volume control", "historical landscape preservation line"

4. Reasonable indoor configuration: In response to today modern value of life.

**Figure 2**: Diagram of operational model for current-preservation

### 4.2 The Steps of Simulation Operation for Current-Preservation of Building Reconstruction

**Steps 1.: define building preservation restriction**

There are 6 level of building preservation restriction: 1. Building façade and street space, 2. Extend until the space of the first hall, 3. Extend again until the first atrium, 4. than extend again until the second hall, 5. Continue to extent until second atrium, 6. Then extend again until the third hall.

**Figure 3**: The diagram of 6 levels range of building preservation

**Steps 2: diagram is used to explain the simulation of building restriction methods.**

“Minimum preservation space” is used as premise for building reconstruction. Than “historical landscape preservation line” is used to control the height of the rebuilding.

The minimal preservation of the space: Faced old street, the first hall and atrium of each building at North-South area.

**Figure 4**: The minimal range of preservation for substances spaces
Steps 3: after satisfying the above two condition, find out more preservation space for old building.

The maximum preservation of the space: Faced the old street, the first hall, the second hall and the second atrium of the building at the north house; phase 1 and atrium of the building at the South house.

![Figure 5: The maximal range of preservation for substances spaces](image)

5. DISCUSSION

5.1 The Difference between This Current-Preservation And The Previous Preservation:
non 「 Once on the success 」 、 non 「 building type control 」

Because of “Once on the success” lost its flexibility during the communication with residence. It still need a lot of completed package law to proceed the preservation work; “building type control” had cause the resist of the residence due to the non-equal condition of buildings. Even may cause negative evaluation towards the value of cultural property. Therefore, in this article we propose using current building act as accordance. Then set the minimal preservation space of the building. The complete used of building capacity as the premise. The addition of “volume control” and “historical landscape preservation line” to immediately start of private historical building preservation. This research of preservation includes general, current and operational. It mechanism is top-down, to set up the variety of dynamic preservation for “minimum preservation space”. It also starts the consciousness of cultural preservation of the residence.

| Table 3 : The differences between current-preservation and previous preservation |
|-----------------------------------|---------------------------------|----------------------------------|
| Target                           | Previous Preservation           | Current-preservation             |
|                                  | Setting up the preservation area | To rescue the historical building which are demolish and rebuild |
| Strategic                        | Once on the success, totally preservation | Flexibility of current-preservation |
| Basic of Law                     | Cultural property preservation law | According to current Building Act |
|                                  | Zoning                          |                                  |
|                                  | Urban design restriction rules   |                                  |
|                                  | Capacity rewards                |                                  |
|                                  | TDR                             |                                  |
| Restriction tools                | Building type restriction       | Volume control                   |
|                                  |                                | Historical landscape preservation line |
| Restricted capacity              | Unfinished used of legal capacity | The complete used of building capacity as the premise |
| Efficiency                       | Takes long time                 | Immediately execute              |
|                                  | May cause acute destroy of cultural property | Comprehensively rescue historical property |
5.2 The Strategic Of “Current-Preservation”, Although It Is A Measure For Historical Property Rescued. The Meaning Behind Shows About The Attitude Of Normal Preservation For Historical Buildings.

Previously, experience gain during the execution of settlement preservation. Preservation and development are always the main problem during selection. This may cause acute destroy on cultural property and confront against the preservation consciousness. The long term set of regulation will cause the cultural property to be disappearing slowly. Therefor, when we face private historical buildings, a completed and flexible thinking about cultural, social and economic have to be proposed for preservation work. The “current-preservation” values the building development rights of the owner of the historical buildings, it is also the positive approach to rescue the historical building immediately. The meaning behind show us the attitude of settlement preservation. It also has the ecological meaning of the cultural environment.

5.3 The Simulation Rebuild Mode Of “Volume Control” Can Appraise Effectively The Preservation And Rebirth Of Historical Environment

The method of “volume control” used the idea of “partly preservation, partly reconstruction”. The execution of “preserve” and “development” are for dual directional expedition research. It can collectively preserve the cultural spaces in those historical sites and respond to the residents on their rights of using the building volume. It can find out the potential and limitation of the building for reconstruction and to find out the minimum preservation space. This will help on estimation of the space reuse and the impact toward the value of the historical environment.

5.4 “Minimal Preservation Space” Will Help Government to Think About The Appropriate Of the Restriction Limit for Private building.

Through the probe of the value of historical environment and complete used of the capacity after the reconstruction simulation. Further estimate of “minimal preservation space”, the proposed of this point is to measure the preservation of the small area with huge historical value, and also probe about the limit of intervene of government into private building. At the same time, to care about the current needs of the living.

5.5 The Variety Proposals Of Simulation Rebuild Mode Will Be Chose A Scheme By People’s Mutual Discussion Of Selection, And It Will Help To Start The Preservation Conscious Of The Residence.

The drawing of “simulation rebuild mode” compares to writing, it easily offer the residence to discuss. The variety proposals of simulation rebuild mode will be chose a scheme by people’s mutual discussion of selection. And it will help to start the preservation conscious of the residence. The Process has the chance for becoming local rebuilt agreement for the cultural environmental preservation work.

6. CONCLUSIONS

The main purpose is to prevent the decay of the architecture cultural assets from the old building facing rebuilt. This study attempts to establish a general theory and an operational
model with the settlement preservation in Taiwan's historical urban area, to probe into the architectural double-sided issue about the cultural preservation and the building volume. We use the ideal of "current-preservation" to set up a operational mechanisms on conditions of existing architectural laws. "Volume control" and “historical landscape preservation line” are used to control the height of the rebuilding. “Minimal preservation space” is used as premise for building reconstruction. It comes up with variety proposals to offer residence for choice by “simulation rebuild mode”. It mechanism is top-down, to set up the variety of dynamic preservation. This model will enlighten people to understand better the benefits for possible coexistence between “Preservation” and “Development”. This will resolve in time to prevent at the brink of collapse in those cultural spaces and historical sites. At the same time, because of “Minimal preservation space”, then we will allow longer time for the local folks to discuss the matters and reach better and common understanding for the preservation works. We hope to gradually expend and deepen the cultural preservation works on those historical buildings. There will also be opportunity to materialize the execution of the overall city preservation and rebirth works. Summary, the main significance of this preservation is “current, local, simple, basically, multiple, variety, dynamically, continuously” which are current preservation trend. Finally, the potential attempt of this “General Theory and an Operational Model” study is to raise up the issues for discussion on the governmental departments, their attitude of preservation toward the private rights of those historic buildings. This includes execution of limited preservation works; respect of current living cultural value being continuously evolved and developed; and holding softer attitude to deal with the rightful owners. These implications hopefully provide sufficient help for further thought while executing works on preservation planning to those historical living environments.

7. REFERENCES

Council for Cultural Affairs, 2006, Implementation Rules for the Cultural Heritage Preservation Law, Taiwan.
Changhua Town Goverment, 1986, The revised zoning of Lugang’s urban planning ,Taiwan.
Taipei County Goverment, 2003, The revised zoning of Sanxia’s urban planning, Taiwan.
Taipei City Goverment, 2000, The revised master plan & detail plan of Dadaocheng area, Taiwan.