

# Research on the Space Transformation of Huangzhou Chibi Cinema Based on Sustainable Concept

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## ABSTRACT

The rapid development of urban construction has prompted many cities to demolish a large number of old buildings. Through historical changes, Huangzhou Chibi Cinema in the 1980s has become old and outdated and can no longer adapt to the current community use functions. Therefore, this paper proposes to adopt modern technical means to transform, try to retain the historical style of the building, give new use functions to the old building, make it better integrate into the environment of the surrounding buildings in the cinema space, and finally realize the sustainable development of urban construction.

**Keywords:** Reconstruction of old buildings, Sustainable development, Huangzhou Chibi Cinema.

## 1. INTRODUCTION

How to take the most effective technical measures to regenerate old buildings and integrate them into the urban environment under the limited economic conditions is a subject worthy of consideration. The cinema in the old urban area has witnessed the changes of the city and has important protection and inheritance value. The reconstruction of the old buildings is self-improvement under the long-term historical and natural environment, which should not only reflect the application of new ideas and new technologies, but also integrate regional culture, so as to highlight the urban culture and respect the urban history.

## 2. BACKGROUND OF THE STUDY

The renewal speed of modern cities is very fast, and the development of cities cannot be separated from the functional reorganization of buildings. The research on the renovation of old building spaces has practical guiding significance for the renewal of urban areas.

### 2.1 The Need for Urban Development

With the rapid development of urbanization in China, people have put forward higher

requirements for the renewal of cities and buildings, and a livable urban environment is what people want. From the perspective of overall urban development, improving the comprehensive competitiveness of the city is the potential driving force of economic development, and the culture and historical context of the city is the symbol of urban civilization. The rural population has poured into the cities in large numbers, and the massive development of real estate has brought about the increasing number of new buildings. However, the old buildings are facing the problems of demolition and reconstruction. Some old buildings in the old city are gradually abandoned, and the blocks lack popularity and commercial vitality. How to excavate the value of the old buildings is a subject to be concerned about.

### 2.2 The Need for Cultural Heritage

Buildings are solidified art, carrying the context of historical development, and are the preservers and disseminators of culture. From the early protection of individual cultural relics and historic sites to the protection of historic cities, the value of old buildings began to receive constant attention. Buildings have been damaged to a large extent in the process of history. The buildings that can be preserved today are symbols of history, reflecting

the continuity of history and culture. The protection of old buildings is related to the inheritance and development of culture.

### ***2.3 The Need for Economic Development***

The reconstruction of old buildings can better protect the architectural heritage, continue the cultural context, and play a pivotal role in the urban cultural heritage. Maximizing the use of space in old buildings not only saves urban land resources and revitalizes idle commercial areas, but also the transformation of public activity space is conducive to improving the quality of people's use and experience in the space and realizing the optimal allocation of building resources. Therefore, some advanced technical means can be used to reinforce and repair the old buildings on the premise of retaining the original building structure, so as to extend the use value of the old buildings, restore the vitality of the old buildings, further improve the building and the surrounding business environment, and promote the economic development of local tourism and business.

## **3. REUSE OF OLD URBAN BUILDING RESOURCES**

The resource integration of urban old buildings is related to the urban ecological environment, and different renovation methods have different social effects. The renovation path generally has the following two aspects:

### ***3.1 Protection Measures for Old Buildings***

The reconstruction of old buildings in foreign countries has a long history. From the reconstruction of old theaters into houses in ancient Rome, the reconstruction of Hagia Sophia into a mosque, to the reconstruction of old factories in the 1980s in the United States, the commercial value embodied by the old buildings is becoming increasingly important. The reuse of old buildings has been widely used as a means. Western countries have not implemented large-scale demolition and construction in the construction of urban centers to protect the original appearance of buildings as much as possible. For this phenomenon, there should be deeper reasons besides culture. The explode population has led to the chaos of the traffic environment, and the buildings and the surrounding ecological environment have been seriously damaged. The first major problem is the neglect of the protection and transformation of

contemporary buildings. With the development of economic construction, the frequency of building renewal has increased continuously. The blind westernization has led to some buildings being directly pasted with ceramic tiles and marble, copying foreign decorative styles, without thinking about the cultural characteristics of the nation. There are certain historical reasons, but the more important is people's awareness of protection. The second is the misconception of reconstruction. After the country has entered the era of commodity economy, urban construction is dominated by developers, and the government mainly guides, while developers are mainly profit-oriented, varying considerably in quality. It is difficult to obtain appropriate standards in terms of economic interests and cultural protection, which is bound to cause the reconstruction of the old city to a more chaotic state. The old building reconstruction policy could not meet the demand at that time. Urban designers mainly focus on new buildings, and it is difficult to pay attention to the protection and reconstruction of old buildings directly. Moreover, the reconstruction of old buildings is restricted by many regulations. This dilemma has begun to be improved somewhat in recent years as conservation issues have become more important.

### ***3.2 Social Value of Reconstruction***

Mr. Wu Liangyong's "organic renewal" theory has well expounded the unified relationship between regional renewal and urban development, that is, taking appropriate scale, advocating that urban construction should follow the internal development law, retain the texture of the city, innovate under the concept of sustainable development, pay attention to the combination of ecological environment and human factors, and improve the quality of human settlements. Urban renewal is easily misunderstood as the concept of "moving nothing". In fact, people should regard the city as the evolution of an organism, constantly update technology, just like removing the old cells and growing new ones, pay attention to the connection between the old and the new, and constantly improve the modern living facilities to meet the needs of the development of modern technology. Cinema is a public activity space for cultural communication in Chinese cities, which affects people's spiritual life and cultural behavior, and has gone through social and era changes. Cinemas bring people joy and memory in different periods. Although people's entertainment activities are more colorful, the venues are more diversified,

it is not as difficult to watch movies as before, and the phenomenon of hard to get a ticket is gone forever, going to the cinema is more of a special nostalgic complex and a spiritual enjoyment, with a high value of social and historical research.

#### **4. RECONSTRUCTION AND REGENERATION**

The Huangzhou Chibi Cinema has been renovated, and although many problems have been encountered during the implementation of the plan, it has reference significance for other public buildings in the urban area.

##### ***4.1 Current Situation of Huangzhou Chibi Cinema***

In 2018, Huangzhou Chibi Cinema was listed by Huanggang Municipal People's Government as the first batch of historical buildings in the city. The cinema building area is about 5137m<sup>2</sup>, with two floors, being the cultural bridgehead of the past, and bearing the cultural memory of Huangzhou people. The object of this paper is the architecture in the 1980s, which was the turning point of economic development. The scale of the city began to expand continuously, the building was updated rapidly, the style characteristics were obvious, and it was the symbol of an era. Although these buildings are ordinary buildings, they can inherit and develop the urban context to a certain extent, and can continue to be used in terms of physical load, which not only reflects the brand of the times, but also reflects the concept of sustainable development. At present, with the development of the times, cinemas have become high-end consumption places. For the early cinemas, most cities choose to dismantle and rebuild them, but few remain due to historical reasons, so there are still many problems in the protection and reconstruction. For example, various styles of buildings emerge in an endless stream, and merchants build them at will, destroying the overall architectural style. Due to the lack of overall planning, the buildings have little consideration for each other and have not been well controlled. The cinema is not compatible with the historical atmosphere of its street. There is a shortage of urban supporting facilities in the annex, such as seats, garbage cans, green plants and other landscape elements. The seats for street rest seem to have been the place that urban residents yearn for when they go out for activities, but they often lack unified management, resulting in continuous damage and even abandonment. There are also

nonstandard blind tracks. Many blind tracks are occupied by parking spots. The sudden disconnection of blind tracks makes people unable to identify the direction correctly and does not have a good connection with the road entrances and exits. From the perspective of ergonomics, the development of urban civilization is largely reflected in the care for the disabled. Old city streets have more serious surface gathered water. Due to the mismatch between the early planning and the current speed of urban development and construction, the municipal facilities are lagging behind, which brings great inconvenience to pedestrians. The color of the street is relatively simple, the uniform concrete wall and colorful billboards are dazzling, and there is no perfect combination from the color perspective of different types of buildings. The level of street space is monotonous, which can not meet the increasing demand of people's consumption and entertainment. Increasing the interest of street space is conducive to the transformation of street space, and so on. Attention should be paid to these problems in the reconstruction of old cities. The handling of these details requires not only the strength of designers, but also the strength of government departments and even the whole society. The reconstruction of traditional cinemas must adapt to the surrounding environment, and the reconstruction plan and measures must be considered from the overall planning of the city.

##### ***4.2 Design Performance and Scheme***

The types of buildings and block functions in old urban areas are relatively complex, and it is necessary to fully consider the actual needs of residents and urban context, mainly from the following aspects to classify and transform.

###### ***4.2.1 Category***

Generally, the reconstruction of old buildings is divided into three categories. The first is the reconstruction of traditional streets. The historical atmosphere of traditional streets is relatively strong, the overall building is relatively intact, and the architectural age style is relatively obvious. This kind of building is not suitable for drastic reconstruction, but should be repaired according to the overall age style, restoring the old as the old, such as the reconstruction of the roof and the street facade. The second is the reuse of buildings. The original building should be reinforced to ensure the sustainability of the building without affecting the

use of functions, without changing the appearance of the building. And the interior should be decorated according to the needs of residential or commercial functions. For example, some places have been transformed into art galleries, office areas and commercial areas through the transformation of waste factories. The structural space just meets the needs of this kind of public space. This reuse design not only continues the historical and cultural style, but also saves public resources. The third is building expansion. The reconstruction of such buildings is to better serve the needs of modern urban residents and change the deficiencies of the original buildings, such as light problems, unreasonable spatial layout, materials and other problems. The expansion is mainly based on the number and frequency of urban residents, and the protection measures are only secondary to meet different types of space needs.

#### 4.2.2 *Design Principle*

**Uniformity:** In the transformation of the cinema, the overall style and features of the surrounding buildings should be combined to achieve distinctive features and mutual integration. For example, the renovation of the roof can be made into a hipped roof, and the block elements can be integrated in the detailed treatment of windows, columns, etc. In view of the situation that the style of the surrounding residential shops is relatively mixed, the reconstruction can be carried out in stages with one style as the main line to gradually realize the unity with differences and ensure the orderly development of the whole block. **Regionality:** Based on the investigation of the context and history of Huangzhou's local culture, combined with the characteristics of the charming city with the theme of Dongpo culture created by the municipal government, the author pays attention to the injection of Dongpo cultural elements in the indoor and outdoor renovation of the cinema, such as adding decoration to the indoor ceiling, floor, lighting, etc. The wall retains the material of the original building, such as plain grey bricks. Only reinforcement and clear water painting are carried out, the decorative style of the Song Dynasty color painting is also used for the local space, and the overall height of the street building is strictly controlled. **Multi-functionality:** The reconstruction of the cinema can no longer fully meet the single original screening function. The cinema can be transformed into a community activity center, elderly day care center and other public welfare places, and continue to play the public service

function of the early cinema. It can be sure that building a cultural workshop with the theme of film display and taking into account the leisure and entertainment functions of citizens can not only meet the daily needs of urban residents, but also inherit the memory of film culture. **Ecological principle:** sustainable development is the goal of future social and economic development. In the field of architecture, there have been significant changes in materials and construction in recent years, but there is still a gap from the concept of zero emission. Architects are also trying to explore sustainable building construction. Eco-friendly and recyclable materials are being used in large quantities in new buildings, and the eco-friendly concept should also be emphasized in the renovation of cinemas to extend the life of the building as much as possible and reduce building energy consumption. For example, roof greening can be adopted, light green plants such as vegetables and vegetation can be planted, and indoor primary air system and plants can be used to purify the air. These ways can improve the urban environment and enhance the quality of living and working environment for residents.

#### 4.2.3 *Application of Traditional Elements*

In many classic buildings, it is found that buildings that generally conform to aesthetic principles can bring people visual feelings, such as common balance and symmetry, proportion and scale, rhythm and rhyme. In the process of cinema and block reconstruction, in the building as a whole, especially on the building façade, geometric composition or folk art can be used for decoration, refining local humanistic customs and cultural characteristics, reasonably grasping aesthetic principles and attaching importance to people's aesthetic needs, so as to bring about an overall harmonious effect. At present, many urban streets have the same style, which has been gradually destroyed in the process of history. The old houses bearing memories have gradually disappeared, and more western-style styles have been pursued. The cultural charm of streets and cities has gradually receded. In the process of renovation of old buildings, traditional elements should be extracted from multiple perspectives and applied to design to awaken people's perception of traditional urban culture.

#### 4.2.4 Features of Space Transformation

In consideration of the decorative art style of the original building, the painting and tile replacement can be carried out according to the original materials to remove the hollowing part. The stairs can be reinforced and repaired, and the principle of repair is to reinforce first and then dismantle to ensure the safety of construction. The second floor can be added with mezzanine, and through calculating the floor load, the steel structural framework can be set up to further expand the building area, and different spaces are reasonably arranged according to the needs of the cinema reconstruction. The first floor is mainly equipped with a screening hall, where various seats can be placed, and a small viewing space can be opened according to the needs of the crowd, which can be temporarily removed when arranging the exhibition. The original viewing stage should be retained, and other performance activities can be carried out as needed to create a multi-functional stage. The whole cinema usually takes the exhibition of film history as the theme, and can receive other types of exhibitions at ordinary times to maximize the use of cinema space. It can make full use of underground space to meet the demand for supporting facilities around the film museum. Acoustic design shall be carried out on the wall and top surface, and sound insulation treatment shall be carried out on other individual spaces. The spatial pattern of the entrance hall should be preserved, to make a good spatial link with the auditorium, achieve a sharp contrast, display the cultural characteristics of Huangzhou, and build a city cultural brand. The renovation of the old cinema involves professional construction technology. The technical requirements should not only meet the control of the government departments, but also maintain the reasonable optimization of the space function.

### 4.3 Future Development Direction

It is not only necessary to pay attention to the problems encountered in the current urban renovation, but also have a forward-looking awareness of future urban development. Sustainable ecological models are also the future development trend.

#### 4.3.1 Dynamic Protection

With the continuous change of time, the building structure will face the problem of bearing

load, which requires the technical approval and management of the competent department before construction. In particular, new technologies should be used in the reinforcement of the project, such as removing the redundant spaces and lime on the wall, filling with cement, and fixing special parts with steel structures. The whole repair process is an organic renewal process, which requires dynamic protection and management to meet the needs of public space and endow it with new functions.

#### 4.3.2 Being People-oriented

The space layout of most cinemas generally maintains the early planning form, and can no longer meet the space needs of the current urban residents' activities. In the reconstruction, advanced design concepts should be introduced, and the space should be re-divided according to different categories based on human physiological and psychological needs. Only by reasonably arranging the interior furniture and updating the drainage system and waterproof system can it re-awaken the pulse of the old building and create an interior space that conforms to the life and activities of modern people.

#### 4.3.3 Application of New Technologies

In the future, new energy-saving technologies will be applied to both newly-built and old buildings. Building ecological energy-saving buildings is the way to develop green cities. The goal of protecting the ecological environment, saving resources and reducing pollution through greening, intelligent equipment, natural lighting and other technical means not only requires less investment, but also is effective, and can also play a better role in promoting the sustainable development of the building and surrounding environment.

## 5. CONCLUSION

The reconstruction process is bound to be accompanied by the contrast between the new and the old, and the road is tortuous and long. In the new era and social background, it is necessary to constantly explore new construction paths, excavate the hidden value of urban culture and ecology, avoid the waste of land resources, and bring old buildings back to life in urban areas.

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