

# Dopamine Reformed Dangerous Building Punch Card Zhu Jiayu

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**Abstract:** In this paper, the application and effect of dopamine in the reconstruction of dangerous buildings in Zhujiayu are discussed. We analyzed the structural characteristics and damage conditions of the dangerous buildings in Zhujiayu, and put forward the reconstruction scheme based on dopamine element. The self-repair and enhancement properties of dopamine provide a new idea for the reinforcement of dangerous buildings. The experimental results show that the materials using dopamine elements can significantly improve the bearing capacity and stability of dangerous buildings, and provide strong support for the protection and sustainable development of traditional buildings.

**Keywords:** Zhujiayu Ancient Village, Dopamine; Transformation; Youth

## 1. Introduction

### 1.1 Research Background

#### 1.1.1 Concept sorting

Definition of ancient village: Ancient village building refers to the village built before the Republic of China, which has retained a large number of historical evolution, that is, the village environment, village style and village site selection have not changed greatly, and has unique folk customs. Although it has gone through a long time, it still serves people<sup>[1]</sup>. Ancient villages come to mind with their long history and rich cultural heritage, often preserving traditional architecture and providing visitors with an unforgettable cultural experience.

#### 1.1.2 Research background

In recent years, the number of ancient villages has shown an obvious downward trend. According to the data, there are only less than 300 ancient villages with cultural protection value, which is especially precious<sup>[2]</sup>. In this

context, people pay more and more attention to the transformation of ancient villages, and the heart of inheriting history and culture is increasingly strong. China's vast territory, in the natural environment and cultural conditions, the formation of ancient villages with regional characteristics, but this is far from enough, under the challenge of the new situation, the protection of ancient villages need to innovate, need to border with The Times.

As the only famous Chinese historical and cultural village in Shandong Province, Zhujiayu embodies the typical ancient village form of mountain village in northern China<sup>[2]</sup>. However, in recent years, Zhujiayu Village has begun to age, fewer and fewer people know Zhujiayu. When facing new challenges, it is more necessary to innovate. This article uses dopamine color matching to transform the dangerous building of Zhu Jiayu, attracts the attention of young people, and makes the impetuous mood become soothing.

### 1.2 Research Method

Investigation method: The author conducted a field investigation, conducted a planned investigation of Zhu Jiayu's development and historical situation, and analyzed and summarized a large number of materials to find Zhu Jiayu's existing problems and solve them.

### 1.3 Research Purpose

Under the background of urbanization boom, Zhujiayu fails to follow the trend of The Times and most young people are not interested in it. In order to inherit history and make Zhujiayu younger, we should transform it and keep up with the development of The Times on the basis of not changing the original historical conditions.

## 2. Natural Geographic Environment and Development Status of Zhujiayu Ancient Village

## 2.1 The Natural Geographical Environment of Ancient Villages

Regional location: Zhujiayu Village is located in Zhangqiu District, Jinan City, Shandong Province. Specifically, it is located in the northeast of Fengjiayu Town government, about 6 kilometers away from the town government, and 32.3 kilometers away from the district government. Geographically, Zhujiayu Village is adjacent to Zhima Valley in the east and Jinji Valley in the southwest. As shown in Figure 1



**Figure1. General View of Zhujiayu**

Geographical features: The village is located in a narrow area of the mountain col, the terrain changes along the contour line, showing the form of concave. This layout makes Zhujiayu a typical mountain village settlement. From a macro point of view, the overall shape of this mountain village is trapezoidal, which is sandwiched between two mountains and runs north-south. Zhujiayu Village ground height of about 230~280 meters, belongs to the mountainous area.

Climatic characteristics: spring drought and less rain, variable wind direction, large temperature difference in the morning and evening.

Summer is hot and rainy, with plenty of light.

Autumn is cool and dry, the temperature difference between morning and evening is large.

Winter is cold and less snow, prevailing northerly wind.

## 2.2 Development Status of Ancient Villages

Since ancient times, Zhangqiu has mainly relied on agriculture to develop its economy. Near mountains and rivers, agriculture is the pillar of local economy. Later, with the rise of commodity economy and the improvement of people's living standards, local crops could not meet the growing material needs of people, and various post roads and post stations in Zhangqiu quietly emerged. By the end of the Qing Dynasty, there were a total of eight avenues, and after the post station was renamed shop, there were Wenjiapu, Liutangkou shop and twenty Li shop. Zhangqiu City has a general

shop, with horses, dismounts, coachmen, soldiers and other guards<sup>[3]</sup>. Now Zhangqiu has a solid industrial foundation, leading industries and competitive products are developing <sup>[3]</sup>. After research, few people, especially young people, travel to Zhu Jiayu, and few people know the glorious history of Zhu Jiayu.

## 3. Renovation of Zhu Jiayu's Dangerous Building

### 3.1 Problems of Zhu Jiayu

For ancient villages, it is important to retain the original history and culture, but in my opinion, if it wants to be remembered in this era, it must have the characteristics of this era rather than remain unchanged.

Zhu Jiayu after time precipitation, become more charm. However, after many investigations, the original ancient village of Zhujiayu has been unable to attract the attention of young people, and there are countless dangerous buildings on the branch road of Zhujiayu Village, although they were left by local residents before, but most of the walls collapsed and weeds grew in the courtyard. In this fast-paced era, few people will slow down or stop to understand the history of ancient villages such as Zhu Jiayu. As shown in Figure 2



**Figure2. Elderly Visiting Zhujiayu**

At present, there are also many cases of rebuilding ancient cities and villages. At the beginning, the consumers of Shuangta Market were some elderly people, and after the renovation, it attracted many young people from other places. However, the initial audience group, that is, the local residents, is decreasing. In this period of the popular transformation of ancient villages, the transformation of Zhujiayu should not only ensure that the lives of local residents are not affected, but also attract young people and benefit local residents.

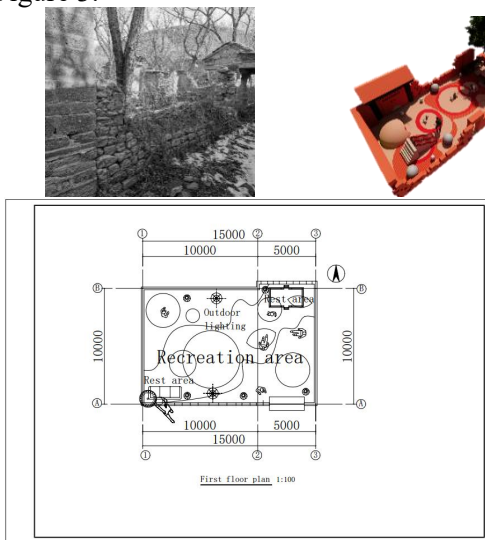
### 3.2 Design Ideas for Transforming Zhu Jiayu

Zhujiayu is divided into two main routes, which retain all traces of people's lives and are a symbol of history, which we cannot change.

While the dangerous buildings on the branch road are abandoned houses and unnoticed buildings, although their historical value is not as good as the value of the main road buildings, they cannot be dismantled in a large area, they are also part of the history of Zhu Jiayu, and only by transformation can the problem be solved.

In today's fast-paced era, people can not stop their pace, but also often worry about the trifles of life and work. In order to solve this problem, a popular dopamine color matching has begun. Dopamine is a catecholamine neurotransmitter existing in nervous tissue and body fluid, which is the material basis of brain function and has an impact on people's emotions and feelings. Then the color of dopamine is the color that will make people feel happy, and bright color matching will make people feel happy physically and mentally<sup>[4]</sup>. It is important to keep a good mood while understanding the history of Zhu Jiayu. Using dopamine color matching to transform the dangerous building, considering people of all ages, using red, green and blue color to transform the dangerous building.

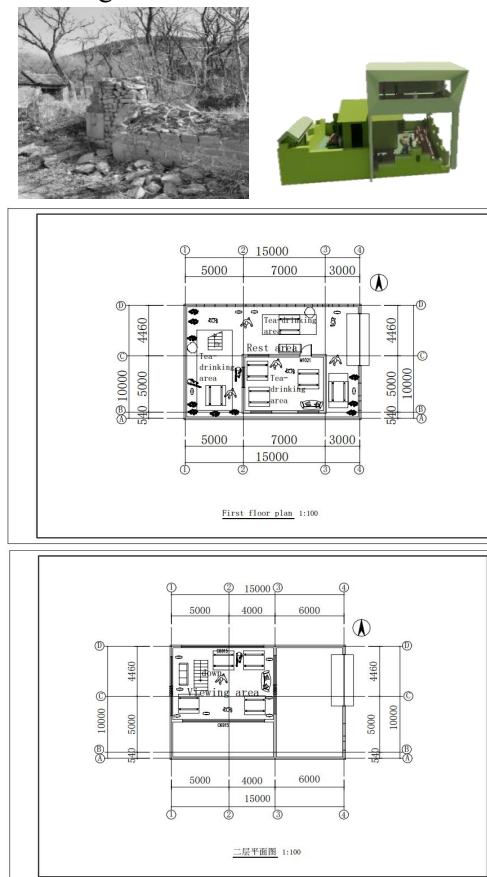
Red represents activity. The interior of the building will be transformed into a children's entertainment area without changing its shape while retaining the history. Books about Zhu Jiayu's history will be placed inside the building to feel the unique charm of Zhu Jiayu while enjoying the parent-child time. As shown in Figure 3.



**Figure3. Red Dangerous Building Renovation and Floor Plan (Author's Self Drawing)**

Green represents quiet, considering that most of

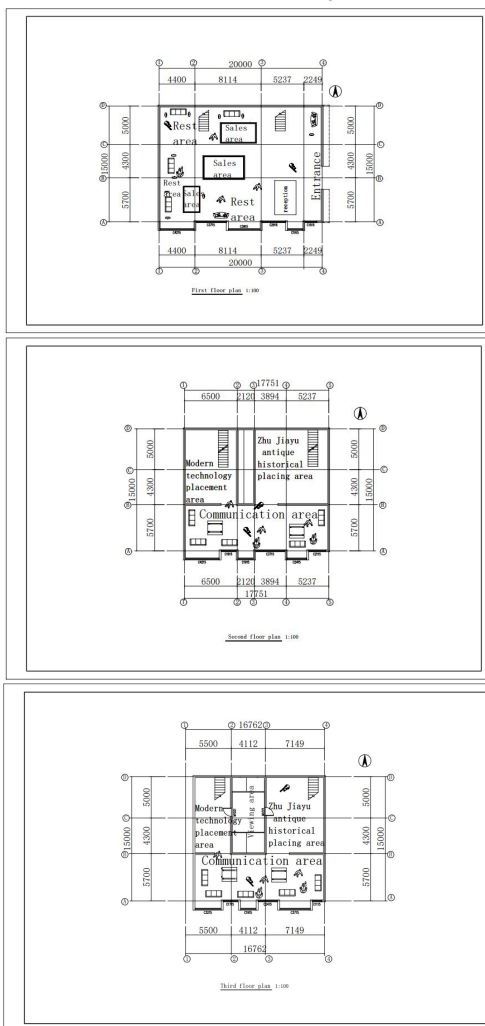
the local residents are empty-nesters, it is transformed into a tea house, the theme is health, and the place for the elderly to rest and exchange. Now there are also some young people to join the ranks of health. In order to better appreciate the scenery of Zhu Jiayu, the aerial viewing platform is built on the basis of the original building by taking advantage of the high terrain. Considering that the local area is in the middle latitude and the summer is hot and sunny, the viewing platform is equipped with overhanging eaves around it to shade the sun, and the overall viewing platform plays a shading role in the outdoor tea drinking area. As shown in Figure 4.



**Figure4. Green Dangerous Building Renovation and First and Second Floor Plans**

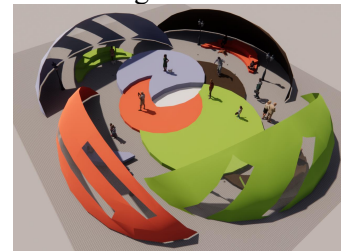
Blue represents the modern and the future. Considering that some young people love science and technology, the building is transformed into an exhibition hall. Books and antiques about the history of Zhujiayu are mainly placed inside the building, followed by a small amount of modern technology. In the building, there is enough space for communication, you can talk about your feelings; Set up a sales area in the first floor, display Zhu

Jiayu's characteristic antiques for people to appreciate and buy; Put green plants in the outside of the building and integrate the concept of modern green development, so that the renovated dangerous buildings have more value of The Times. The small Windows in the north of the building are designed to prevent the Zhu Jiayu relics from being damaged by excessive exposure to the sun. As shown in Figure 5



**Figure5. Blue Dangerous Building Renovation and First, Second, Third Floor Plan**

At the end of the Zhujiayu route, a small square is built, and red, blue, green and brown are used as the main colors, that is, the dopamine colors of the reformed dangerous buildings. Red, blue and green represent modern colors, and brown represents traditional colors, which is a fusion of modernity and tradition. It is built as a circle, representing inclusiveness, and the development of The Times can retain the tradition, and the tradition develops with The Times. Large-scale events such as fireworks shows and light shows are held here to provide a place for people to communicate and enhance emotions between people. As shown in Figure 6



**Figure6. Small Square Model (Author's Self Drawing)**

### 3.3 Analysis of the Location of Renovated Dangerous Buildings

In this fast-paced era, CITYWALK has become popular among young people, who like to quickly punch in and take photos in distinctive places. Therefore, the reconstructed dangerous buildings are placed in different positions, from near to far, and the reconstructed dangerous buildings are used to guide people through all routes, so that they can deeply feel the charm of Zhu Jiayu's history and the local humanistic atmosphere.

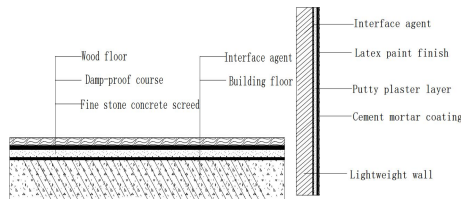
### 3.4 Design Overview

This design is to transform Zhu Jiayu dangerous building, divided into red, green and blue three buildings.

The red building floor material uses PVC rubber floor material, which has non-slip performance and can protect the safety of children when playing. When laying PVC rubber floor material, note that the deviation of length and width should be within the range of  $\pm 0.5\text{mm}$ , the deviation of diagonal should be within the range of  $\pm 0.5\text{mm}$ , and the thickness deviation should be within the range of  $\pm 0.3\text{mm}$ . According to the Architectural Design Code for Nurseries and Kindergartens JGJ39-78, the height of children's slide handrails should not

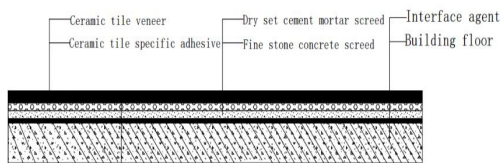
be greater than 0.6m, the height of stair steps should not be greater than 0.15m, and the width should not be less than 0.26m<sup>[5]</sup>

According to the "Technical Regulations for the Application of Building Glass" JGJ113-2015, the observation deck should use tempered glass with a nominal thickness of not less than 12mm, and the glass in the periphery should use tempered glass with a nominal thickness of not less than 10mm. The height of the stairs leading to the observation deck is 195mm, the width of the steps is 240mm, the floor is wooden, the wall is finished with latex paint. As shown in Figure 7



**Figure 7. Diagram (Author's self drawing)**

The large area of the blue building glass curtain wall has a reflectivity of 15% to 20%, and the inclination Angle to the ground is 75% to 115%. The floor is finished with tile and the wall is finished with latex paint. As shown in Figure8



**Figure8. Ground node Diagram**

#### 4. Conclusion

This article deeply discusses the potential and value of dopamine element in the reconstruction of ancient villages. In the face of new situations,

transformation is not blindly imitating, but imitating will only be infinitely close to history, and will never become history. The article points out that dopamine, as a neurotransmitter, can trigger people's sense of pleasure and satisfaction, which provides a new idea for the transformation of Zhujiayu ancient village and adopts the concept of green development. The reconstruction of the dangerous buildings in the branch can not only preserve the cultural history of the original main road, but also maximize the use of the abandoned dangerous buildings; The dangerous buildings in the renovation branch do not affect the lives of the original local residents, but also attract young people. In a word, this article provides useful enlightenment for the transformation of Zhujiayu ancient village, and let us see the possibility of rejuvenating the ancient village.

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