

Research on New Rural Dwellings Design and Regional Culture-Taking Hangzhou as an Example

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Abstract:

This paper examines the current state of Hangzhou's new rural dwellings and their integration with regional culture. To address the imbalance between urban and rural development, China has prioritized issues related to agriculture, rural areas, and farmers, aiming to foster economic and social advancement in rural regions and enhance farmers' living conditions. Hangzhou's new rural dwellings, exemplified by the "Hangzhou-style residential houses," have adeptly merged regional culture with modern needs through innovative planning and architectural design. Case studies of Dongziguan Village and Wangxian Village demonstrate that these new rural dwellings satisfy contemporary living requirements while preserving traditional features, achieving a harmonious coexistence of historical culture and modernization. This paper outlines strategies for integrating new rural dwellings with regional culture in their design and underscores the significance of this construction approach for China's rural development and cultural preservation.

Keywords:

Traditional Village, Regional Culture, Residential Design

1. Introduction

1.1. Background of China's new rural dwellings

In recent years, China has focused on issues concerning agriculture, the countryside, and farmers to address the imbalance between urban and rural development, making systematic arrangements for rural advancement. As rural areas experience economic and social growth and farmers' living standards improve, the desire among farmers to enhance their living conditions and environments has intensified. Consequently, the scale of rural housing construction, investment, and consumer spending have shown a trend of steady growth. [1] The new rural dwelling, as an emerging type of rural residential construction, not only meets farmers' needs for improved living conditions but also contributes to the beautification of the countryside. This type of construction has gradually gained popularity, particularly in economically developed rural areas.

Many rural areas in China are historical and cultural villages that more fully reflect the traditional appearance and regional culture of certain historical periods, forming a significant part of China's rich cultural heritage. However, rapid economic and social development, along with significant lifestyle changes, pose new challenges to the protection and renewal of these historical and cultural villages. Traditional vernacular architecture increasingly fails to meet the demands of modern life, leading to the replacement of old buildings with new rural dwellings. These new constructions aim to better accommodate residents' contemporary needs while preserving the cultural essence of the villages.

However, the construction of new rural dwellings faces several challenges. Firstly, the proliferation of "Western style building" rural dwellings has led to homogenized architectural styles, [2] undermining the unique local rural landscape and hindering the inheritance of regional culture. Secondly, the high cost of renovating new rural dwellings poses a significant barrier, making it difficult for many villages to afford the construction of these new homes.

Therefore, as a form of architecture embodying unique regional culture and social attributes, the modernized design and development of new rural dwellings present both opportunities and challenges. A construction model that balances modernization with traditional culture is crucial for the development of China's rural areas and the preservation and advancement of regional culture.

1.2. The development status of new rural dwellings in Hangzhou

Hangzhou, located in Zhejiang Province, China, initiated the construction of new rural dwellings with the 2014 notice from the Hangzhou Municipal People's Government, which promoted the creation of "Hangzhou residential model villages." This initiative marked the beginning of Hangzhou's new countryside development, with the "Hangzhou residential model villages" becoming emblematic of the city's new rural dwellings. To date, Hangzhou has undertaken new rural dwelling projects in Dongziguan, Wangxian Village, and other areas, making these projects significant examples of new rural dwellings in China.

2. The Integration of New Rural Dwellings Design and Regional Culture

2.1. Integration of regional culture in the planning layout

The planning layout of Hangzhou's new rural dwellings retains the original village's overall layout, departing from the conventional checkerboard pattern. It integrates a limited number of architectural prototypes with twisting, staggering, and mirroring techniques to create a diverse and natural village layout. The varying sizes and degrees of openness in courtyard spaces establish a relationship reminiscent of traditional village landscapes. Unlike the parallel arrangement seen in traditional layouts, the boundaries of the architectural base and courtyards are intertwined. Several clusters grow in an orderly fashion, evolving into an organic and varied settlement pattern that aligns with the traditional Chinese architectural logic of group formation. [3]

2.2. Integration of regional cultures in architectural form

The integration of regional culture in architectural form is primarily reflected in two aspects: roof design and architectural color.

Roof Design: The roof of Hangzhou's new rural dwellings departs from the traditional two-slope or single-slope designs. Instead, it features a decomposed and reconstructed form with gentle curves, creating a continuous, undulating roofline. This design adapts to the modern building's depth and resonates with the surrounding rolling hills. The combination of curved and folded sloping roofs, dark gray roof tiles, and flowing rooflines together produces a distinctive and vibrant visual identity for Hangzhou's architecture.



Figure 1. *Roof forms of new rural dwellings.*

Architectural Colors: The primary colors of Hangzhou's new rural dwellings—black, white, and grey—mirror those found in traditional villages in the region. Building walls feature grey surface bricks and white paint, with wainscoting made from grey bricks to guard against rainwater damage. Courtyard enclosures and main walls predominantly use white paint, accented with grey bricks in selected areas. Hollowed-out bricks further enhance the building's facade, combining simple colors in a refined yet varied manner. The dark grey roof tiles and metal roofing contribute to an overall appearance that resonates with the color palette of traditional buildings. [4]



Figure 2. *Architectural colors of new rural dwellings.*

2.3. Integration of regional culture in architectural materials

The materials and methods used in regional architecture do not merely replicate traditional techniques without regard to advancements in time and technology. In the design of new rural dwellings, materials such as white paint, gray bricks, and imitation wood grain metal grilles are employed. Modern design techniques are used to evoke traditional village aesthetics and meanings while reducing construction costs. This approach facilitates large-scale promotion and application.

In Hangzhou, the primary regional construction materials for new rural dwellings include tiles, decorative masonry, wood, stone, and green bricks. These materials, integral to the local building tradition, reflect the region's cultural heritage. By utilizing these regional materials, the renovation of rural residences partially restores their original character, reconstructs traditional elements using modern design

language, and showcases diverse spatial attributes through various local vernacular materials. This approach effectively highlights the regional expression of the new vernacular architecture.

3. Cases Study of New Rural Dwellings in Hangzhou

3.1. A case of new rural dwellings in Dongziguan Village

Dongziguan Village, situated in Fangkou Town, Fuyang District, Hangzhou City, Zhejiang Province, is an ancient settlement along the Fuchun River. As part of the “Hangzhou residential model villages” project, Dongziguan has developed new rural residences to enhance rural culture and improve farmers’ living conditions. [5] A new residential complex has been constructed in the village’s southeast corner. Additionally, nearly one hundred ancient buildings from the Ming and Qing dynasties, such as the Hsu Family Compound, An Ya Hall, and Yue Shi Temple, have been preserved. The new rural dwellings continue the architectural forms and layouts of these historic structures, maintaining Dongziguan Village’s status as a historically and culturally significant site while improving villagers’ quality of life. Today, Dongziguan Village is renowned across China as a cultural tourism destination.

3.2. A case of new rural dwellings in Wangxian Village

Wangxian Village, located in Fuyang District, Hangzhou City, Zhejiang Province, is a historical and cultural village renowned for its Jiangnan water village characteristics and rich cultural heritage. Celebrated for its picturesque natural environment and deep historical roots, Wangxian Village is one of China’s well-preserved traditional villages. Through thoughtful planning and design, Wangxian Village has achieved notable progress in constructing new rural dwellings. These new residences cater to modern living requirements while preserving and integrating traditional architectural elements, allowing old and new structures to coexist harmoniously. This approach not only enhances residents’ quality of life but also protects the village’s historical features and cultural heritage, establishing it as a model for new rural construction.

4. Conclusions

By exploring the design of new rural dwellings and regional culture in Hangzhou, this paper summarizes the parts of new rural dwellings that are integrated with regional culture in their design. In general, as an architectural form with unique regional culture and social attributes, the design concept and development direction of new rural dwellings have undergone profound changes in the process of modernization. The construction mode of new rural dwellings that takes into account both modernization and traditional culture is crucial to the construction of China’s rural areas as well as the inheritance and development of regional culture. Through scientific planning, rational design and effective management, the new rural dwellings can realize the continuation of historical culture and the release of new vitality of the village, and promote the coordinated development of urban and rural areas. This model not only improves the quality of life of farmers, but also provides valuable experience for the construction of new rural areas in other regions, and is of broad reference significance.

Conflicts of Interest

The author declares that there is no conflict of interest regarding the publication of this article.

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