

MO ZHOU¹

INFUSION AND REFLECTION
BETWEEN TRADITION AND MODERNIZATION
IN CHINESE TRADITIONAL VILLAGE
DURING RURAL REVITALIZATION

INFUZJA I ODZWIERCIEDLENIE
MIĘDZY TRADYCYJĄ A MODERNIZACJĄ
W TRADYCYJNEJ CHIŃSKIEJ WIOSCE
PODCZAS REWITALIZACJI OBSZARÓW WIEJSKICH

Abstract

With the modernization and economic development of Chinese traditional villages, reservation and continuation of tradition becomes more important. During the rural revitalization, more and more authorities, villagers and designers paid attention to the tradition in the rural heritage culture. Obviously, the villagers welcome the idea of prosperity while preserving their values and customs. In addition, many traditional villages have turned to tourism as a means of economic survival and culture preservation. Nonetheless, how will the commercial tourism in the modernization affect their daily lives and values? This paper will explain the inheritance and transformation of traditional and modern rural houses from three aspects: spatial layout, architectural style, and traditional remains by four case studies.

Keywords: Tradition, Modernization, Traditional villages, Rural revitalization

Streszczenie

Wraz z modernizacją i rozwojem gospodarczym tradycyjnych chińskich wsi, zachowywanie i kontynuowanie tradycji staje się coraz istotniejsze. W procesie rewitalizacji wsi coraz więcej przedstawicieli władz, mieszkańców wsi i projektantów zwraca uwagę na tradycję w kulturze dziedzictwa wiejskiego. Oczywiście mieszkańcy wsi z zadowoleniem przyjmują ideę dobrobytu, zachowując jednocześnie swoje wartości i zwyczaje. Co więcej, wiele tradycyjnych wiosek obrało turystykę jako sposób na przetrwanie gospodarcze i zachowanie kultury. Jak jednak komercyjna turystyka towarzysząca modernizacji wpłynie na ich codzienne życie i wartości? Niniejszy artykuł wyjaśnia dziedzictwo i transformację tradycyjnych i nowoczesnych domów wiejskich z uwzględnieniem trzech aspektów: układu przestrzennego, stylu architektonicznego i tradycyjnych pozostałości na podstawie czterech studiów przypadku.

Słowa kluczowe: tradycja, modernizacja, tradycyjne wioski, rewitalizacja obszarów wiejskich

¹ Ph.D. Arch. Mo Zhou, Institute of Architecture and Physical Planning. Faculty of Architecture. Poznan University of Technology, mo.zhou@put.poznan.pl; ORCID 0000-0002-2903-6379

1. INTRODUCTION

Traditional architecture, commonly known as vernacular architecture, is mainly used to define the methods of construction. The vernacular architecture is mostly transported by traditions and is based on knowledge and experience of old generations. In most cases, it is also referred that traditional architecture is a kind of architecture way which is passed down from people to people, generation to generation, particularly orally, but at any level of society not just by common people².

Generally speaking, it reflects the cultural and historical contexts, climate and tradition of local area.

It is commonly recognized that the architecture community has a strong and continuing interest between modern and traditional architecture. Besides, the similarities and infusion are also analyzed by other scholars. As shown by some research, the boundary between tradition and modern architecture is fluid and complex. The vernacular built traditions, such as material and structural sensibility, minimalism, modularity and adaptability, are completely modern. “Based on the similarities in principles, there are the possibilities of two-way transmission of ideas and techniques from traditional buildings to the contemporary ones or from modern to vernacular architecture”³.

Chinese traditional houses have simple, practical and local characteristics, strong adaptability, flexible construction, rich national style, as well as unique historical, cultural and artistic values. Thus, it is very important to realize the preservation of the traditional architecture during the fast economic development. This point was realized much earlier as Liang Sicheng had urged the scholars and the authority should stop destroying the historical buildings in China any more. He regarded the preservation of traditional architecture as the power of reverse growth as well as the obligation of the architects⁴.

Compared with many public buildings and landmarks, the design of traditional dwelling is undoubtedly plain and ordinary, but reflects people’s daily life and habits. As the cultural heritage building, traditional houses are widely scattered in various regions of the country, experience vicissitudes of life, and carry a lot of historical information.

As multiple researches on traditional houses are extensive and in-depth, how to inherit and carry forward the excellent traditional culture has become one of the core topics of research⁵.

In Chinese rural area, “the strategy of rural revitalization” is implemented. During the 19th CPC National Congress, it was claimed as a major strategy with fundamental impact on national livelihood. In recent years, there have been many renovations and rebuilt houses in Chinese traditional villages. Under the profound influence of urban development, increasing numbers of habitants demand for comfortable and contemporary houses. However, the traditional architecture is the object to carry forward the culture. Nowadays, it is becoming very important to inherit and develop the culture and tradition for renovation of the rural residential houses.

² Noble, G. A., *Traditional buildings: a global survey of structural forms and cultural functions*, I. B. Tauris, London 2007, pp. 1–17.

³ Rashida M., RahatAra D., *Modernity in tradition: Reflections on building design and technology in the Asian vernacular*, *Frontiers of Architectural Research*, 2015, Vol. 4, no. 1, pp. 46–55.

⁴ Liang S., *Chinese Architecture History* [original in Chinese], Baihu Literature & Art Publishing House, Tianjin 2005.

⁵ Hu H., *The inspiration of traditional folk house to the design of new rural residence* [in:] *Proceedings of the 2016 5th International Conference on Energy and Environmental Protection*, Atlantis Press 2016.

Through the case studies, especially in the term of typical Siheyuan and traditional Hui-style dwelling, this paper will clarify how to inherit and carry forward the tradition in the modern architecture during the rural revitalization in China.

2. THE CHARACTERISTIC OF CHINESE TRADITIONAL ARCHITECTURE

Chinese traditional residence style is deeply influenced by Chinese traditional culture. On the one hand, China's traditional culture has contributed a lot to the Chinese traditional architectural facade. For instance, the traditional courtyard layout, the building's structural style, artistic conception and other aspects reflect the spiritual connotation of traditional culture⁶.

Traditional cultures such as Confucianism and Taoism have deeply influenced Chinese people's life. Therefore, the characteristics of harmony and balance with the surrounding nature are all reflected in Chinese traditional residential houses. At the same time, the dwelling is all in line with Confucian hierarchy and principle of Fengshui.

Because of the regional and climatic differences, the residential building style of North region is different from that of South region in China. In the north region, courtyards are emphasized in order to maximize sunlight. Generally speaking, the northern dwellings are not so deep and little and have low height, the aim of which is to tighten the interior space and save the heating energy in the hard winter season. Apart from that, most of the residential houses in the village face south. In this way, it can not only provide rooms with sufficient sunlight but also prevent direct invasion of north wind. Additionally, the south windows are generally larger, while there are no windows in the north side. Besides, the arid northern climate makes the flat roofs more practical. The typical northern traditional housing layout is Siheyuan, Shanxi Dayuan and caves.

In southern China, the residential houses often have sloped roof structures due to the frequent rainfall. Beyond that, the courtyard is not quite important because of the relatively warm climate. Indeed, the houses are rarely built with more than one story in the northern plains, whereas it is quite common in the mountainous region in south of China where the building space is less available⁷.

3. THE SPATIAL LAYOUT OF CHINESE COURTYARDS AND TRADITIONAL ARCHITECTURE STYLE

3.1. SIHEYUAN AS THE REPRESENTATIVE TRADITIONAL CHINESE COURTYARD

“Siheyuan”, as a historical type of residence, can be easily found throughout the whole China, especially in Beijing area. The word “Siheyuan” literally means a courtyard sur-

⁶ *Ibidem*.

⁷ Kohrman M., *Technology and Gender: Fabrics of Power in Late Imperial China: Technology and Gender: Fabrics of Power in Late Imperial China*, American Anthropologist, 2008, no. 1, pp. 60, 88, 89, 71, 73, 77, 76, 78, doi: 10.1525/aa.1998.100.1.236.1.

rounded by four buildings. Simply speaking, it refers to the typical Chinese courtyard “enclosed on four sides”. Throughout the Chinese history, the Siheyuan composition is the basic pattern used for residences, palaces, temples, monasteries, family, businesses and government offices. In ancient times, a spacious Siheyuan would be occupied by a single, large and extended family. It was built to house multiple generations of descendants, which represented the richness and prosperity of one family. Beyond that, it was the gathering place for micro-communities.

Siheyuan is a typical form of ancient Chinese architecture, especially that in Beijing city. In recent years, the renovation has enhanced the economic value of Beijing Siheyuan. Meanwhile, it has been retained as the sign of traditional architecture in Beijing city. In the new industrial information society, the old dwellings and courtyards built during the period of farming civilization are inevitably refurbished, but the transformation has once again given them new vitality. It is impossible to judge the future development of Beijing Siheyuan. However, in the traditional and future spatial dimension, the development of future buildings requires the precipitation of traditional residential buildings.

The Siheyuan was built in an enclosed and inward way by taking advantage of sunlight and winds. Additionally, the main houses are usually located along the main axis of the house and face to the south. Furthermore, less important and functional rooms face to the north or two sides – the cooler and more shaded side of the building.

The basic layout smartly protects inhabitants against the harsh winter winds and the dust storms of spring. In tradition, they are the wisdom from the inhabitants and correspond to the local climate. Their design also reflects the Chinese traditional culture and it is supposed to follow the rules of Fengshui. The head of the family lives in the main house which faces to the south. It also follows the Chinese Confucian order and hierarchy in old times.

Today, however, Siheyuan in China are faced with the challenges of transformation or preservation in encroaching urban development and social stress.

In the process of modernization, the development of traditional architecture is divided into two aspects. To be specific, one side is protection and renovation based on the existing layout, which is beneficial to preserve the culture heritage and form a built environment with traditional living culture. The other side is inheritance and innovation. During this process, the modern design architecture should be designed innovatively on the basis of retaining the charm, culture, emotion and traditional architecture as much as possible. At the same time, it is of great necessity to embed the essence of traditional architecture into modern architecture so as to achieve the cultural diversity⁸.

3.2. HUI-STYLE VERNACULAR DWELLINGS IN CHINA

The traditional Hui-style dwelling is one of the representative traditional architecture styles in South of China. The traditional Hui-style dwellings are mostly triads or courtyards. They are safe, independent and clustered. In addition, they are self-contained, which are mostly three or four generations.

The characteristics of the time and space transition of the houses are obvious and representative. Their dwellings can be roughly classified into three types: “—” type, “L” type, and

⁸ Xie K., Cai G., *The Primary Exploration of Integration of Modern Architectural Design Techniques and Traditional Residential Buildings in the North* [original in Chinese], Case studies, March 2018.

“匚” type. The main houses in the courtyard are mostly decorated with corridors, but they are usually no more than two due to the limited resources. The traditional Hui-style dwelling has formed a good overall layout with its own surrounding space maintained by the courtyard. The main rooms are positioned to the north and face the south. Generally speaking, they are symmetrically distributed with balanced spatial layout⁹.

Obviously, the three different spatial layouts present different family sizes and different living conditions of different families. In terms of the “L” type and the “匚” type, it is easy to find out the role of the courtyard in maintaining a family, especially in family gatherings.

For most Hui-style traditional houses, horsehead-like upper corners are popular appeared on the walls, therefore, are often called “horsehead walls”. The horsehead wall is regarded as the most special architectural feature of the Hui-style vernacular dwelling, and has a profound influence on the architectural style in other regions in China¹⁰.

However, due to the increase in population and limited land resources, the spatial layout has been extended not just in the horizontal direction, but rather shows a trend of vertical development. Most of modern residential houses have a height of two or three stories. Furthermore, the overall spatial built area is gradually moving closer to urban area.

3.3. THE CHARACTERISTICS OF TRADITIONAL CHINESE RURAL HOUSING

The features of traditional Chinese architecture reflects Chinese culture. Chinese traditional rural architecture is referred as preference for lumber construction, covering wooden buildings with overhanging roofs, rammed earth buildings, courtyard Compounds, South Facing Orientation, Symmetrical Layouts and South facing orientation etc.

Most of traditional Chinese rural houses were made of wood due to the climate difference in regions and the lack of the transport. Apart from that, bricks, stone ,bamboo ,straw and clay are becoming common construction materials for rural traditional buildings .

In traditional Chinese residential houses, the gable is smartly combined with a sloping roof to form a special “人” shape roof, which is simple, technic, practical, and cost-effective. According to the local climate, most of the Hui residential houses are built with double small slope roofs.

The materials of traditional Hui-style dwelling mostly include the rammed earth, bauxite, blue brick, masonry, wood, lime and tile. Additionally, the external colors are mainly gray and yellow. Modern dwellings have gradually eliminated bauxite and begun to use yellow sand, cement, steel, clear fire bricks, gray tiles, and so on. In terms of color, modern dwelling houses inherit the traditional house’s ash and yellow and also use red, white and other tiles. The color of the doors and windows is mainly black and lacquer. Besides, the use of gray or yellow bricks creates a calm feeling. The decorative part mainly reflects the influence of culture, religion and aesthetic habits. Apart from paying attention to brick carving, wood carving and painting, traditional houses have other unique characteristics, such as cornices, doors and windows. Particularly, the stacking of the cornices not only strengthens the horizontal lines at the cornice but also makes the layering stronger. In the new residential houses, the decorative

⁹ Shi X., She W., Zhou H., Zhang Y., Shi F., Chen W., *Thermal upgrading of Hui-style vernacular dwellings in China using foam concrete*, *Frontiers of Architectural Research*, 2012, Vol. 1, no. 1, pp. 23–33.

¹⁰ *Ibidem*.

elements are relatively reduced, the processing of the details is relatively simple, and the overlapping parts are simplified¹¹.

4. INSPIRATION TO THE MODERN DESIGN OF RURAL REVITALIZATION PROJECTS WITH THE CASE STUDIES

4.1. THE MODERN ECO-HOUSE BASED ON THE TRADITIONAL COURTYARD

Eco-home in Anji is designed for the small family. The layout of the home is an innovation based on Chinese traditional residential courtyard.

In fact, the project insists on inheriting the traditional residential layout. However, compared with the traditional courtyard residence, the main room is no longer partitioned. Instead, it becomes an open space for dining and living. At the same time, skylights are added to improve the lighting of the main room.

There is a long history of rammed-earth housing in Anji County. Most of the old rural houses in Anji are a blend of timber frame and rammed-earth infilling. With the diffusion of modern building materials, traditional rammed-earth construction gradually disappears. At the same time, the rural residents demolish their old houses and rebuild them with modern building materials. Then, the demolished wood frames are reused by the villagers to build the experimental houses. The rest of wood used in the houses is fast-growing Chinese fir. He also brings back rammed-earth techniques in his eco-houses practice¹².

In the traditional courtyard residence in southern China, the courtyard has the function of rainwater collection, fire protection, lighting and ventilation. The residences always have two floors. Additionally, the courtyard in Southern China is smaller than that in northern China, the purpose of which is to protect from baking under the summer sun.

4.2. THE MODERN ARCHITECTURE IN THE VILLAGE RECONSTRUCTION WITH PROTECTION OF THE LOCAL CHARACTERISTICS

Since ancient times, drama stages have played an important position in the cultural life of Chinese countryside. Generally speaking, a stage is normally located in the a public center of one village in Chinese villages. In the past, the combination of “stage and rostrum” has once given this former traditional architectural element new life in the modern context. Besides, the stages is supposed to extend the various sport events, rural elections, festival performances and other activities for the villagers. However, with the change of rural governmental structure and modernization in Chinese villages in recent years, the original function of stages is gradually becoming weaker and weaker. Meanwhile, many large stages invested by villages have been abandoned for a long time. In the context of contemporary villages under the rural

¹¹ Zhang S., *Comparison Of The Characteristics Of Traditional And Modern N. Anhui Rural Residence*, [original in Chinese], A&C Case Studies, 2016, 53.

¹² Li Y., *Renovation of vernacular architecture in rural China*, PhD thesis, 2017, <http://www.tdx.cat/?localeattribute=es>

revitalization strategies, their enclosing space character, massive volume, and singular function have become increasingly embarrassing.

The case study with the renovation of the Beihedong drama stages, Shandong designed by the local architect Fu Yingbin is showing the modernization of Chinese traditional drama stage. While designing Beihedong stage, the idea is to provide multi-function and more space for public activities by the drama stage instead of only performance in the past. Following this idea, the spatial formation is greatly changed by destroying the old walls and a huge floating skyhook ceiling applied by providing shelter for various activities and gathering the villagers.

Then, the stage is completely formed as an open space under the suspended ceiling, which is convenient for performances and more seats provided for the villages. In this way, villagers can sit around and chat even in their spare time. The whole stage, which is presented in the village in a free, open and communal manner, carries different kinds of public activities for villagers. The whole roof structure is sprayed with festive red, which becomes a landmark installation in the village. The Plaza where the stage is located is also a place for the rural market. When colorful stalls and bustling crowds filled in the markets, the nearby stage is forming a fantastic and mutually contrasting view of rural life corresponding to the amazing rural landscape. Because the red color is repressing good luck in Chinese traditional culture, the structure of the stage are painted into red color, which reflects the modernization of rural public facility is closely related to the traditional architecture elements. With the rural development in China, its design has not been fully constrained within the forms and materials chasing “tradition” and “inheritance”. In many cases, it may be a better choice to honestly serve the realistic and unique demands of current countryside by using the contemporary techniques as the fundamental methodologies. Nowadays, the drama stage again is becoming the rural landmark of public activities.

4.3. THE CASE STUDY WITH MODERN RURAL B&B HOTEL BASED ON TRADITIONAL SIHEYUAN COURTYARD

Through the case study – “Redefining an Old Siheyuan in the Old District Around Beijing to a Modern Courtyard by B.L.U.E. Architecture Studio”, it can be seen that the historic architectural layout was preserved. Apart from that, modern design and mixed materials such as concrete, brownish wood and glass are adapted during the renovation process. In this way, it can help enhance the harmony between tradition and modern architecture and the cultural heritage is also preserved.

The courtyard house, as the unit, again reflects the close relationship between its inhabitants and nature. Meanwhile, there are some variations responding to prevailing climatic conditions.

4.4. THE MODERN DESIGN FOLLOWING THE CHINESE TRADITIONAL CULTURE AND LANDSCAPE ARCHITECTURE

It is a very old popular Chinese saying “living back into nature” which is pursued by a lot of designers under the fast life pace nowadays. The project Deep³ Courtyard designed by SU Architects is exactly showing the modern rural housing based on the traditional Chinese living style. There is a tradition of creating beautiful private gardens in this region. Therefore, it is

emphasized that modern building technology to improve the living condition in comfortable way. Modern houses in the deep courtyard by following the traditional cultures of living surrounding the nature were reflected quite well in this project.

In the aim of forming a spatial layout in the deep yards, the designer smartly enlarged the longitudinal scale of circulation, scenic views and even timeline though the strategic transition and composition of spaces on the existing long and narrow site.

Although this project was constructed from steel structural system, the architectural archetype of this project originates from the traditional Chinese architectural pavilion element named “Ting”, which is a pavilion specially constructed from wooden beams. The huge overhanging roofs extend the boundaries of architecture into the courtyard and gardens, which is the main idea of formation of the big garden house divided into three deep occupied space-deep³ courtyard.

5. CONCLUSION

To conclude, traditional dwelling is a valuable culture and wealth. In the modern architecture, a lot of elements should be continuously used, well analyzed and studied in order to discover the wisest elements and apply them to modern dwellings through the “redesign” of modern dwellings. Furthermore, the essence of traditional Chinese architecture will be promoted in the modern residential design.

“Modern dwelling” draws on “tradition”. Its purpose should not just be used for reference. Indeed, infusion, improvement and development are more important. Therefore, the “tradition” can renew its vitality. In addition, research on modern architecture can promote traditional architecture, especially with the application of new technology in modern residential housing.

In the process of modern design, we reorganize the natural and traditional elements – mountain, stone, roof, window, and column – into the new architectural form as significant symbols. For instance, traditional big roofs sketch the contours of mountains in a range and well-arranged side walls form vivid elevations of the building. Beyond that, carved hollow windows and modular columns switch life exterior and internal space.

With the rapid development of Chinese villages, it is essential to embrace both traditional and contemporary elements so as to create the houses that can better meet the demand of inhabitants.

Undoubtedly, it is a wise decision to apply the concept of traditional Chinese architecture to contemporary designs or use the elements of contemporary architecture to highlight the features of traditional culture. Generally speaking, the traditional Chinese culture should be inherited in the new rural projects during the modernization of the Chinese villages. As for many architects, displaying the spirit of traditional Chinese culture in architecture is the approach to inherit the traditional culture during the modernization.

Nowadays, Chinese architecture increasingly embodies the innovation of technology. Meanwhile, many architects try to express their respect for tradition by incorporating elements of ancient Chinese architecture styles in their design projects. Therefore, the architects should show more respect to the tradition and history, which is conducive to the inheritance of the tradition as well as the infusion between the tradition and modern architecture.



III. 1. Affordable Housing for located in the heart of Dongziguan Village in Fuyang Hangzhou (by GAD architects). The contemporary rural architecture reflects the traditional Chinese housing style with “人” shape rooftop. It aims at improving living condition for relocated farmers.



III. 2. A drama stage for the Beihedong Village in Zibo City, Shandong Province, China (by Fu Yingbin). The huge floating skyhook ceiling is applied in the renovation project of rural performance stage, which is provided places for various public activities following the traditional Chinese culture.



Ill. 3. A drama stage with surrounding environment located in the Beihedong Village in Zibo City, Shandong Province, China (by Fu Yingbin). Through the photo provided by local Architect Fu Yingbin, it can express that the modern public building in Chinese village is corresponding to the surrounding traditional architecture. The renovated drama stage is becoming a landmark of the place and a recognizable element of the village.



Ill. 4. Deep³ Courtyard south of Yangtze River, Jiangsu China. The Project is designed by SU Architects (Photo by Shengliang Su) 2015. The project reflects the modern construction technology and living comfort, satisfying the spiritual needs for those Chinese who still really treasured Chinese traditional Cultures of living themselves to the nature.

References

- [1] Chan, C.C., Xiong, Y., *What forces that shape and retain the Beijing courtyard houses?* [in:] *Proceedings of the 3rd Hawaii International Conference on Arts and Humanities*, Honolulu, 2005, pp. 794–805.
- [2] Hu H., *The inspiration of traditional folk house to the design of new rural residence* [in:] *Proceedings of the 2016 5th International Conference on Energy and Environmental Protection (ICEEP 2016)*, Atlantis Press 2016.
- [3] Kohrman M., *Technology and Gender: Fabrics of Power in Late Imperial China: Technology and Gender: Fabrics of Power in Late Imperial China*, *American Anthropologist*, 2008, no. 1, pp. 60, 88, 89, 71, 73, 77, 76, 78, doi:10.1525/aa.1998.100.1.236.1
- [4] Liang S., *Chinese Architecture History* [original in Chinese], Baihu Literature & Art Publishing House, Tianjin 2005.
- [5] Li Y., *Renovation of vernacular architecture in rural China*, PhD thesis, 2017, <http://www.tdx.cat/?localeattribute=es>
- [6] Noble, G. A., *Traditional buildings: a global survey of structural forms and cultural functions*, I. B. Tauris, New York – London, pp. 1–17.
- [7] Rashida M., Rahat Ara D., *Modernity in tradition: Reflections on building design and technology in the Asian vernacular*, *Frontiers of Architectural Research*, 2015, Vol. 4, no. 1, pp. 46–55.
- [8] Shi X., She W., Zhou H., Zhang Y., Shi F., Chen W., *Thermal upgrading of Hui-style vernacular dwellings in China using foam concrete*, *Frontiers of Architectural Research*, 2012, Vol. 1, no. 1, pp. 23–33.
- [9] Xie K., Cai G., *The Primary Exploration of Integration of Modern Architectural Design Techniques and Traditional Residential Buildings in the North* [original in Chinese], Case studies, March 2018.
- [10] Zhang S., *Comparison of the Characteristics of Traditional and Modern N. Anhui Rural Residence* [original in Chinese], *A&C Case Studies*, 2016, 53.

Author's note:

Currently working as a lecturer at the Faculty of Architecture, Poznan University of Technology. She is doing research and practice on sustainable ecological landscape architecture planning, interactive landscape architecture with Eco-Industry design, sustainable urban farming development, and traditional rural architecture preservation research in terms of rural revitalization projects, etc.