



A Study on the Symbolic Aesthetic Reconstruction of “Exogenous Graphic Depictions” in Rural Ancient Architecture from the Perspective of Cultural Memory Theory

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SUMMARY: *Rural cultural memory is not only an important construction of rural cultural history and tradition, but also a link of cultural inheritance, and rural ancient architecture as an important material carrier of rural history and culture, as well as the memory space of rural culture and spirit, has a unique value. The “exogenous” drawings of ancient rural buildings (the exogenous drawings of ancient buildings in this study refer to the visual information system of ancient buildings, such as traditional boundary paintings, illustrations showing the construction techniques of ancient buildings, examples of ancient structural engineering, and landscape representations of the main body of ancient buildings). It records and contains rich rural cultural and historical pictorial information. Through archaeological analysis of historical images and case comparisons, we attempt to construct an interpretive framework to decode the layers of historical information in the pictographs. The study takes rural cultural memory as the perspective, and the inheritance of “exogenous drawing” aesthetics of ancient rural buildings extends the structure and creatively revitalizes the cultural genes. At the same time, under the intervention of the development of digital technology, the study explores the multidimensional social and cultural values of the exogenous drawings of ancient rural buildings and the various possible forms of rural cultural narratives. The research focuses on the retention and development of rural cultural memory and the transformation of its bearing forms, aiming to build a memory ecosystem for the development of humanistic rural cultural protection in the new era and provide an effective path for rural cultural protection.*

KEYWORDS: *rural cultural memory; rural ancient architecture; exogenous mapping of ancient architecture; aesthetic extension construction*

1 Introduction

Rural culture is the origin and an important component of Chinese culture, and it is also the soul of rural revitalization. And ancient rural buildings are important carriers for preserving urban memory, passing on regional culture and remembering nostalgia in the present day [1]. Therefore, the restoration and reconstruction of tourism culture based on the theory of town memory and nostalgia is an important scientific problem that needs to be solved urgently. Memory is an integral part of interpreting the meaning of space and locality and has an important impact on the identity of the place, and the urban and rural space on which memory and nostalgia are dependent is the material carrier on which they are based for their continuation and development [2-4]. Rural memory has the functions of cultural regulation,

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social identity, psychological comfort and spiritual purification [5]. When the countryside and memory through the “time-space-people” interaction together, rural memory is to a certain extent to carry and convey the rural life culture, production culture and ecological culture of the “storage”, and the corresponding space naturally becomes a comprehensive carrier of rural cultural heritage. The corresponding space naturally becomes a comprehensive carrier of rural culture inheritance, which is not only the carrier and result of human social practice, but also the main form of expression of rural memory [6, 7]. In the process of its formation, the rural areas not only show their own unique local cultural characteristics, but also reflect different historical periods of cultural, economic, political and even military and other resource characteristics, which can be seen to truly understand the process of formation of culture in rural areas must pay attention to the dynamic changes in rural memory and culture [8].

Early research on rural memory was mostly found in history and cultural studies, but has gradually shifted to other related disciplines, and is not as rich as urban memory. Wheeler, R, for example, argues that rural studies has paid less attention to the role of unmanaged ‘everyday’ rural landscapes in perpetuating social memories and reshaping notions of place; in this regard, he takes the case of Askam-in-Furness, a former mining operation in Cumbria, to explore how industrial remains in the landscape can inspire individuals and societies to remember the countryside. In this context, he uses the case of the former mining Askam-in-Furness in Cumbria as an example of how industrial remains in the landscape can stimulate individual and social memories of the countryside [9]. Zhao, Z et al. constructed and tested a theoretical model to explore the hypothesized relationship between autobiographical memory (including memory recapitulation and memory influence) and place attachment as antecedent variables of revisit intention and recommendation intention in the context of rural tourism in China, and for the first time applied the structural dimensions of autobiographical memory to the field of rural tourism in China [10]. Wang, M et al. focused on a group of tourists who had lived in the countryside for more than a year, aiming to explore how olfactory landscape perception evokes their autobiographical memories, which in turn affects place identity and place attachment [11]. Catrina and S examined how, in the process of shaping the “authentic” image of the rural area of Maramureş in Romania, the tourism accommodation operators transformed local hospitality into a brand, as part of the tourism marketing strategy. This branding mechanism of hospitality implies reinterpreting the “social memory” related to the Romanian peasant social and cultural world [12]. Focusing on a group of young people who migrated from the countryside to the city to receive higher education, Sun, J found through semi-structured in-depth interviews and textual analyses that short videos significantly influence the construction of youth's rural memories through the three key mechanisms of symbolic representation, identity construction, and group identification [13].

With the continuous development and expansion of rural tourism, the study of rural memory has also gradually turned to the integration with rural tourism, reflected in the relationship with vernacular literature, rural culture, rural space and rural identity. Peng, B and Sirisuk, M believe that the inheritance of spatial memory is essentially a dynamic process of collective cultural value continuity and social indoctrination through the continuous use and adaptive evolution of architectural entities and spatial forms in the historical vein [14]. Fan, Y and Xie, X take the intangible memory value of industrial places as the narrative text to construct a narrative space for interpreting urban cultural memories and emotions, so as to inherit industrial culture and the spirit of place. Through adaptive reuse of industrial heritage, the spatial narrative will continue and create new memory values, retain the imprint of urban history, and shape a deep cultural memory [15]. Yang, Q takes cultural memory as a perspective and cultural landscape as a framework to reveal the five stages of rural cultural change: from clan settlement to give rise to the germination of cultural memory, to the

shaping of spatial expression by traditional dwellings, to the continuation of local memory by collective interpretation, to the deconstruction of memory triggered by the adjustment of transportation and zoning, and finally to the reconstruction of memory through the reconstruction of tourism [16]. Chen, H and Tao, W took the traditional Chinese festival "Qiqiao Festival" from the Lingnan region as an example to systematically explore the memory formation mechanisms of different identity subjects. They found that the elites and the government selectively restructured the festival landscape, replacing the real landscape with an "officialized" one; the memories of grassroots villagers were constructed based on traditional landscape elements by themselves, while citizens and immigrants formed an "official memory" different from that of the villagers through top-down landscape intervention [17].

With the development of social culture and science and technology and the needs of culture and spirit, the expression of ancient architecture and exogenous forms presents more rich and diverse. Therefore, this paper explores the aesthetics of the exogenous drawings of ancient rural buildings, which will help us to deeply understand the connotation and value of rural cultural memory, to re-understand the essential characteristics of rural culture, and to provide both historical depth and innovative vitality of the cultural path for the innovative development of rural culture.

2 Types, patterns and evolution of rural cultural memory spaces

2.1 Cultural Memory Texture of Rural Ancient Buildings and Their Exogenous Drawings and Paintings

The “immovability” of ancient buildings: from the perspective of site archaeology, “immovable” ancient rural buildings are rural cultural sites that should not be, and are not permitted to be, moved or transferred from their place of origin. The study of ancient rural buildings and their cultural and historical value lies not only in the ancient buildings as material remains of the entity, but also in the overall significance of its spatial carrier as a specific historical situation, as well as the rural social and cultural information it carries. Taking rural ancestral halls as an example, their core “monumentality” goes beyond the type of architecture and decorative art itself, and is fundamentally rooted in their role as places for clan rituals, spaces for the continuation of collective memories and local beliefs, and longstanding witnesses to the structural changes of rural society. These ancient buildings materialize the historical trajectory and cultural characteristics of rural development with specific materials, structures and craftsmanship. Therefore, they are not only objects of physical existence, but also texts of social and cultural construction, which are the key symbols used by the rural community to unite identity and pass on memory.

Rural ancient buildings are usually regarded as sturdy and monumental cultural symbols in public perception, but their real vitality is not entirely dependent on the material form, but lies in its interactive relationship with rural memory. Nowadays, rural buildings are often treated only as static historical and cultural monuments, while neglecting their own historical reconstruction process. Therefore, it is necessary to examine the dynamic superposition mechanism of ancient buildings and their cultural memory from a multi-dimensional perspective, revealing their vulnerability and dependence - they are not eternal existence, but are the dynamic creation of human beings in the historical and cultural space and time of the countryside.

Compared with the stable directionality of written records, exogenous drawings and

paintings (e.g., boundary paintings, murals, and custom paintings) of different rural ancient buildings carry differentiated memories in different visual ways. This critical perspective can avoid the fixation of the drawings and paintings of ancient buildings as rigid cultural symbols, and thus promote them to become living memory carriers. Retracing the construction process of ancient buildings through their exogenous drawings can reveal their inner vitality (e.g. social changes, aesthetic concepts, and other hidden factors), transcend their “silent appearance”, and transform them from static remains into dynamic cultural generating mediums, which will ultimately activate the living inheritance of the local culture in the countryside.

As a living carrier of cultural memory, the “memory texture” of the rural ancient architecture exogenous drawing reflects the deep intertwining and dynamic generation of the three dimensions of space-time, material and acceptance. In the spatial and temporal dimensions: the time background of the conceptualization and drawing process constitutes the initial field of memory; in the material dimension: the material transformation process from the production process to the final presentation of the drawings forms the material bearer of memory; in the acceptance dimension: the flux of the drawings in the cognition of the cultural public constitutes the continuous reconstruction mechanism of memory. These three dimensions together constitute a dynamic memory ecosystem. The ultimate purpose and advanced form of this memory activation mechanism is to realize the creative fusion of individual memory and collective memory, weaving them into a complex “memory texture”. This “texture” refers to the unique and recognizable cultural texture and meaning structure formed by personal experience and collective narrative in the layers of history, which are superimposed and permeated each other. In this sense, the exogenous drawings of ancient rural buildings have completely transcended their original function as mere technical records, and have evolved into a key cultural medium that connects historical memory and contemporary practice, and catalyzes the continuous reproduction of cultural significance.

Rural cultural memory and rural ancient buildings from the perspective of rural ancient building exogenous mapping constitute the material cornerstone of cultural memory, and their spatial forms and spiritual cores are systematically translated into circulating visual genealogical documents through the medium of “exogenous mapping”. In the end, the overall perception, interpretation and emotional resonance of this set of memory genealogy can be sublimated into an “aesthetics of rural memory” that concerns the depth of time, the spirit of place and identity.

2.2 Extraction of rural cultural memory elements

Through to the countryside "exogenous figure painting" thus annals record history time section and a major event record analysis, understand the Kim dinh rural culture in different historical periods of precipitation, recorded by rural cultural memory and hopes of the space presents the accumulation of cultural level, thus showing rural cultural memory "deposit", Then the memory elements carrier to continue in the form of rural context. These elements of rural cultural memory, as the symbols of an era of civilization, reflect the various natural environments, socio-economic conditions, and customary needs in which specific cultures were bred in different periods. Therefore, the representative cultural memories are excavated through the historical review to reveal the spatial and temporal dynamic changes in the formation and development of rural culture in the case site as shown in Table 1.

Among them, a to d respectively represent the initial formation stage, the peak stage, the stable stage and the regeneration stage. By analyzing the major historical events affecting the place, this paper divides the course of cultural memory origin and change that can reflect the “exogenous drawing” into the following: before the Ming and Qing Dynasties, it is the initial

stage of Dongting Xishan cultural memory; after entering the Ming and Qing Dynasties, it presents the heyday stage, and enters the stable stage after the Republic of China; after the establishment of New China, it enters the regeneration stage after the development of the local economic and social, especially the tourism industry, which leads to the protection and utilization of the rural cultural memory space. Especially the development of tourism industry has driven the protection and utilization of rural cultural memory space into the regeneration stage. In terms of the number of rural cultural memory fields of “exogenous drawing”, literary texts as the representative carrier of cultural memory have an absolute advantage, with a cumulative total of up to 239 literary works of various kinds recorded in the former local records, most of which were formed in the Ming and Qing dynasties and have been handed down to the present day. Describing the local natural landscape, humanities and customs, local products, historical celebrities and other aspects, they show the historical development of Jinting in an all-round way.

Table 1: Summary of Rural Cultural Memory Fields

Types of cultural memory fields	Initial formation stage	The peak stage	Stable stage	Regeneration stage
	a	b	c	d
Memorial site	2	10	23	56
Iconic venue	7	12	12	51
Cultural path	0	0	0	0
Literary text	0	5	21	213
Festival ceremony	0	0	0	17
Identity symbol	0	0	1	2
Historical figures	1	0	15	12
Total	10	27	72	351

2.3 Typological characteristics of rural cultural memory spaces

The results of the relative and cumulative rates of change of different types of cultural memory spaces in the “exogenous mapping” of ancient rural buildings are shown in Table 2. It can be seen that since the formation of the living and production spaces, only in the Ming and Qing Dynasties, the relative rate of change $R=1.734>1$, indicating that the rate of new additions in this period is faster than the average level of the whole town, while the cumulative rate of change basically remains at 0, which indicates that the cultural inheritance and spatial continuity of this type of space is very good in successive generations of development. In particular, many spaces were added in the Ming and Qing Dynasties and retained to this day, laying the foundation for the subsequent smooth development of the cumulative rate of spatial diminution. The relative rate of change of the Functional Symbolization category of space after the heyday, stage is $R=2.850>1$, which indicates that the rate of addition after the Ming-Qing period is faster than the average level of the whole township, but compared with the other types, the cumulative rate of change of this category of space has increased in the degree of shrinkage since the Ming-Qing period, and the retained space has decreased substantially. The relative rate of change of the social representation type of space only in the regeneration stage $R=1.252>1$, also after the Ming and Qing Dynasties, the retained cultural memory space shows a substantial increment. The relative rates of change of the spiritual consciousness spaces are all $R<1$, indicating that the rate of addition is slower than the average of the whole town, while the cumulative rate of change of the spaces remains at 0, which also indicates that these spaces, as the spiritual symbols of the place, have

a stronger continuity and less change.

Table 2: Relative change rates and cumulative change rates of Different types of cultural memory Spaces

Indicators and spatial types		Initial formation stage	The peak stage	Stable stage	Regeneration stage
Relative rate of change	Life and production category	-	1.734	0.358	0.004
	Functional symbol category	-	0.654	2.850	2.385
	Social representation class	-	0.903	0.816	1.252
	Mental consciousness category	-	0.482	0.006	0.564
Cumulative decline rate	Life and production category	0.000	0.005	0.015	0.007
	Functional symbol category	-	0.007	0.092	0.208
	Social representation class	0.000	0.135	0.075	0.085
	Mental consciousness category	-	0.001	0.006	0.031

The changes in the number of cultural memory spaces in different periods are shown in Table 3, and the number of cultural memory spaces in the four periods is 202, 142, 81 and 47 respectively. The cultural memory spaces in different stages of development present the following characteristics: (1) The development of the living and production space has basically remained stable after reaching its peak, while the functional and symbolic space and social representation space have shown an “inverted U-shape” trend of change, and the spiritual consciousness space has basically remained stable from the beginning to the end of its integration. (2) The cumulative retention of life production space and spiritual consciousness space is relatively good, while functional symbols and social representations have been greatly reduced since the Republic of China period. (3) As a result of the cultural fusion caused by population migration and the special geographic environment, a variety of folk customs, such as living customs, seasonal customs, traditional festivals and temple fairs, with local characteristics, have been formed, laying the foundation for the further formation of cultural memory spaces of social representations and spiritual consciousness throughout the development of local history.

Table 3: Changes in the number of cultural memory Spaces in different periods

Indicators and spatial types		Initial formation stage	The peak stage	Stable stage	Regeneration stage
Spatial quantity	Life and production category	29	35	15	9
	Functional symbol category	55	49	23	15
	Social representation class	56	43	25	11
	Mental consciousness category	62	15	18	12
Total		202	142	81	47

3 Succession and new construction of exogenous drawings and paintings of ancient buildings in a historical context

3.1 Evolution of exogenous pictorial representations of ancient architecture

Over the past thousands of years, along with the development of social productivity,

architecture, which is closely related to people's lives, and its art forms in the field of clay firing, bronze casting, painting on silk and drawing, as well as tomb frescoes and other mediums, have left a rich aesthetic legacy that continues to this day. These legacies are not only a fusion of technology and art, but also a key medium for carrying the cultural memory of architecture.

The value of studying Dunhuang's murals from the perspective of ancient architectural drawings lies in the systematic reconstruction of architectural knowledge from the Northern Wei Dynasty to the Yuan Dynasty over the course of nearly a thousand years. The murals accurately depict a variety of architectural types such as halls, chambers, pagodas, pavilions, buildings, corridors, and three gates, etc. Their images form a tight graphic chain of evidence with the documentary records such as “Records of Famous Paintings of All Ages,” “Youyang Miscellany Chambers - Records of Temples and Towers,” “Records of Seeing and Hearing in Pictures,” and so on, which completely reveal the spatial organization of Buddhist temple architecture in the Tang Dynasty. Especially valuable is that the murals clearly recorded the structural details of the arch and mortise and tenon, Liang Fang carving process characteristics and color painting and coloring technical specifications (such as Yulin Grottoes, Cave 25, the south wall of the partial --- see Figure 1), filling the Han and Jin architectural imagery and the Tang and early Song Dynasty between the physical remains of the historical material fault, and with the Yungang, Tianlongshan, ringing the Tongshan and other caves and architectural heritage to form a dialogue across time and space. Some of the mural paintings even rarely frame construction scenes such as scaffolding and component lifting, providing dynamic visual evidence of ancient construction techniques and breaking through the limitations of relying only on static physical objects to deduce craftsmanship.



Image credit: Liang Sicheng. Great Beauty to Simplicity

Figure 1: Partial view of the south wall of Cave 25 in Yulin Grottoes, Dunhuang

The “exogenous drawings” in Dunhuang murals are not only historical witnesses of architecture and technology, but also important carriers of cultural memory. They record the aesthetic changes and cultural innovations of the Chinese people throughout history, reflecting the historical attitude of Chinese painters towards artistic inheritance and innovation, and demonstrating their initiative and creativity in the face of foreign cultures. These drawings and paintings not only have high artistic value, but also become precious physical materials

for the study of the history of ancient cultural exchanges, architecture and art history, and provide us with precious first-hand information for the study of the aesthetic extension of traditional Chinese culture.

Boundary painting began in the Eastern Jin Dynasty, and reached both technical and theoretical maturity in the Song Dynasty. As the core form of traditional Chinese architectural drawing, it is also called “palace” or “yamu”. In a narrow sense, it refers to the types of buildings such as pavilions, and in a broader sense, it includes the paintings of palaces, artifacts, vehicles and ships, etc., which are drawn with a boundary ruler to draw lines. As a unique “memory medium”, the theory of “field of memory” proposed by French scholar Nora is very explanatory here - Boundary painting with its unique visual syntax, constructing the “field of memory” of Chinese architectural culture.

The promulgation of the "Construction Standards" in the Northern Song Dynasty not only marked the perfection of the official architectural system, but also formed an "image - system" intertextual relationship with landscape paintings. The "upper fold and lower calculation, one slope and a hundred followings" in landscape paintings are not mere mechanical reproduction, but rather an image translation of the "Law of Construction". For example, the structure of the bridge in "Spring Festival on the Bian River" (see Figure 2) can be restored to its design logic through geometric analysis, indicating that landscape paintings are the visualized presentation of construction rules. The cultural grammatical nature of landscape paintings is more evident in its multi-dimensional encoding ability: on the one hand, it precisely reproduces architectural forms (such as brackets, mortise and tenon joints, roof projections) and utensils and costumes, preserving ancient craftsmanship and technical wisdom; on the other hand, it incorporates natural landscapes and human activities into the spatial narrative, such as Yuan Jiang's "Penglai Immortal Island Painting" (see Figure 3), which fuses fictional pavilions with green and blue landscape paintings to create an ideal living scene that is "accessible for walking and living".



Figure 2: (Song Dynasty) A section of Zhang Zeduan's "Riverside Scene at Qingming Festival"

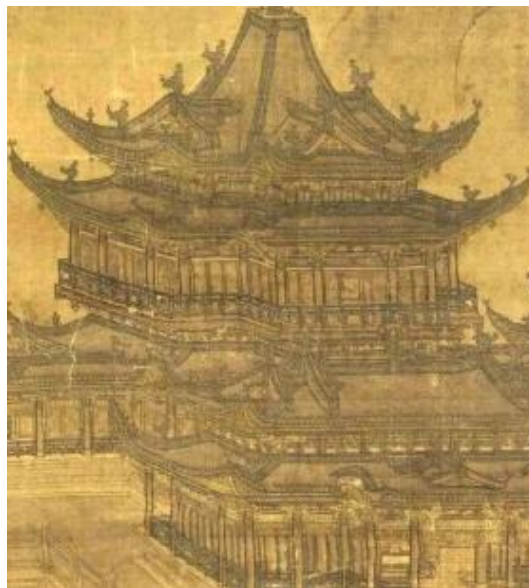


Figure 3: (Qing Dynasty) A section of Yuan Jiang's "Penglai Immortal Island Map"

The value of boundary paintings as a visualized carrier of cultural memory lies not only in the accuracy of the reproduction of form, but also in the linking of the builder's technical memory and the viewer's emotional memory. Nowadays, when we study the city buildings in Qingming Shanghe Tu and the pavilions in Penglai Xiandao Tu, we construct a common space of cultural identity while evoking historical imagination. This cultural memory system, centered on architectural images, preserves the collective knowledge of traditional building techniques and inscribes the spiritual pursuit of ideal space for generations of Chinese. The digital revival of contemporary Boundary Painting is opening up a new dimension for the memory transmission of traditional architectural culture.

3.2 Liang Sicheng's Paradigmatic Innovation: The Integration of Western Style Painting Grids and White Drawing Brushes

In 1946, Liang Sicheng published the English version of *Images of Chinese Architecture*. The mapping of ancient buildings in this work is of a world-class standard comparable to that of Fletcher's *History of Architecture*, and has become a model for the study and mapping of ancient Chinese architecture. The work innovatively adopts a "comprehensive integrated" illustration (borrowing the compilation method of Fletcher's *History of Architecture*), that is to say, through the combination of a large picture composed of multiple associated small pictures, supplemented by bilingual analysis, forming a pattern of graphic evidence and information-intensive presentation. The unique forms of ancient Chinese architecture, especially the combination of columns, beams, arches, concave and curved roof tiles, and rich decorative patterns in the wooden frame system, put forward extremely high requirements for drawing techniques. However, Liang Sicheng's survey drawings precisely combine the rigor of ruled drawings with the agility of freehand sketching, and the rhythmic beauty of Chinese architecture is shown to the fullest extent with lines of appropriate thickness and curvature, even surpassing the rendering effect of actual photographs. "The mapping drawings of Chinese ancient buildings under their pen on the one hand adheres to the cartographic methods of Western architecture and the aesthetic spirit of Western classicism it contains, and on the other hand creatively integrates the techniques of traditional Chinese brushwork and white drawing, so it can better present the unique aesthetics of Chinese ancient buildings" (see Fig. 4, see Fig. 5). This innovation not only enhances the technical value, but also gives

deeper cultural connotation to the ancient architectural forms. This method of drawing not only inherited the scientific spirit of Western architectural drawing, but also blended the traditional Chinese brushwork and white ink flavor, thus surpassing the research catalogs of Western and Japanese scholars of the same time in terms of artistic expression, and becoming a unique paradigm in the field of illustration of the world's architectural history. In this work, Liang Sicheng also “analyzes in detail the characteristics of ancient Chinese architecture, and he lists seven major characteristics of ancient Chinese architecture according to the structural method of Chinese architecture and its development. These discussions and analyses have far exceeded the level of foreigners' research on Chinese architecture in the past, and have reached a high level that has not been reached by the predecessors.”

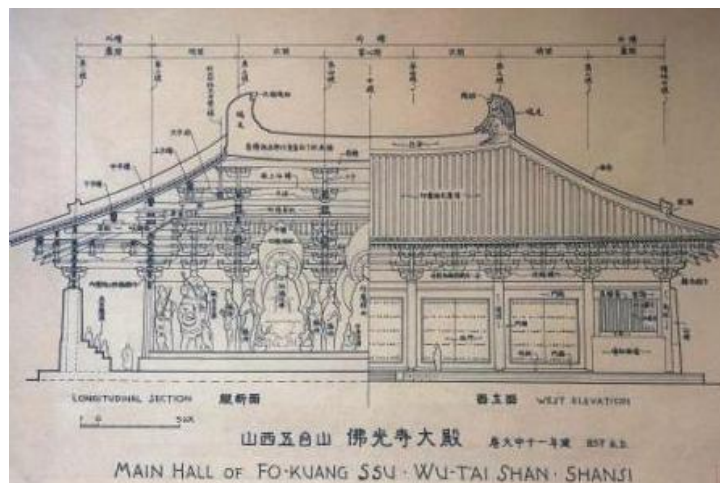


Image credit: Liang Sicheng. Leung Sze Shing's “Images of Chinese Architectural History” hand-drawn drawings

Figure 4: (1935) Liang Sicheng: Frontal and longitudinal section of the Great Buddha Hall of Foguang Temple, Wutai Mountain, Shanxi



Image credit: Liang Sicheng. Leung Sze Shing's “Images of Chinese Architectural History” hand-drawn drawings

Figure 5: (1935) Liang Sicheng: Rendered elevation of the Wooden Pagoda in Ying County, Shanxi (left) and cross-sectional view

These precious mapping drawings preserved by the Liang Sicheng team's mapping work are an important medium for the continuation of Chinese architectural cultural memory. It is essentially a salvage project of cultural memory - they fixed the disappearing architectural forms with scientific mapping, and at the same time preserved the unique aesthetic perception of ancient Chinese craftsmen on space, proportion and form through the flavor of white ink and brushstrokes. The mapping drawings build an objective foundation for academic research, while at the same time conveying subjective memories of traditional culture. This dual value makes Liang Sicheng's survey drawings go beyond the value of mere historical materials and become a visual link connecting the cultural memory of ancient and modern architecture. When we can read the precise construction data and feel the vivid artistic temperament in these drawings, we have completed a cultural dialog with the ancients across time and space. The essence of this dialog is the most precious way of passing on cultural memory - preserving objective knowledge and continuing subjective emotions, so that ancient Chinese architecture can regain its life in the contemporary context.

4 The aesthetic extension of “exogenous drawing” of ancient rural buildings

4.1 Pen and watercolor “bone method with the brush and Western color East rhyme” cultural heritage

Pen and watercolor is a composite painting technique that combines the precise lines of a pen with the transparent rendering of watercolor, which has demonstrated its unique value in the fields of architectural expression, illustration and outdoor sketching. The pen-and-watercolor style explored in this paper applies Chinese painting's expression of line and bone and expands its expressive dimension through the medium of watercolor, in order to realize the contemporary translation and expression of the Eastern aesthetic spirit. This practice not only pays homage to Mr. Liang Sicheng's tradition of scientifically documenting the construction of ancient buildings by means of white drawing, but is also a continuation of the heritage of traditional architectural drawing art.

Xie He of the Southern Qi Dynasty in the famous “Six Methods”, the core element of the “bone method with the brush”. In the “Records of Famous Paintings Through the Ages”, Tang Dynasty painter Zhang Yanrong stated: “To depict an object, one must first achieve likeness in form. To achieve likeness in form, one must maintain its essential spirit and structure. Both likeness in form and the essential spirit and structure are derived from the conception and ultimately expressed through the brushstrokes.” (The author of “Records of Famous Paintings Through the Ages” is Zhang Yanrong, a person from the He Dong region of Baotou City (now in Shanxi Province), who was from a prominent family in the Tang Dynasty. This book was completed in the first year of Da Zhong of the Tang Dynasty (847 AD). The Record of Famous Paintings of All Ages has an important historical documentary value, which is reflected in the fact that it records the life experiences, works of art and artistic attainments of 373 painters from the ancient times to the Tang Dynasty, and retains a large amount of precious art historical information. The text quoted “the image of the object must be in the form of similarity, the form of similarity must be full of its bones, bones and forms, all from the intention and return to the use of the brush”, the core meaning of this sentence: painting first of all, the pursuit of the objective object of the form of similarity, the form of similarity must be included in the object of the spirit and temperament of the inner spirit, the spirit and the unity of the form of the creative intent, and ultimately through the use of the brush skills to achieve. (This phrase embodies the aesthetic pursuit of “both form and spirit” in traditional

Chinese painting, emphasizing that painting should not only express the external form, but also convey the inner spirit, which is all based on the creator's intention and exquisite brushwork skills). It is thus clear that the way of using the brush, which is “withered but moist, with quality and rhythm”, is the most fundamental element in the system of Chinese painting techniques. Compared to the rich and varied color system of Western paintings, the simplicity and subtlety of traditional Chinese landscape paintings in terms of coloring highlights the profound cultural connotation. This paper studies the watercolor transparent layering technique of "Western colors and Eastern rhythm", which follows the principle of "assigning colors according to the category" to enhance the sensitivity and control over color application. It also continuously explores in aspects such as "transmitting emotions through color, creating scenes through color, and clarifying thoughts through color" (these concepts originate from traditional Chinese art aesthetics and are widely applied in fields like painting, poetry, opera, and architectural decoration, emphasizing the symbolic nature, emotional expression, and cultural connotations of color). Based on the rich medium of watercolor pigments, it reproduces the "spirit" of ancient buildings through dry and wet control, achieving the contemporary translation of Eastern color charm (see Figure 6).

The innovativeness of this study in terms of technique is reflected in the reconstruction of two major dimensions:

(1) Linear dimension: the fountain pen replaces the brush, reconstructing the expression of “bone method” with the brushwork of “breaking, rubbing, dotting and coloring”. Its hard brushstrokes express the mechanical structure of ancient building components such as arches, beams and square beams, suggesting traces of the age of the ancient buildings through the rhythm of the lines, so that the lines have both the precision of the “likeness” and the abstraction of the “bone spirit”. This kind of gesture technique is injected with the spirit of writing to convey the artistic characteristics of the wisdom of ancient building construction (see Figure 7).

(2) Color dimension: Watercolor rendering regulates color according to the “nature of the state of matter”. Transparent overlapping colors layer traces of time such as the peeling of vermilion paint and the spreading of moss, while wet and dry techniques simulate rainwater infiltration and sunlight fading, making the colors “visual metaphors for traces of humanity”. What is particularly crucial is that the fluidity of watercolor creates a composite effect of "the blending of color blocks and lines", which not only conforms to the Yin-Yang philosophy of "dividing colors into five hues" in Chinese painting, but also echoes the "vitality and vitality" of life rhythm through the evaporation of water and color (see Figure 8).



Image Source: Gong Zheng. Line Color Country Charm - Traditional Architecture Pen and Watercolor Manuscript Collection

Figure 6: (2024) Pen watercolor "The ancient residence in Huotong, Ningde, Fujian"



Image Source: Gong Zheng. Line Color Country Charm - Traditional Architecture Pen and Watercolor Manuscript Collection

Figure 7: (2025) Pen and watercolor "Siping Township, Pingnan County, Ningde City, Fujian Province"



Image Source: Gong Zheng. Line Color Country Charm - Traditional Architecture Pen and Watercolor Manuscript Collection

Figure 8: (2024) Pen and watercolor "Rural Sketching in Yi County, Anhui i"

The innovation of pen and watercolor discussed in this paper is not limited to the fusion of East and West at the level of technique, but pays more attention to transforming the material carrier into emotional symbols, and re-embedding the rural cultural memory into the contemporary aesthetic context. The drawing of ancient buildings is not only a reproduction of heritage, but also a continuation and reproduction of rural cultural memory; it not only retains nostalgia, but also opens a visual door of nostalgia that can be used for gazing, reflecting and dialoguing. These images are not only the reproduction of ancient buildings, but also the visual carrier and visual cultural narrative of the collective memory of the countryside with temperature. It allows the past to be touched, makes nostalgia tangible, and establishes a bridge between history and reality, memory and place for gazing, reflection and inheritance.

4.2 The Object Carrying of Memory: From Ancient Exogenous Drawing to the Aesthetic Construction of Rural Cultural Creation

The deeper purpose of the contemporary cultural and creative design of ancient rural buildings is by no means limited to the shallow expression of architectural symbols, but the core of which should be an “aesthetics extension” practice rooted in the cultural memory of the countryside and committed to creative transformation. It delves into the spatial structure of the building, the structural logic of the ancient buildings, and the deep layers of collective memory, using design as a link to reconnect the rural cultural contexts that were disrupted by history. For example, in the mortise and tenon cultural creation project of Li Zhuang Ancient Town (see Figure 9), the work does not merely imitate the wooden structure form of the ancient buildings, but transforms the "node wisdom" contained in mortise and tenon into detachable and interactive modern objects. During the assembly process, users not only perceive the exquisite physical structure, but also experience the "ritual" and "order" contained in the traditional ancient building construction, thus achieving an aesthetic leap from "form extraction" to "intention comprehension". This kind of design is in fact to build a foundation for the construction of ancient building exogenous drawings, and the visual genes analyzed from multiple perspectives are used as a wedge to rebuild a palpable rural cultural memory field with the new carrier of ancient building construction in the contemporary new rural narrative context.



Figure 9: Li Zhuang Ancient Town Cultural and Creative Products- Tenon-And-Mortise Work

In the process of translation and formal reconstruction of the elements of ancient rural architecture, the exogenous drawing of ancient architecture not only serves as a source of inspiration, but also assumes the role of “cultural decoding”: for example, the design of Yingxian Wooden Pagoda's skeleton paper sculpture (see Figure 10) is actually a translation of Mr. Liang Sicheng's structural mapping draft of the language of the line diagrams, through modern laser engraving technology, to reproduce the proportional order and structural rhythm of wooden pagodas. The design is actually a translation of Mr. Liang Sicheng's structural mapping language through modern laser engraving technology, which reproduces the proportional order and structural rhythm of the pagoda. It not only maintains the mechanical authenticity of the prototype, but also gives the pagoda an ethereal poetic aesthetic with the

help of the lightness and translucency of the paper, constituting a deep dialog between “technical rationality” and “aesthetic context”. Similarly, the Yijiasan Folk House USB flash drive (see Fig. 11) utilizes a metal etching process to miniaturize the line drawing of the residential façade on a digital object of daily use. The design establishes a link between function and symbolism, making a subtle echo between the modern behavior of “storing data” and the cultural metaphor of “preserving memories”. These works show the transformational logic of “drawing-element-product”, the core of which is the extraction, reconstruction and regeneration of the cultural genes of ancient architecture. There is also the “Ancient Alcove Fragrance” cultural and creative series (see Figure 12) designed by Fuzhou Ancient Alcove as an ancient building element, which integrates the architectural language characteristics of Fuzhou Ancient Alcove with regional spices, awakens spatial memory by olfactory experience, and restores the overall atmosphere of local culture through multi-dimensional perceptions of visual, tactile and olfactory senses. They not only regenerate the contemporary discourse of the aesthetics of ancient architecture, but also make the cultural memory out of the rigid state of preservation and reintegrate into the flow of daily life.



Figure 10: Wood Pagoda of Yingxian with Openwork Paper Carving and Seal



Figure 11: Xijia Mountain Folk Residence USB Drive



Figure 12: Ancient House Fragrance Identification Aromatherapy Humidifier

Ultimately, this kind of cultural and creative design points to the sustainable transmission of rural cultural memory and the contemporary remodeling of vernacular identity. It can be said that the practice of cultural creation based on the exogenous drawings of ancient buildings is a cultural revival movement with objects as media and beauty as a ferry - it allows those vernacular buildings that have stayed in drawings and history to grow again in the consciousness and emotional world of modern people, thus realizing the true meaning of "the extension of the construction of memory" and the passing on of culture.

4.3 Intelligent Media Reconstruction: Virtual Aesthetic Production of Ancient Architecture in the Context of Digital Technology

The traditional "exogenous drawing", which is mediated by pen and paper, has undergone a profound paradigm shift in the current digital era. Artificial intelligence, three-dimensional modeling, and virtual reality and other intelligent media have elevated the mapping and representation of ancient architecture from static copying to programmable, interactive, and immersive dynamic visual production. This paper focuses on the core of the practice of "aesthetic extension" in the present time: The cutting-edge technologies of the digital age can transform the structural features of ancient buildings and the "visual grammar" and "memory texture" contained in the external pictorial depictions of these buildings into data genes that are computable and reconfigurable. This has achieved a crucial leap from "reproducing the object" to "generating the subject". During this process, digital aesthetics can serve as an accurate "decoder" for the parametric translation of historical cultural heritage; at the same time, it is also a "encoder" for creative narration in the virtual space-time, opening up a new path to break through physical limitations for the continuation of rural cultural memory (see Table 4 for examples).

In Yunnan Lijiang Baisha ancient town, researchers with the help of through three-dimensional modeling, digital image restoration, virtual reality and other means, Baisha mural painting scenic area digitization construction project, the launch of the world's first mural-themed VR space experience "mural secret", through the "content + experience" revitalization of the world's cultural heritage. The project adopts 3D sound field, large space tracking and other technologies to realize movie-level picture quality and immersive narrative. In the combined application of high-precision 3D scanning and VR technology, Changle

Village, Zhejiang Province, used high-precision 3D scanning and VR technology to make the faded “Wang Yunlou” reborn in the virtual world, and the villagers were able to “walk into” the digital pavilions that appeared in the finest detail. (See Figure 13) This is no longer the traditional two-dimensional drawings of the view, but in the digital wisdom of the virtual three-dimensional space re-constructed “habitat”, marking the “exogenous drawing” of the core function from the record of the shape of the system, shifting to the re-creation of accessible, perceptible digital field. In the Fujian Yongding Tulou Cluster Conservation Project, researchers combined 3D laser scanning technology to accurately and realistically model Hakka Tulou buildings with highly complex geometric features, providing a high-precision data base for damage monitoring, restoration and reconstruction, and virtual display of Hakka Tulou architectural and cultural heritage in the future development and conservation process. At present, the process and technology described in this paper have been applied to the digital tourism information service of Fujian Hakka Tulou, a world heritage site, with obvious results. The digital technology has not only reproduced the architectural form, but also, more critically, restored the unique spatial organization logic and architectural decorative art features. These technological advances show that rural cultural preservation is changing from mere morphological records to in-depth analysis and creative transformation of its cultural connotation. Digital reconstruction technology provides a brand new possibility for the revitalization of rural cultural memory. These technological innovations not only preserve the architectural entities, but also activate the living culture associated with them, making rural architecture a cultural link between the past and the present. This aesthetic production mechanism is further embodied in the deep deconstruction and reorganization across time and space of the visual syntax of traditional ancient buildings.

Table 4: Application of Digital Technology in the Extension of Ancient Architecture Aesthetics

Technology Type	Representative cases	Core Features
Artificial Intelligence (AI)	AI Restoration of Dunhuang Murals	Image Completion and Style Restoration
	"Building a Realm" AI Generated Song Dynasty Architecture	Generate designs that comply with historical rules
Virtual Reality (VR)	Reconstruction of Wangyun Tower in Changle Village, Zhejiang Province	Submerged Experience and Interactive Narrative
3D Modeling/Gaming Engine	Black Myth: Wukong and Fujian Tulou	Interactive Expression of Oriental Aesthetics
AR/Co-Creation Platform	Anhui Yixian Rural Memory Museum	The Fusion of Oral History and Physical Data
	AR Memory Application of Lijiang Ancient City	Geographic Information Superposition of Historical Images
Dynamic Monitoring	Digital Landscape Environment Simulation in Suzhou	Virtual Aging Simulation Driven by Real-time Data
Forward-Looking Technology	Neural Perception of Ancient Architecture (BCI Concept)	From Visual to Multisensory Experience Extension



Source: Chen Tao, Zheng Hao, Fu Yutong, et al. Study on Digital Restoration Path of Destroyed Ancient Buildings under the Threshold of Cultural Heritage Protection--The Case of Wangyunlou in Lanxi, Zhejiang, China

Figure 13: Detailed construction of the upper hall in Wangyun Tower, Changle Village, Zhejiang Province (VR digital virtual)

Digital tools give unprecedented capabilities, and in popular culture products such as the game *Black Myth: Wukong* (see Figure 14) and the movie *Big Fish and Begonia* (see Figure 15), digital technology enables freer aesthetic reconfigurations. In the movie *Big Fish and Begonia*, the enclosed form of Fujian Tulou is transformed into a visual metaphor for the Eastern cosmology, and the arches and beams of traditional architecture become a ritual space that can be interactively explored. The game “*Black Myth: Wukong*” restores the mortise and tenon structure and construction details of the ancient buildings, and through interactive triggers when players control their characters to travel through the scenes of the ancient buildings, the ancient buildings are transformed from abstract symbols in historical documents into immersive cultural scenes that can be experienced and participated in, experiencing the aesthetic tension of the ancient buildings as a “living language”.



Figure 14: The game 'Black Myth Wukong' is inspired by Shisi Temple in Jingning, Lishui, Zhejiang Province

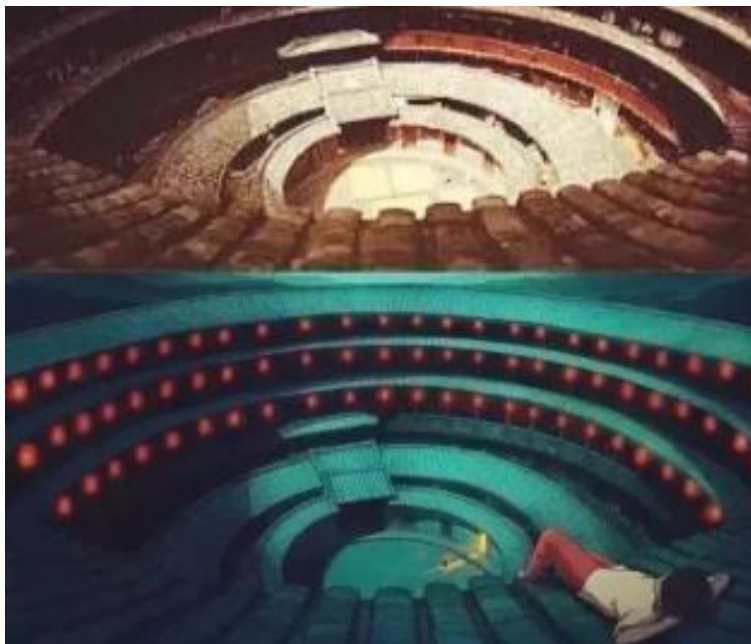


Figure 15: Fujian Tulou in the movie "Big Fish Sea Buds"

With the intervention of digital virtual technology, it is also possible to build open digital archives and co-creation platforms to empower local communities to become the subjects of cultural narratives. For example, the “Village Memory Museum” in Fengwu Village, Yixian County, Anhui Province, although presented in a physical form, behind it is a digitized collection of villagers' oral histories, images of old objects and documents constituting a “memory database”. The museum itself becomes a digital content-driven “memory container” that weaves fragmented individual stories into a collective “long poem of life”. This model allows diaspora villagers and concerned members of the public to work together to add notes, stories and even recreate a digital virtual ancient building through online virtual communities, interactive digital exhibitions and geo-information-based AR applications. It makes those memories that are on the verge of being broken due to physical destruction, geographical isolation or generational change, obtaining a new continuation carrier. As a result, the digital virtual ancient building is no longer an object for professional mapping and admiration only, but a growing digital life form with continuous collective memory and emotional injection. Villagers scattered all over the world can also take this opportunity to return to their spiritual homeland and strengthen their ethnic and rural cultural identity. The digital virtual world thus becomes a “rainbow bridge” linking the past and present, entity and imagery, individual and collective, which not only reproduces the visual appearance of ancient rural buildings, but also reshapes their cultural life, so that vernacular memories still maintain cultural warmth and vigorous vitality in the digital age.

Current practices have demonstrated that the external pictorial decorations of ancient buildings, in terms of culture, history and aesthetics, have undergone a process of accumulation and development, presenting an aesthetic extension trend characterized by digital media: The core lies in breaking the frozen state of historical styles, allowing the elements of ancient buildings to regain the ability to express themselves in contemporary aesthetic and narrative logic, thereby achieving the transformation from "preservation specimens" to "living language".

5 Conclusion

Ancient architecture exogenous drawing is not a passive recording tool, but through its unique visual language, the wisdom of craftsmanship, spatial ethics and collective memory carried by the rural architecture is transformed into image text that can be disseminated, interpreted and re-created. This “translation” process is not only the extraction and preservation of cultural genes, but also the activation and reconstruction of memory itself. From the perspective of cultural philosophy, this relationship responds to the fundamental proposition of how the Chinese people can settle down their temporal and spatial experiences and continue their cultural roots through the practice of “drawing” and “remembering”; In terms of aesthetics, it has given birth to a kind of memory aesthetics that integrates “French” and “rhyme”, and makes the ancient architectural drawings and paintings become an aesthetic medium that connects materiality and spirituality; In terms of sociological significance, the creation and dissemination of ancient architecture drawings and paintings constitute the ritualized practice of constructing the public nature of rural social memory, which strengthens the community identity and cultural cohesion.

To summarize, this paper explores the deep interactive relationship between rural cultural memory and the exogenous drawings of ancient buildings, and proposes a theoretical framework and practical path for the introduction of the aesthetics of exogenous drawings of ancient buildings into the construction of a “memory ecosystem for the preservation of humanistic rural culture”. The purpose of this study is to provide different theoretical perspectives and practical paradigms for rural culture protection, and to provide new perspectives and feasible paths for exploring the road of rural civilization rejuvenation with Chinese characteristics in the context of the technological era of AI digitalization.

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