


Article

Expressing the Spatial Concepts of Interior Spaces in Residential Buildings of Huizhou, China: Narrative Methods of Wood-Carving Imagery

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Abstract: In the interiors of ancient Huizhou buildings in China, a profusion of wood carvings are employed for decoration, with traditional research interpreting their function from decorative and aesthetic perspectives. However, this research suggests that the role of Huizhou wood carvings in interior spaces surpasses mere decoration; they enhance the expression and experience of spatial concepts through narrative imagery. By analyzing the mechanism and intrinsic logic behind the spatial concepts formed in Huizhou residential buildings, this study investigates how wood-carving imagery contributes to shaping spatial concepts through narrative techniques, as well as their creativity and expressiveness in architectural design. Utilizing literature reviews, field surveys for case selection, and case analysis methods combined with observation, interviews, and measurements, this research ultimately employs image analysis to interpret the narrative structures and styles of wood-carving imagery in detail. This study reveals that (1) the spatial concepts of Huizhou residential buildings are influenced by traditional thought, social culture, and other factors, leading to an interweaving of material, cultural, and social spaces that results in a spatial concept characterized by harmony between heaven and humanity, clear hierarchy, and orderliness; (2) Huizhou wood-carvings, through their narrative images, actively engage in the production of spatial concepts, employing thematic juxtaposition narrative modes and utilizing singular-scene narration, composite-scene narration, and cyclical narration to articulate these concepts. These findings significantly deepen our comprehension of the relationship between the spatial concepts of Huizhou's traditional residential architecture and social culture. By integrating cultural elements with spatial production theory, this research addresses the limitations of existing studies and augments their theoretical interpretative power. Additionally, clarifying the connection between the cultural elements of wood-carving imagery and the formation of spatial concepts offers a novel perspective on the study of Huizhou wood carvings, moving beyond their longstanding categorization as purely decorative elements.

Keywords: Huizhou residential buildings; concept of interior space; wood-carving imagery; narrative; Chengzhitang



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1. Introduction

Traditional villages, often referred to as ancient villages, are settlements that have survived throughout history, have significant value in terms of historical, cultural, scientific, artistic, economic, and social conservation, and offer a rich legacy from centuries of rural civilization [1]. These villages constitute an integral part of Chinese traditional culture and have substantial research importance [2]. Huizhou, a region celebrated for its ancient villages, includes an abundance of traditional architectural styles alongside ancient building design philosophies and spatial concepts, showcasing their immense historical and

cultural worth. The region is dotted with ancient buildings, with Xidi and Hongcun recognized as World Cultural Heritage Sites that epitomize traditional villages and buildings of the Hui style. Located within Yi County, in Huangshan City, these villages are still intact and serve as key monuments to Huizhou culture and architecture.

Regarding the study of spatial concepts in Huizhou buildings, whether it pertains to the mechanistic genesis of village spatial planning [3–6], the evolution of architectural spatial forms [7,8], or the organization and conception of interior residential spaces [9,10], all are inevitably influenced by historical and cultural factors [11,12]. These studies, through the analysis of material, cultural, and social spaces, conclude that the traditional architectural spaces of Huizhou are not only conditioned by the natural environment, clan rituals, and geomantic practices but are also reciprocally influenced by the mercantile economy of the Huizhou merchants and Neo-Confucian culture [13,14]. The impact of culture on buildings' spatial concepts is not unique to China and is similarly evident in Western countries, with church architecture being a prominent example. Gothic churches, for example, exhibit diversified spatial characteristics and emphasize the holistic significance of the architecture in relation to its surroundings. Their interior spaces are distinguished from, yet interconnected with, the exterior, embodying a diversity of spatial concepts. To convey spatial meanings, visual techniques such as color, painting, and sculpture are utilized [15], fostering an emotive connection between space and the body [16], elevating the symbolic significance of space to unprecedented levels.

In the context of Huizhou residential buildings, it is challenging to determine why designers have placed an abundance of Huizhou wood carvings within interior spaces, many of them featuring thematic human figures. Whether these wood carvings serve merely a decorative function or possess other intentions remains a subject of debate [17,18]. The existing literature often fails to link these exquisite wood carvings with spatial concepts, instead considering them solely as embellishments that beautify and enhance the environment. This represents a misunderstanding, neglecting the deeper mechanisms of spatial concept production. Therefore, it is imperative to re-examine the role of Huizhou wood carvings within architectural spaces, returning to the essence of imagery to investigate their participation in spatial production and understand how the represented concepts are narrated to shape spatial concepts.

These considerations prompt us to explore (a) the significance and expression of interior spatial concepts in Huizhou residences; (b) how Huizhou wood carvings, after providing a visual experience, facilitate spatial expression; and (c) how Huizhou wood-carvings as visual imagery narrate content. This study aims to identify the narrative methods of wood-carved imagery through observation and analysis, elucidating and interpreting the function of Huizhou wood carvings in spatial production via case studies. Hence, the hypotheses of this paper rely on qualitative research and case analysis methods. To explore these research questions, we propose the following two hypotheses:

H1. *Huizhou wood-carved imagery, as a cultural element, satisfies more than aesthetic appreciation in its spatial placement; it is pivotal in expressing the interior spatial concepts of Huizhou residences, with the visual imagery effectively enriching the spatial experience and enhancing quality, thus yielding a greater impact than functional or form-oriented factors.*

H2. *The expression and shaping of spatial concepts through Huizhou wood carvings are achieved via narrative methods such as image content and composition. These images evoke cultural memories, bridging sociocultural contexts and personal emotions, directly or latently influencing others.*

This presents an opportunity to develop the analysis of wood-carved imagery and interior spatial concepts in traditional architecture, potentially leading to theoretical and practical developments in the study of Huizhou wood carvings. Methodologically, this paper employs an inductive approach to elucidate the value of wood-carved imagery in the production of spatial concepts. To this end, we investigate the significance and fun-

damental aspects of interior spaces in ancient Huizhou architecture and engage in case studies by analyzing selected architectural spatial concepts and the narrative methods of wood-carved imagery. Thus, this paper seeks to analyze the cultural characteristics of interior spatial concepts in sample buildings, demonstrating how spatial concepts establish a connection with wood-carved imagery.

2. Literature Review

2.1. *The Concept of Space*

Space is one of the basic concepts through which we refer to the material world, describing people's cognition, understanding, and concepts of space. It involves subjective experiences, cultural cognition, and social constructions of space. Different cultural backgrounds, social statuses, and personal experiences can influence and shape one's concept of space. Academically, this concept is widely discussed in disciplines such as human geography, architecture, cultural studies, and sociology.

Research into the concept of space shows us the understanding and valuation of space among people from different cultural and social backgrounds, explores the relationship between spatial form, function, and cultural significance, and deepens our understanding of spatial cognition and spatial practices. As a crucial concept, it helps us to understand individuals' and groups' cognition, perception, and utilization of space, providing a theoretical framework and perspective on which to base spatial research.

2.2. *Traditional Chinese Spatial Thinking*

The spatial concepts reflected by the wisdom of Confucian and Taoist philosophies constitute the fundamental essence of traditional Chinese spatial conceptions. In Chinese thinking, space consists of a well-ordered whole comprising Heaven, Earth, and Humans, including the world where people live. "The Supreme Ultimate generates two forms" [19,20], indicating that space and time originate from the Supreme Ultimate, which then produces the two forms, referred to as Heaven and Earth, or Yin and Yang, and thus breeds all things in space, with the flow of time nurturing, day and night alternating, and seasons cycling. According to the "I Ching", Heaven and Earth signify space, showing its materiality and yet also revealing its conceptual nature as the material manifestation of Yin and Yang [21].

The Confucian ritual system is a means of materializing abstract spiritual concepts into political, social, and cultural realms and even tangible objects, thereby standardizing human values, ethics, and order, with architecture serving as a critical vessel for such embodiments. The concept of ritual propriety significantly influences the spatial layout of Huizhou residences, with the hall being the architectural focal point. Other arrangements are organized along an axis that adheres to public-front and private-rear, hierarchical order by age and status, and gender distinctions according to ethical order.

Conversely, the natural concepts of Taoist philosophy, advocating for "tranquility, naturalness, and non-action", demand that architecture maintains a state of "serenity" as much as possible. This view holds that humans and nature are fundamentally interconnected and that one should comply with the laws of nature to achieve harmony between humanity and the natural world. The courtyards and skywells of Huizhou residences are manifestations of this philosophy.

Confucian and Taoist philosophies distill a chaotic natural temporality into an ordered spatiotemporal framework, indicating an interconnected and mutually influential relationship between the natural world and human society. From the discussion above, it is evident that the spatial concepts of Confucianism and Taoism adhere to the principles of cosmic resonance between heaven and humanity, clear hierarchical structures, and orderly states. The concept of cosmic resonance in space reflects reverence and worship for nature; the concept of clear hierarchical structures represents the embodiment of social order; and the visible concept of orderliness signifies the portrayal of social ethics. Therefore, traditional Chinese spatial consciousness embodies a "unity of heaven and man" with multiple associated attributes.

Traditional Chinese spatial thought does not deny the material nature of natural spaces; it is adept at adapting and utilizing material spaces according to local conditions and available resources. It holds that architecture should be rationally organized and selected based on the local geographic environment, climatic conditions, and resource status, harmonizing with the natural surroundings. Traditional Chinese spatial thought transcends the natural attributes of space, reconstituting architectural spaces into “narrative” spaces that presuppose an ideal societal, ethical, and moral realm—an epistemological space imbued with vital spirit and subjective elements like emotional coloration. Notably, the fundamental conception of space in traditional Chinese thought reduces to an abstraction of objective and subjective elements, yet it does not fully engage with the inherent social nature of space.

2.3. Marxist Social Spatial Thinking

Throughout the historical process of spatial cognition, space has often been understood as an objective and perceptible *a priori* natural entity, overlooking the significant implications of human practice on spatial studies and failing to unveil the underlying social essence of space. Marx, employing historical materialism, examined the essence of space, deeming both space and human society to be products of social practice. He argued that the transformation from natural to social space is continuously constructed through labor practice, just like human society, and attributed social, historical, and practical characteristics to space.

Lefebvre inherited Marx’s notion of the social essence of space [22]. He asserted that the production of space reflected specific production relationships [23] and that the shaped space also maintained these relationships [24]. Space began to represent a mapping of social relations and social practices [25,26]. The theory of spatial production emphasizes that space is a dynamic and ongoing process of production, not a static entity. This process is influenced and constrained by various forces such as socio-economic and production relations. The production of space encompasses not only the physical construction but, more significantly, the projection and manifestation of social practices and relationships within it [27].

In summary, traditional Chinese spatial thought and the theory of spatial production share similarities yet also bear significant differences. Both recognize that space is not merely a material existence but also a vessel for social thought, emphasizing the relationship between space and people, as well as the influence of space on societal development. The distinction lies in the fact that traditional Chinese spatial thought accentuates the harmonious unity of ritual propriety and nature while neglecting the influence of production relations. The theory of spatial production places greater emphasis on space as a product of political-economic elements and forces, emphasizing the social factors hidden behind space in shaping and reconstructing space, while ignoring the role of cultural factors [28]. In comparative analysis, we observe that traditional Chinese spatial thought focuses on the intrinsic qualities and humanistic content of space, whereas spatial production theory pays more attention to the social attributes and socio-economic functions of space. Combining these two theories as a theoretical framework (Figure 1) allows for a holistic interpretation of the interior spatial concepts of Huizhou residential architecture. On one hand, spatial production theory is utilized to explore the underlying social dynamics and relationships; on the other hand, traditional Chinese spatial thought aids in deciphering the internal cultural connotations and spiritual ideals. Through this theoretical integration, we can gain a deeper understanding of the formative mechanisms and inherent logic behind the spatial concepts of Huizhou residential architecture, which is instrumental in analyzing the role and methods of Huizhou wood-carved imagery in spatial production.

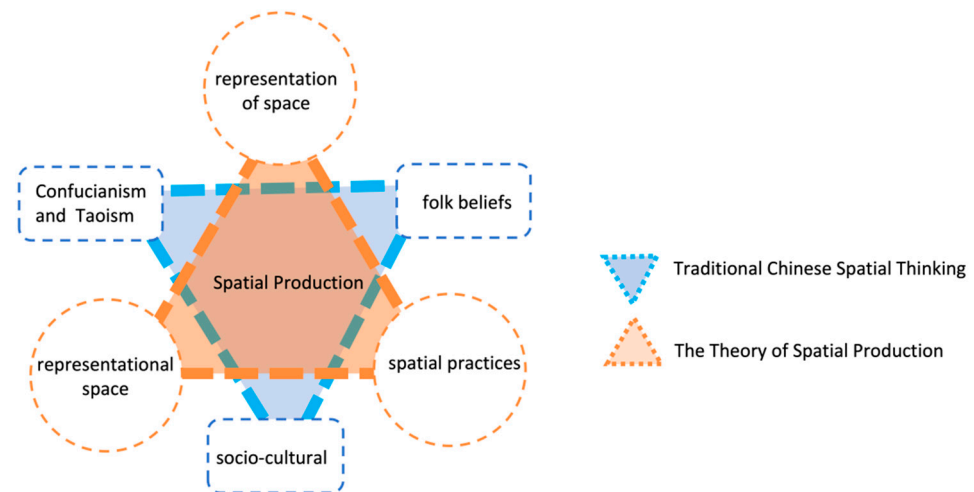


Figure 1. Theoretical framework.

3. Materials and Methods

3.1. Methods

The aim of this study was to interpret the hidden design creativity and cultural beliefs that went into architectural spaces. These elements are intangible and are challenging to quantify. Therefore, qualitative research methods, such as a literature review, fieldwork, observation, and interviews, were employed (Figure 2), relying on a shared cultural context and perceptual capacity [29], particularly with regard to cultural heritage and spatial concepts, to engage with stakeholders and make authentic judgments [30].

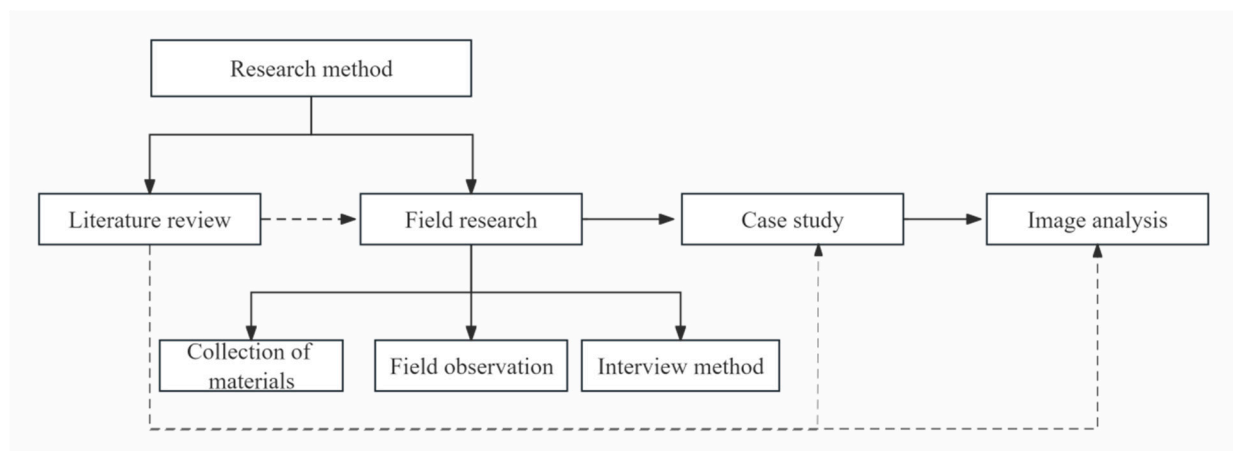


Figure 2. Research plan for this study.

3.1.1. Field Research Method

Ethnographic investigation is also referred to as field research or participant–observation-based research. The findings of ethnographic investigations are typically described and interpreted. This is because narrative descriptions can provide a high level of detail [31]. Field research was conducted in the traditional villages of Huizhou, with the selection of representative and well-preserved residential building clusters located in Hongcun, Xidi, Lucun, Guanlu, and Pingshan in Huangshan City, Yi County, Anhui Province; Xucun in She County; Zhukou Village in Qimen County; and the old street of Huizhou District (Figure 3). Through extensive fieldwork in the Huizhou area, including direct observation, participatory observation, and the collection of physical data on local architecture and wood-carving images, we gathered first-hand information on the spatial layout, functional division, themes, and forms in Huizhou architecture and wood-carving images. Due to work commitments, the

author has led students to these sites for 12 consecutive years, with each field trip lasting about 15 days and the team staying with local villagers and establishing good interpersonal relationships. Moreover, through introductions from villagers, connections were made with local guides, other homeowners, inheritors of wood-carving intangible cultural heritage, and cultural scholars, ensuring sufficient interview time, breadth, and depth. Interviews with these stakeholders were very helpful in revealing the spatial concepts behind Huizhou architecture and the narrative role played by wood-carving images.

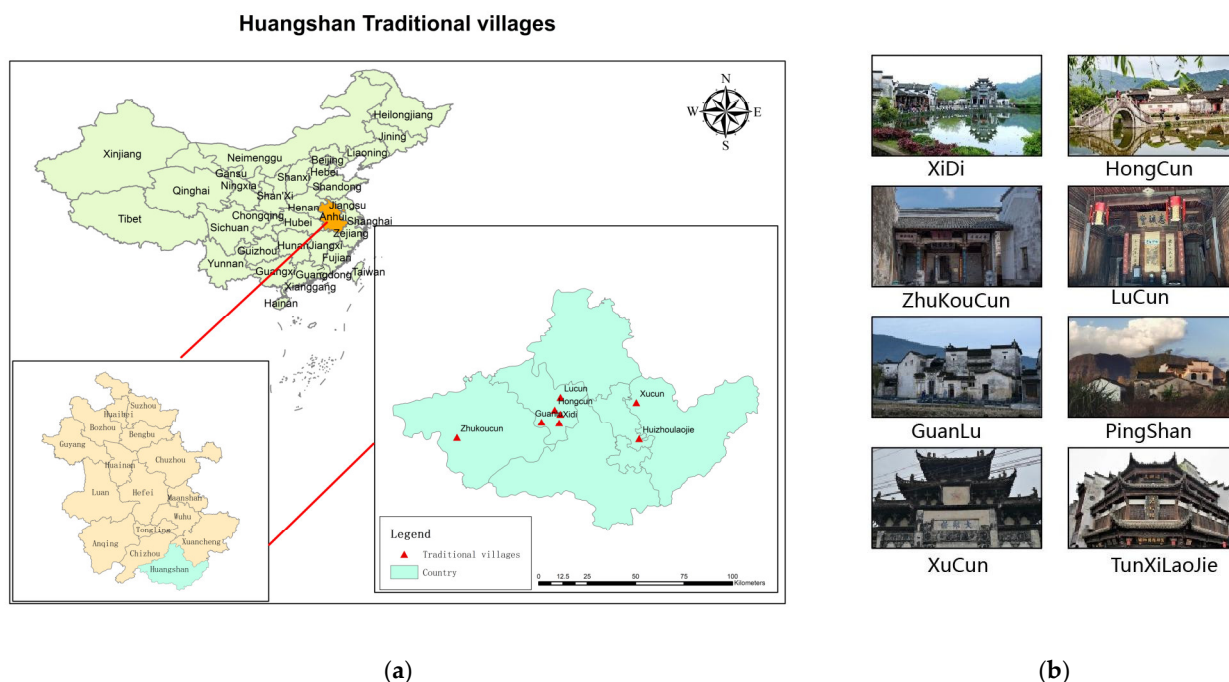


Figure 3. (a,b) Location and research scope of selected villages.

3.1.2. Case Study Method

The case study method is a qualitative research approach that involves the detailed and in-depth analysis of one or more specific cases to reveal their internal structure, characteristics, patterns, and relationships with other cases.

In this study, eight ancient villages in Huizhou were surveyed, covering a total of 36 ancient residential and public buildings. Many of these structures were partially damaged or had been modified. After deliberation, Chengzhitang was chosen as the sample for the study of the spatial concepts in Huizhou residential architecture, primarily for the following reasons:

① Chengzhitang is one of the representative buildings of Hongcun, listed as a World Cultural Heritage site, and embodies typical characteristics of Huizhou residential buildings. Its architectural spatial layout, functional division, and themes and forms of wood-carved imagery fully display the spatial features and cultural connotations of Huizhou residences.

② Chengzhitang is well-preserved, especially the extensive wood-carved imagery, which remains intact, thus accurately reflecting the original design intentions of the ancient architecture. This provides invaluable primary data for our research, allowing us to grasp the original features of Huizhou residential building spaces more accurately.

③ The historical information of Chengzhitang's owner, Wang Dinggui, is clear, offering precise data for our research. By delving into its historical background, we can gain a deeper understanding of the cultural context and social environment that shaped the architectural space of Chengzhitang, thereby showcasing its unique spatial concepts and narrative methods of wood-carved imagery.

In summary, Chengzhitang, as a research sample of Huizhou residential buildings space, possesses multiple advantages including representativeness, authenticity, historicity, and scholarly value, making it an ideal choice for in-depth study.

3.1.3. Image Analysis Method

The image analysis method is a research approach focused on visual elements and symbols. It uncovers the underlying messages in images via a deep analysis of the visual elements, such as form, color, and composition, and the symbolic meanings and cultural connotations that they convey. In this study, the image analysis method was applied in order to conduct a thorough analysis of wood-carving images in the case study residence. This involved collecting images of the wood carvings in the residence, including photographs and drawings, and organizing and categorizing them. A detailed description of the collected wood-carving images is provided, including information on their dimensions, shapes, themes, styles, etc. Using the background information from field investigations and relevant theories, an in-depth interpretation of the wood-carving images was performed to analyze the symbols and metaphors contained within them and how they related to spatial concepts. Our study explored the placement, layout, and relationships of wood-carving images within their surrounding environment in the case study residence, with the aim of investigating how these images contributed to shaping and conveying spatial concepts.

3.1.4. Data Collection

① Collection of Documentary Materials: Gathering historical and cultural background materials on Huizhou residences and wood carvings, studying the relationship between Huizhou residential space concepts and wood carvings, and collecting data on the architectural spatial dimensions of Huizhou residences for digital modeling.

② Field Observation: Conducting on-site inspections of selected Huizhou residences, with a focus on examining the spatial significance of the front and rear halls of the sample buildings, and observing the content and layout of the wood-carved imagery.

③ Interviews: Conducting in-depth interviews with local residents, tour guides, homeowners, inheritors of intangible cultural heritage in the form of wood-carving practices, and cultural scholars to understand the production process and cultural significance of wood-carving images.

Regarding the use of interview data, it is important to note that it was necessary to establish good interpersonal relationships with villagers. Frequent linguistic guidance was required in order to evoke their cultural memories. Consequently, many interviews were conducted in informal settings, with the content being organically integrated into the narrative and the analysis of the research findings, rather than being directly quoted.

3.2. Materials

3.2.1. Research Area

Huizhou culture, as one of the exemplary traditional Chinese cultures, has a long history. Huizhou had established counties during the Qin Dynasty (BC 221–207), and policies enacted by Qin Shi Huang led to forced migrations that caused stable population settlements to form in the area. The real development of the Huizhou region began during the period of Eastern Jin and Northern and Southern Dynasties (AD 420–589) due to the southward migration of people from the Central Plains during the “Five Barbarians’ Chaos”. Subsequent migrations during the Jin Dynasty, the late Tang Dynasty, and the Southern Song Dynasty due to wars in the Central Plains led to the rapid development of Huizhou society, especially after the Southern Song Dynasty (AD 1127–1279) moved its capital to Lin’an (now Hangzhou, Zhejiang Province). Huizhou flourished during the Ming (AD 1368–1644) and Qing (AD 1644–1912) dynasties, leveraging its proximity to the capital. Throughout the development of Huizhou society, numerous clan settlements formed around common ancestors and blood ties, and clan-based organizations of society gradually developed.

Meanwhile, the continuous population growth led to insufficient natural resources, prompting many to seek their livelihood elsewhere. The Huizhou people, whether residing within the region or dispersed outside, relied on the clan system for mutual support, forming a core social network. Thus, the success of Huizhou merchants was inseparable from the clan's community system. Successful merchants would return to their homeland to purchase land and forests, increase clan property, and construct residences, ancestral halls, and schools, supporting clan members in imperial examinations and further strengthening the clan community system through the compilation of family genealogies. The southward migration of people from the north not only brought advanced means of production but also Central Plains culture, including Confucianism, which, over thousands of years, nurtured the splendid Huizhou culture, making it into a rich reservoir of Confucian, Buddhist, and Taoist cultures. The selection of sites and architectural styles of ancient Huizhou villages primarily followed geomancy theories but, more importantly, was governed by clan legal and ethical systems [32], as well as the familial structure relationships that these systems reflected. Based on this, concepts and order developed that corresponded to social and spatial structures in villages and architectural spaces [33].

Of Huizhou residential buildings, represented by ancient architectural groups in Xidi, Hongcun, and Pingshan, there are 310 examples listed in the Directory of Traditional Chinese Villages, leading Huizhou to rank second among prefecture-level cities nationwide, as of 2023 [34]. The builders of Huizhou ancient villages integrated geomancy theories, philosophical ideas, Neo-Confucian thinking, clan concepts, and Huizhou merchant culture into the layout and design of villages [35], often reflecting a strong aim and symbolic meaning in their layout forms, whether this was to honor ancestors, signify auspiciousness, or express reverence for nature [36]. The spatial concept behind the villages is centered around the harmonious philosophy of the “unity of heaven and man” from Confucianism, resulting in spatial compositions that combine aesthetics with practicality, presenting traditional Huizhou village landscapes with unique regional cultural characteristics.

3.2.2. Huizhou Residential Buildings

“Huizhou residential buildings” are the ancient Ming and Qing dwellings in the Huizhou area, representing the largest scale and most intact traditional villages with profound socio-historical and cultural significance in China. Most Huizhou residences have two stories, with floor plans typically featuring “凹”, “回”, “H”, and “日” shapes, characterized by square forms, clear axes, and orderly arrangements (Figure 4). The layout is based on the “courtyard” unit, with an entrance hall, a central courtyard, and a hall with wings extending along the longitudinal axis. Dual courtyards are common, while larger houses may have three or even more courtyards. Huizhou people value traditional family ethics, with spatial distributions reflecting principles of gender and age differentiation. Overall, Huizhou residences are courtyard combinations flexibly arranged around a central courtyard according to scale, terrain, and function. Within Huizhou residential architecture, components such as partition panels, lotus doors, window shutters, railings, and beams, from the main door ridge to the courtyard well, and other architectural elements, such as beam frames and window lattices, are adorned with intricate wood-carving images. The expression techniques, styles, and themes in these wood carvings are rich and serve as important elements in constructing spatial concepts.








Figure 4. (a) There are several types of Huizhou residential building plans, including “凹, 回, H, 日” shapes. These plans have the characteristics of being square in shape, clear in axis, and neatly organized. (b) The upper pictures show the design of the main gate of Huizhou residential buildings. The lower pictures depict the internal space and beam structure of Huizhou residential buildings.

3.2.3. Huizhou Wood-Carving Images

The subject matter of Huizhou wood carvings is diverse, commonly encompassing themes such as human figures, landscapes, flowers and birds, animals, fish and insects, cloud patterns, scroll motifs, the Eight Treasures and ancient relics, inscribed couplets, and auspicious patterns (Table 1). These artworks display a range of styles, from figurative realism to abstract expressionism. From the perspective of image narratives, this paper organizes the themes into two main categories. The first consists of narrative human images that depict Confucian ethics and folk beliefs, including the themes of literary stories, opera scripts, religious myths, folk customs, legends, and social life, such as “King Wen Visiting the Wise”, “Xi Zhi’s Love for Geese”, “The Seven Sages of the Bamboo Grove”, “The Top Scholar”, “The Eight Immortals Crossing the Sea”, “The Harmony of Two Immortals”, “Heavenly Official Bestowing Blessings”, “Romance of the Three Kingdoms”, and “Fortune, Prosperity, Longevity, and Happiness”, and stories reflecting traditional virtues, such as “Mother Yue Tatoos [Her Son’s Back]”, “Lying on Ice for Carp”, and “Su Wu Herding Sheep”. There are also depictions of labor scenes, with activities such as chopping wood, farming, herding, weaving, carrying water, fishing, and dragon and lion dancing.

The other category comprises decorative auxiliary pattern motifs, mainly folk auspicious patterns. Wood carvings featuring mythical creatures, flowers, trees, the Eight Treasures, ancient relics, cloud patterns, scroll motifs, and poetry represent wishes for good fortune, such as “Three Rams Bringing Auspiciousness”, “Five Bats Surrounding Longevity”, and “Crane Ascending the Plum Tree”, as well as symbols of fertility, such as the pomegranate, symbols of longevity, such as the peach, and symbols of prosperity, such as the peony. These themes are often presented on courtyard horizontal beams, arches, and eave strips and frequently stand alone as individual works. Carvings on ceiling beams, such as “Two Lions Fighting Over a Ball”, “Dragon and Phoenix Bringing Auspiciousness”, and “Qilin Bringing Offspring”, as well as those with landscape and garden themes, are examples of such imagery.

Table 1. Classification of Huizhou wood carvings.

Pattern-Based Wood-Carving Images	Narrative Wood-Carving Images	Character-Themed Content	Anecdotes of Famous Figures; Fiction and Opera Stories; Religious Mythology; Folk Legends; Social Life	
		Animal-Themed Content	Auspicious Beasts; Flying Birds; Fish and Insects	
		Still Life Themes	Eight Treasures; Vases with Flowers; Antiquity Displays; Offerings	
		Pattern-Based Themes	Cloud Pattern; Swastika Pattern; Decorative Pattern; Flowers and Plants	
		Landscape Themes	Landscapes with Mountains and Water and Gardens	

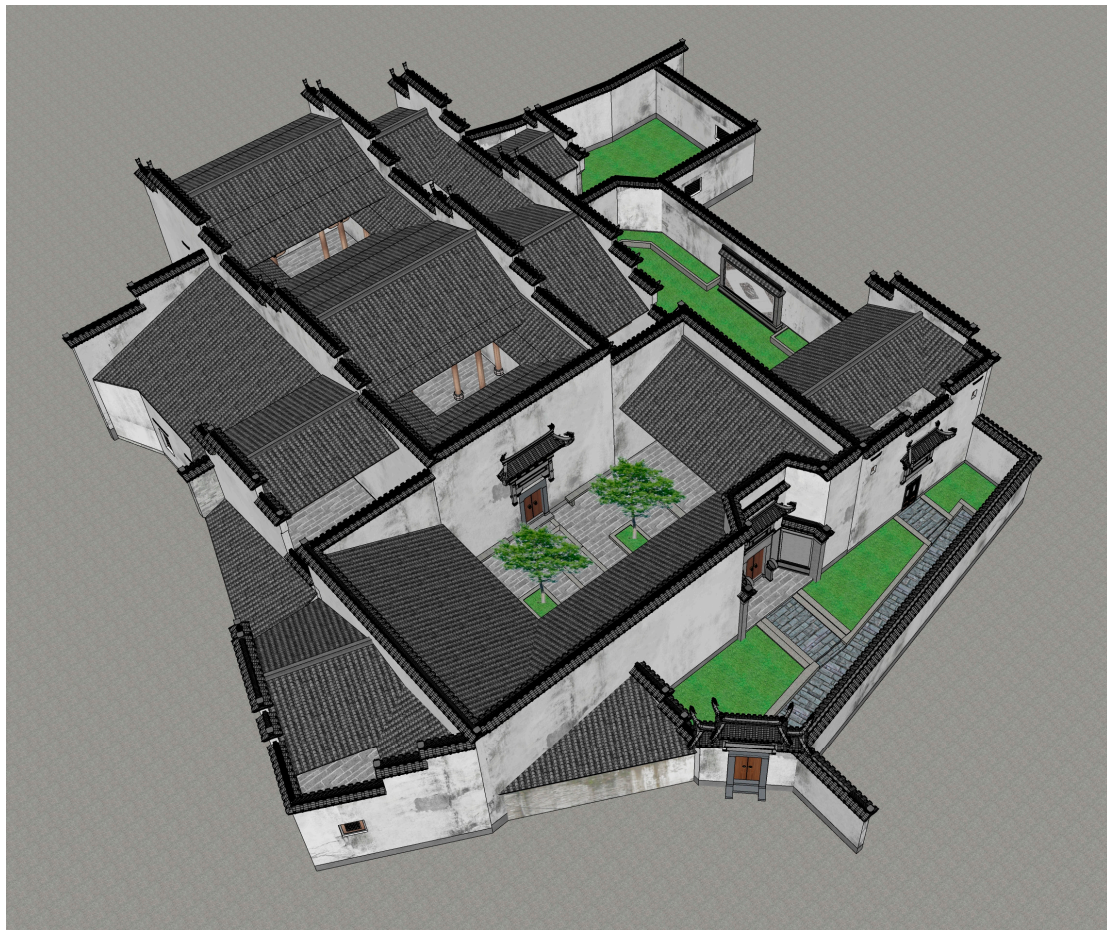
Huizhou wood carvings present both individual images and multiple pieces that combine to express a theme. In terms of form, the narrative wood-carved imagery, whether in composition or character portrayal, shares a significant connection with Huizhou wood-block prints in both style and design. Some character stories and depictions are derived directly from illustrations in novels and operas. Absent the context of the literary text, the portrayal of characters and scenes often employs exaggerated and distorted techniques that transcend conventional perspective, as well as an emphasis on symbolic representation. The aim is to highlight the focal content of the scene, enhancing its narrative quality.

Functionally, these wood carvings not only serve a decorative purpose but also lack substantial functional utility. Distributed across various spatial locations, they assume the role of expressing concepts. Some wood carvings are placed in elevated positions where their intricate details are not easily appreciated by the naked eye, leading to the infer-

ence that their narrative content and significance lie in conveying Confucian ethics and popular beliefs.

3.2.4. Chengzhitang Architectural Case Study

Chengzhitang, located in Hongcun, Yi County, near the upper water channel, was built in the fifth year of the Xianfeng era (1855) of the Qing Dynasty. It was the private residence of Wang Dinggui, a major salt merchant in Hongcun toward the end of the Qing Dynasty (Figure 5). Famous for its exquisite carvings, vermillion columns, and golden beams, it is known as the “Folk Forbidden City”. Chengzhitang is the largest existing residential building in Hongcun, covering an area of 2800 square meters, with a construction area of over 3000 square meters. According to local residents and guides, this mansion comprises 66 rooms, 9 courtyards, and 7 towers, utilizing 136 structural columns and 60 doors. The mansion also includes gardens, ponds, and other auxiliary buildings, with a layout that is interconnected in all directions. It is said that the construction required 100 taels of gold and 600,000 taels of silver, with the gilded couplets in the main hall alone using 5 jin (approximately 2.5 kg) of gold powder. The wood carvings throughout the mansion were completed by 20 artisans over four years.



(a)

Figure 5. Cont.



Figure 5. (a) Chengzhitang digital model; (b) front hall of Chengzhitang; (c) the ceremonial gate and courtyard of the front hall.

The main building of Chengzhitang has a two-entry, three-room structure, linked longitudinally by conventional three-bay units. The front and back halls are typical longitudinal three-room linked residential structures (Figure 6). Within this mansion, we can find numerous wood carvings, showcasing the features and craftsmanship of ancient Huizhou-style wood carvings in a concentrated and complete manner. Over 200 figures were carved, with lively imagery and strong narratives. Despite being over a hundred years old, they still dazzle with splendor, showing high artistic value. Local legends say that the gold used just for the surface gilding of the wood carvings amounted to over a hundred taels. The interior decoration of Chengzhitang is elegant and tranquil, with tasteful furnishings in the halls. The naming of the mansion aims to honor ancestors, remember their teachings, and carry forward their virtues, making Chengzhitang a quintessential example of a well-preserved Huizhou residence (Figure 7).

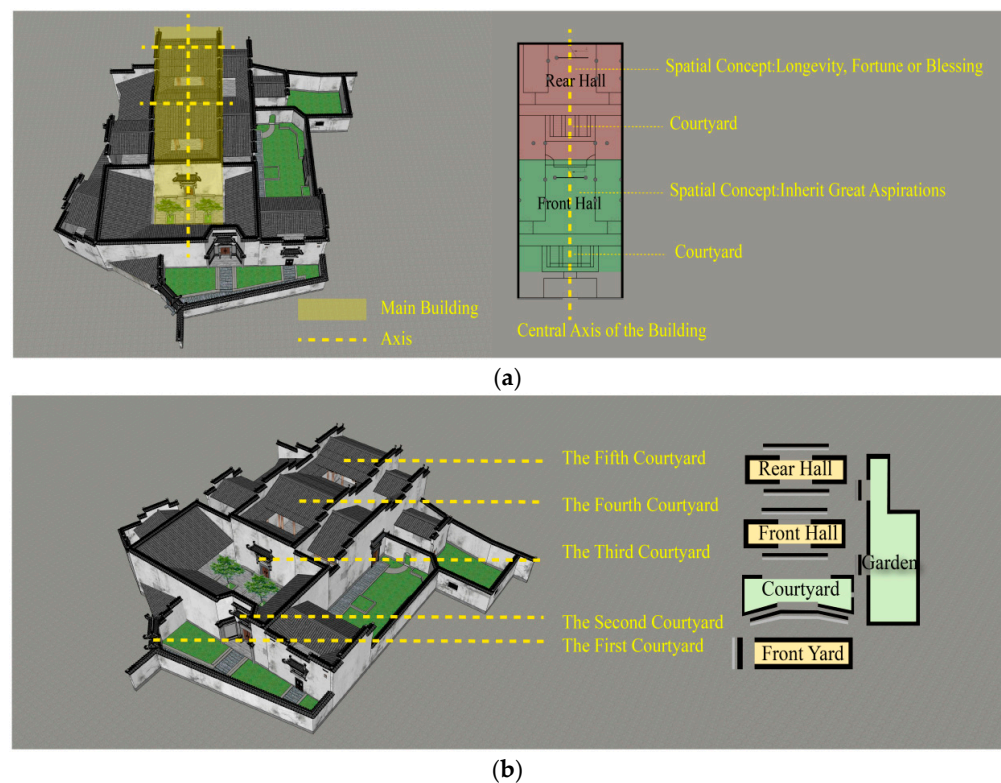


Figure 6. (a) Main building layout and axis of Chengzhitang; (b) “Five entries” of the overall Chengzhitang building.

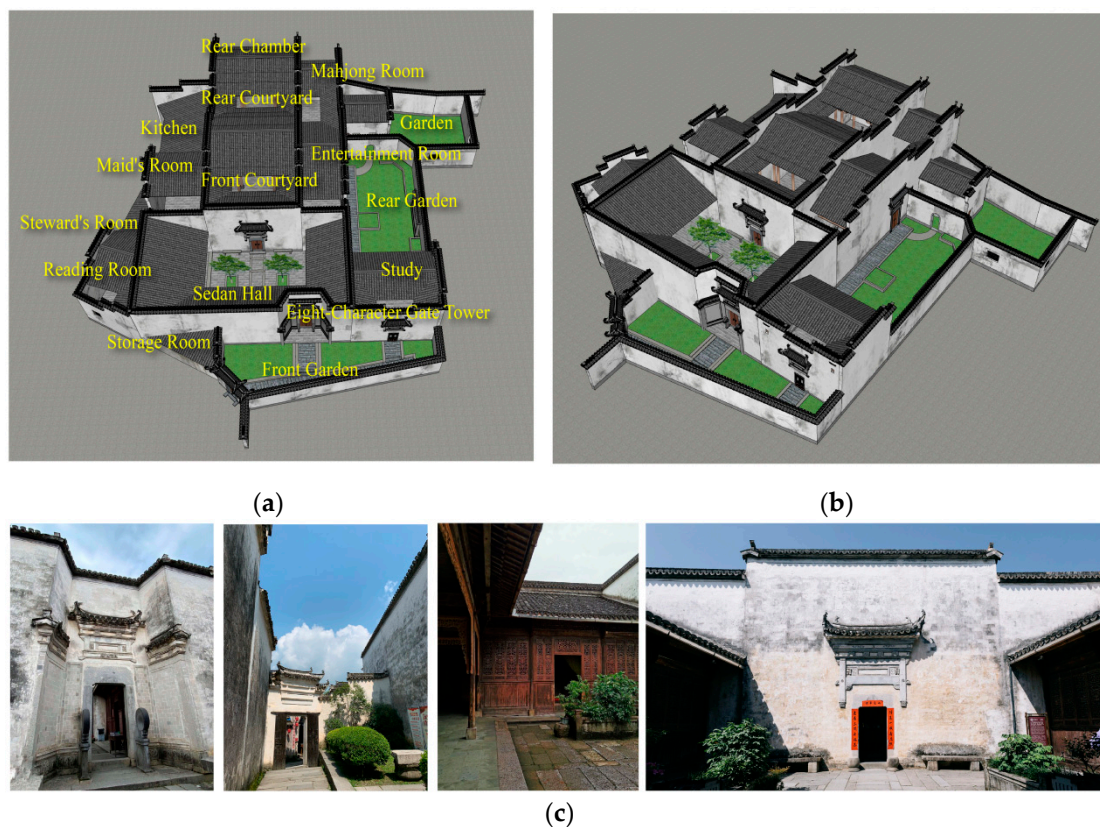


Figure 7. (a) Main spatial layout of the Chengzhitang building; (b) model of the Chengzhitang building; (c) partial view of the Chengzhitang building.

1. The Front Hall. The Chengzhitang hall is divided into the formal hall and the inner hall, with the formal hall, also known as the front hall, serving as the main location for hosting guests, discussing affairs, conducting ritual ceremonies, and celebrating folk activities. Positioned behind the formal hall, the inner hall, also referred to as the “back hall”, is utilized for receiving close friends and relatives and managing daily household tasks and serves as a living and play area for women and children.

The front hall of Chengzhitang is the centerpiece of the entire building, embodying not only a living space but also a space of ritual and ethical significance; it is thus categorized as a formal ceremonial space. A “Chengzhitang” plaque is prominently displayed above the center. Flanking the hall are side rooms, compact in size and arranged over two stories. These halls are central to the main structure. The artistic value of Chengzhitang largely depends on the wooden carvings in the front and back halls, which exemplify the level of Ming and Qing Dynasty architecture and decoration in Huizhou. The decorative wooden carvings in these halls, focusing on human figures, emphasize the depiction of characters in form and spirit. The halls feature over two hundred carved figures, encompassing widely known folk stories, literary works, and drama themes, as well as images depicting folk customs.

The wood carvings in Chengzhitang are of unparalleled exquisite beauty. Positioned in the central courtyard, above the ceremonial gate of the front hall, is a “Hundred Sons” carving, depicting more than a hundred boys in various poses, exquisitely lifelike, and capturing the festive scenes of the Lantern Festival celebrated in the Huizhou region. The ceremonial gate’s crossbeam is adorned with four decorative pillars, carved with images of the “Four Occupations” (fishing, woodcutting, farming, and studying), symbolizing the most typical occupations rooted in agriculture (Figure 8). The beam ends atop the gates on the eastern and western sides are shaped like ancient coins, resembling the upper strokes of the character for “merchant”, symbolizing prosperity and reflecting the owner’s (narrator’s) respect for merchants’ status. The top of the gate also features carvings of “Fu

Lu Shou” (Fortune, Prosperity, Longevity) and “God-given Official Blessing”, depicting the owner’s (narrator’s) aspirations. The crossbeam showcases a unique narrative carving: the east side depicts “Dong Zhuo Enters the Capital” and “Ganlu Temple”; the west side shows “Changban Slope” and “Dingjun Mountain”, accompanied by large carvings of “The Three Heroes Battle Lu Bu” and “The Battle of Changsha” on the left and right beams, respectively. These themes, drawn from the tale of “Romance of the Three Kingdoms”, feature intricately and vividly carved figures with complete storylines, reflecting the owner’s success in his endeavors through wisdom and strategy, using allegorical stories to educate descendants to follow in his aspirations. The significance of these stories aligns perfectly with the core theme of the building, “Chengzhitang”.

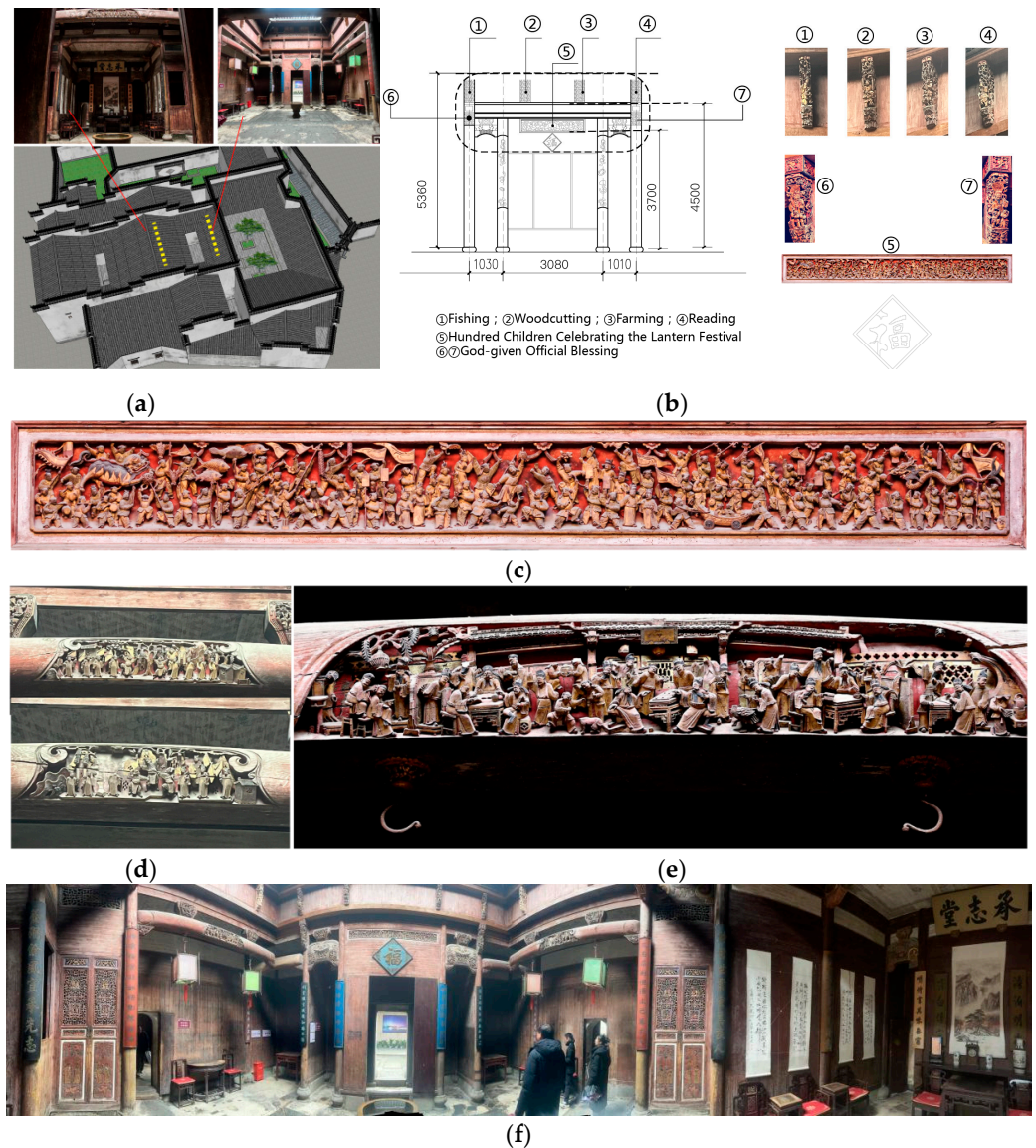


Figure 8. (a) Front hall of Chengzhitang; (b) upper wood carvings of the front hall entrance of Chengzhitang, including “Fishing, Woodcutting, Farming, Reading”, “God-given Official Blessing”, and wooden carvings of “Romance of the Three Kingdoms” on the beam. (c) Wood carvings of “Hundred Children Celebrating the Lantern Festival” in the front hall of Chengzhitang. (d) Wood carvings “Three Heroes Battle Lu Bu” and “Battle of Changsha” in the front hall of Chengzhitang. (e) Large-scale wood carving “Emperor Suzong Banquet for Officials” in the front hall of Chengzhitang. (f) Panoramic view of the front hall of Chengzhitang.

Carved on the frontispiece of Chengzhitang's front hall is the most representative large-scale wooden image, "Emperor Suzong of Tang Hosting a Banquet for Officials", one of the most valuable pieces of Huizhou wood carving. This carving, approximately 2 m in length and 0.33 m in height, depicts over thirty officials engaging in activities such as playing instruments, playing chess, reading, and painting around four tables. The scene also includes servants brewing tea, fanning the flames, and grooming, with clear lines, an ingenious composition, extremely lifelike forms, and complete narratives. The frieze, 5–6 cm thick, features 7–8 layered depths, creating a rich sense of three-dimensionality. This wooden carving is positioned in the most prominent location, clearly intended to highlight the owner's (narrator's) distinguished social status that integrates official and commercial identities.

The side rooms flanking the front hall feature double lotus doors carved with patterns embodying the wish that "all goes well", featuring two pairs of fish to symbolize abundant joy and fortune. The lattice doors are adorned with images of the Eight Immortals, including Iron-Crutch Li, Lü Dongbin, and Zhang Guo Lao, among others, with each immortal accompanied by a child, totaling sixteen figures. The most prominent pattern on the door panels is the "Four Loves", depicting people's admiration for the plum blossom, orchid, bamboo, and chrysanthemum. Each door portrays a theme with an elder and a child, where the child is presenting a beautiful flower to the elder, who narrates the story. These images employ tales of renowned figures to articulate the pursuit of "gentlemanly" virtues, with the elders symbolizing Zhou Dunyi's love for the lotus, Tao Yuanming's affection for the chrysanthemum, Su Shi's fondness for bamboo, and Meng Haoran's admiration for the plum (Figure 9). Within the Chinese cultural context, these four flowers symbolize the qualities of a gentleman, reflecting the owner's (narrator's) intention to create a space of elegance.

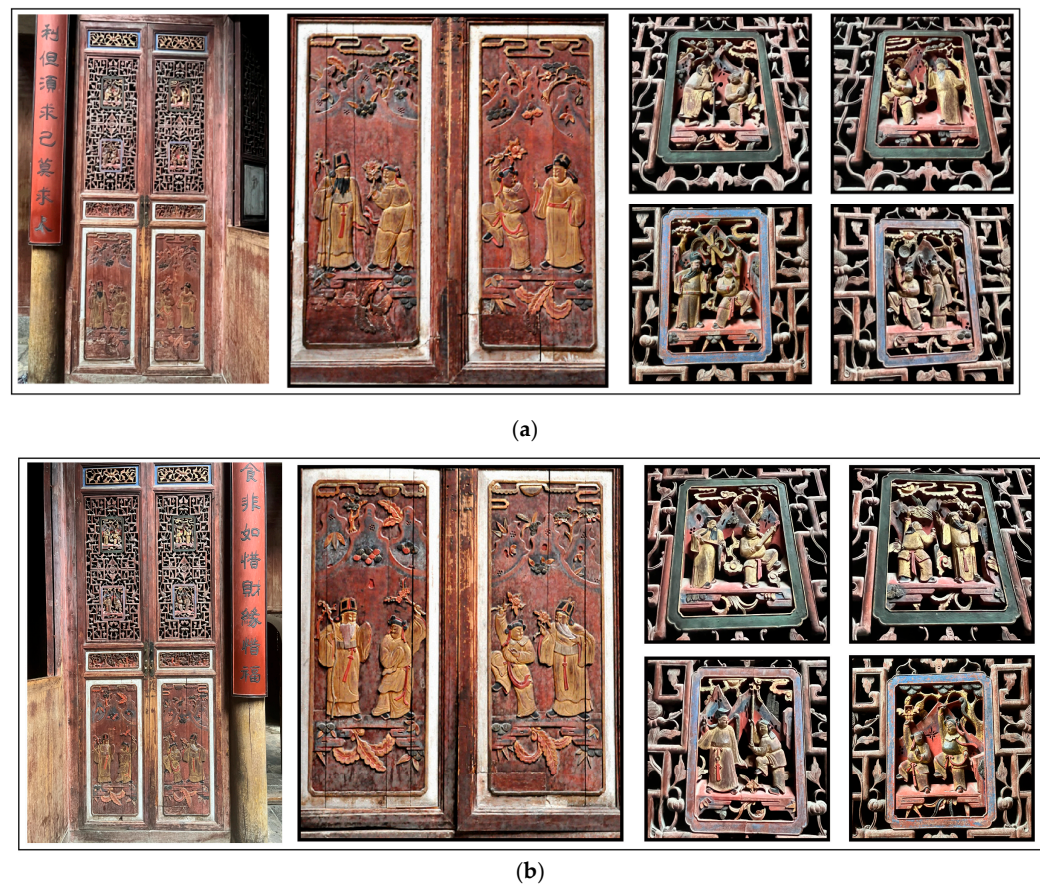


Figure 9. (a) Complete and detailed view of the wood carvings depicting "Four Loves" on the left side room door of the front hall of Chengzhitang; (b) complete and detailed view of the wood carvings depicting "Four Loves" on the right-side room door of the front hall of Chengzhitang.

2. The Rear Hall. The rear hall serves as the living area for the elders of the family and structurally resembles the front hall, though its wooden carvings convey distinctly different themes, primarily focusing on longevity and the prosperity of generations. The main theme of the back hall is articulated through carvings such as “Guo Ziyi Celebrating Longevity”, featuring Guo Ziyi and his wife in the center, flanked by civil and military officials coming to offer birthday congratulations, and their children and daughters-in-law kneeling in homage. The lower frieze depicts the “Nine Generations Under One Roof”. The supporting columns showcase images of the Southern and Northern deities of longevity, while the upper beams are adorned with carvings of cranes and other symbols of long life (Figure 10). Around the courtyard, the phrase “Received Blessings” is crafted in tin, signifying the perpetual prosperity and officialdom of the family across generations.

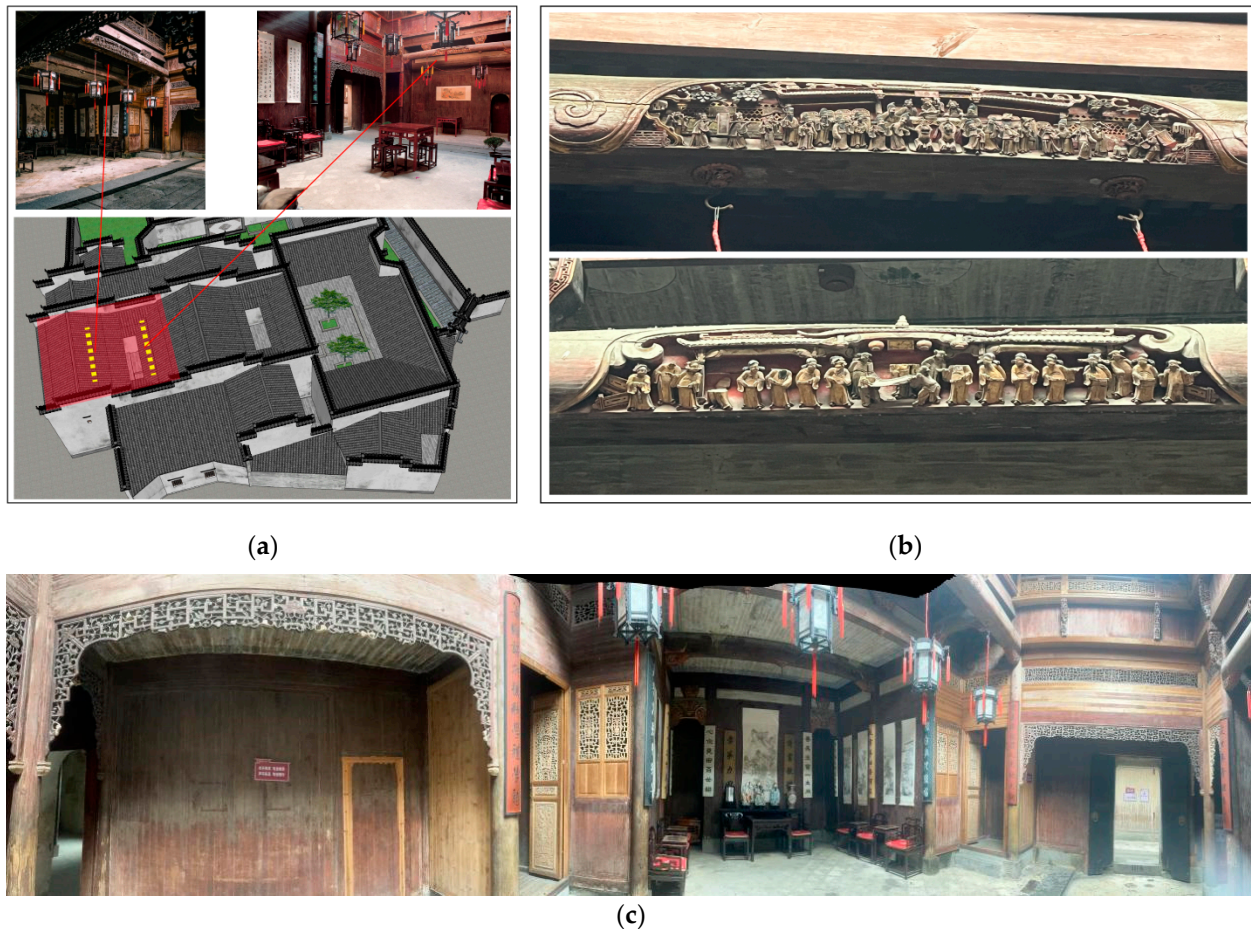


Figure 10. (a) Rear hall of Chengzhitang; (b) partial view of the wood carvings “Guo Ziyi Celebrating Longevity” and “Nine Generations Under One Roof” on the cornice of the rear hall of Chengzhitang; (c) panoramic view of the rear hall of Chengzhitang.

3. Recreational spaces named Paishang Pavilion and Tunyun Pavilion are situated to the east of the main building and are accessed through a central doorway leading to a courtyard. The “Paishang Pavilion” is at the upper end, and the “Tunyun Pavilion” is at the lower end of the courtyard, combining living and ceremonial spaces utilized for the owner’s entertainment. The doors of these pavilions are decorated with images of antiquities, while the ceilings are painted with auspicious motifs of clouds and flora.
4. The ancestral hall is a sacred space dedicated to ancestor worship and the enshrinement of ancestral tablets. This space has been deified, meaning that it is categorized as a divine area.

4. Results

An analysis of the samples leads to the fundamental conclusion that the interpretation of the association between wood-carving imagery as a cultural element and the concept of space is innovative, elucidating creativity and expression in architectural design. Initially, according to the theory of spatial production, social space is a scene constructed by individuals in their daily activities, inherently reflecting the interactive relationships among people. This relational space is essentially the production and reproduction of social relations. The interior spaces of Chengzhitang encompass spaces for living, ceremonial activities, ethical interactions, and sacred functions, each with distinct attributes—some clearly delineated, others intermingled. As one of the representations of spatial concepts, wood-carving imagery holds value not merely for its decorative and aesthetic purposes but more importantly for its role in spatial production through narrative imagery, thereby maintaining existing production relations. Moreover, traditional Chinese spatial thought exerts a pivotal influence, characterized by the pursuit of a “Unity of Heaven and Man” that transcends everyday life. Through spatial organization, layout, and form, it constructs a unified multi-dimensional space that encompasses heaven, earth, humanity, and the divine. Huizhou wood carvings, as elements of cultural expression, directly participate in this process, vividly embodying the objectives of cultural practice in an overt manner.

Thus, the interior spaces of Huizhou residential buildings, by influencing human social practices and cultural concepts, transform the material space. This alteration allows material, cultural, and social spaces to permeate each other, ultimately presenting a spatial concept that is harmonious, hierarchically clear, and orderly.

4.1. *The Spatial Concepts behind Huizhou Residential Buildings*

4.1.1. The Spatial Concept of Unity between Heaven and Man

The architectural space of Huizhou residences pursues the concept of the unity of heaven, earth, and humanity, where humans, architecture, and nature (heaven) are interconnected and responsive as a whole. The courtyard space of Chengzhitang can gather Qi and connect to heaven, integrating with nature and experiencing the rhythmic changes in the seasons. The concept of “heaven” is deified and worshipped, represented in the architecture through wooden carvings that symbolize the responsive relationship between heaven and humanity. To create a sacred space, usually, the upper part of the building, as demarcated by the horizontal beam in structures such as Chengzhitang, is considered sacred. Observations reveal that the beams and supporting columns, reinforced by brackets and spandrels, are carved with cloud patterns, as well as images of sages and immortals. The four supporting columns under the eaves of Chengzhitang’s courtyard are carved with images depicting the scholarly pursuits of “fishing, woodcutting, farming, and studying”, while the opposing four columns feature carvings of “Fortune, Status, Longevity, and Happiness”. The spandrels can display auspicious cloud patterns, lions with embroidered balls, and themes of feathered immortals. The ceilings above the front and back halls are also painted with vibrant colors, illustrating clouds and flying birds, symbolizing “heaven above”. The use of wooden carvings as symbols expresses the spatial concept of the unity of heaven, earth, and humanity (Figure 11).

Below the Chengzhitang’s horizontal beam lies the living space and ceremonial space. In these spaces, wooden carvings predominantly feature patterned motifs, mainly of vases of flowers and themes from antiquity, designed to create an elegant and inspiring environment. There are also a few human images carved on parts such as the apron panels of lattice doors, generally depicting the figures of common people in secular society performing the etiquette of daily life. The partition doors of Chengzhitang’s front side rooms are decorated with twisted dragon patterns, and the grid is adorned with melon patterns, while the tie beam panels feature wooden carvings and colored paintings of “Romance of the Three Kingdoms”, and the apron panels are carved with figures symbolizing blessings and longevity.

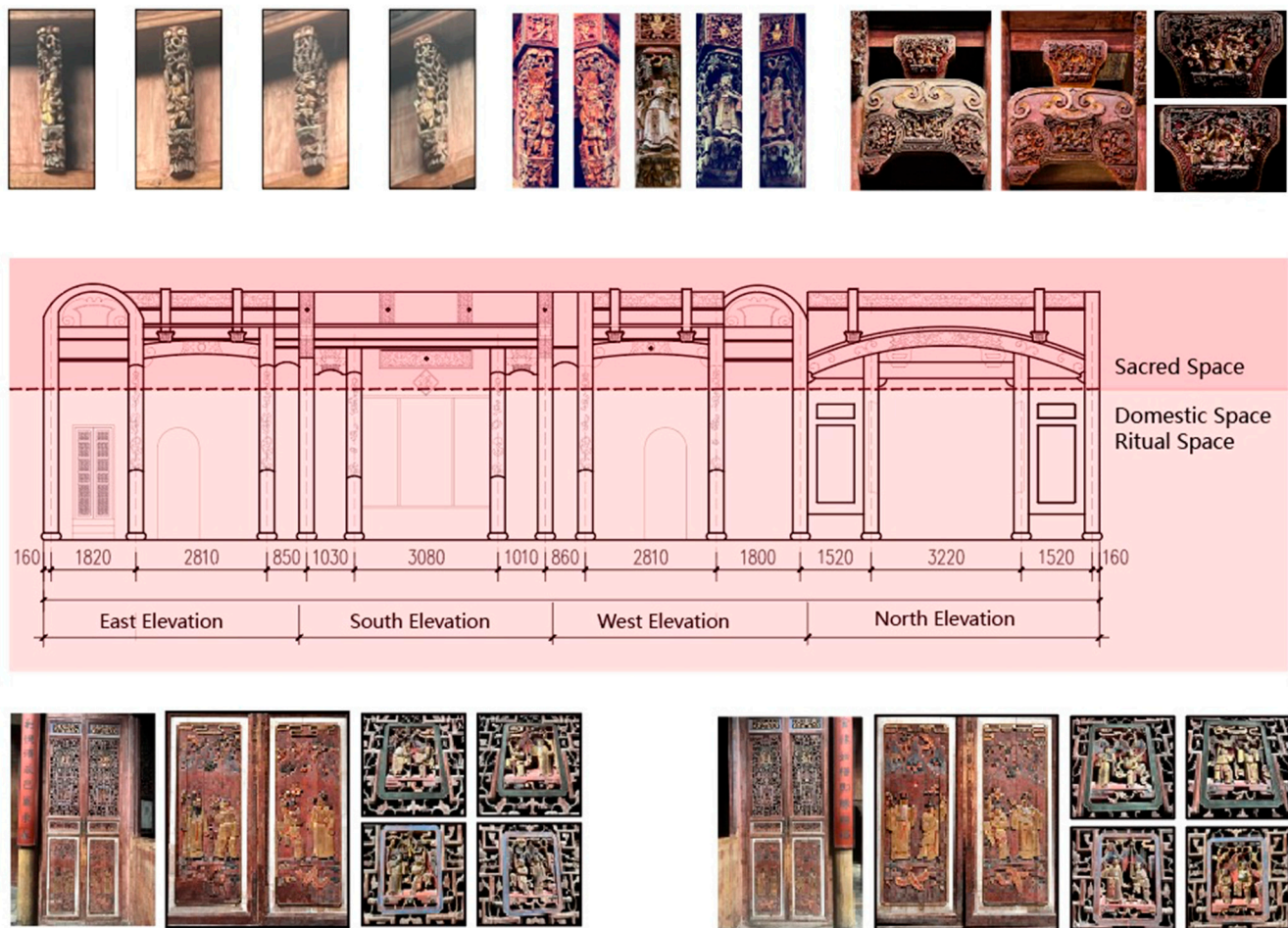


Figure 11. The upper space of the front hall of Chengzhitang is the central area for wood-carving images. These wood carvings predominantly depict mythical legends and folk beliefs, shaping a sacred space. The lower space features wood carvings on themes from daily life and rituals, shaping a practical and ceremonial space.

4.1.2. The Spatial Concept of Hierarchy and Order

The spatial arrangement in Huizhou residential architecture exhibits a clear hierarchy and orderly concept. The layout emphasizes axial symmetry, with a fixed sequence in the spatial arrangement of the architecture. This spatial concept endows the space with a “centered and Rectangle” form, where “center” denotes the highest level of hierarchy. The Doctrine of the Mean states that “Before emotions are aroused, it’s called centrality (center); once aroused and they are in right measure, it’s called harmony. Centrality is the great foundation of the world” [37]. It is believed that centrality aligns with the heavenly way. Furthermore, Guanzi-Dudi mentions the concept of how “the emperor centers himself for reverence”, and “living in the center is honorable”. The development of spatial sequences along the vertical and horizontal axes embodies the “ritual” system, i.e., spatial and ethical order, further interpreting the essence of the “center”.

“Rectangle” refers to the beauty of a clear axial form, reflecting a balanced and stable permanence. The spatial arrangement of Huizhou residences follows the direction from the entrance hall to the outer hall, inner hall, and ancestral hall, metaphorically combining the axes for the future, present, and past. The space extends laterally from the center of the outer hall along the horizontal axis. This expansion along the horizontal axis primarily allows the establishment of new families of the same generation, as seen in the famous “Eight Great Houses” of Guanlu Village in Yi County, where an expanded space is usually divided by shared partition walls or a central courtyard, forming a synchronous axial

spatial combination. This sequence of spatial combinations metaphorically narrates the temporal framework through wooden carvings.

4.1.3. The Spatial Concept of Ethics and Morality

The spatial concepts behind Huizhou residential buildings adhere to ethical and moral principles. The overall layout of the architecture strictly follows the Confucian code of “order among the young and old, distinction between the high and low”. Under the influence of the principle of “distinction between the high and low”, the north room (also known as the north hall) has always been the dwelling place for the most esteemed elders in the entire family; the concept of “men outside, women inside” is primarily manifested in the living arrangements of female family members, who generally reside in the inner courtyard; “order among the young and old” is mainly reflected in the eldest and second sons residing in the east and west wing rooms, respectively [8].

4.2. The Multifaceted Nature of Spatial Concepts in Huizhou Residential Buildings

The spatial concept and production of Huizhou residences are influenced by Confucian Neo-Confucianism, adhering to the Confucian spatial concepts at the conceptual level. The space in Confucian thinking can be summarized as space that complies with the order of rites, space that is dynamic and continuously accommodates life, and space that integrates heaven and humanity, surpassing the natural space. Hence, regarding the architectural design of Huizhou residences, we may infer the fundamental assertion that their spatial design is not merely a functional space but a complex one with multiple attributes, expressing a range of human aspirations and means of wellbeing.

The multiple attributes of Huizhou residential building spaces are determined by Huizhou architectural spatial concepts. These concepts imply that space includes “heaven, earth, humanity, and divinity”, encompassing living spaces, ceremonial spaces, ethical spaces, sacred spaces, etc., which are interwoven to construct the entire space of a residence. Of course, to express spatial concepts, there are related representational objects in the space. For instance, representational objects in living spaces include everyday utensils. Ceremonial spaces often display ceremonial utensils and couplets or paintings, presenting an image of etiquette characterized by gentleness, respect, thrift, and humility, while sacred spaces have symbolic representations. Among these, wooden carvings represent one of the important representational objects. Huizhou wooden carvings, with their rich themes and vivid imagery, exhibit a strong narrative intent. Huizhou wood carvings offer both decorative functions and narrative expression, actively participating in the production of space and the dissemination of concepts.

4.3. Narrative Modes of Huizhou Wood Carvings

Wood carvings play a significant role in the perception of spatial concepts in Huizhou residential buildings. The design concept of Huizhou wood carvings adopts a theme-juxtaposition narrative mode [38], which, under the guidance of a spatial “theme”, uses multiple narrative plot threads in juxtaposition to organize dispersed wood carvings to collectively narrate a theme. Since they are parallel and juxtaposed, the causal relationships between the dispersed wood-carving contents are not closely connected, and even adjusting their order or position does not lead them to fundamentally differ. The “theme” acts as the soul and bond that constructs “narrative connections” among “sub-narratives”, enhancing the spatial concept.

Therefore, it is essential to understand the “theme” of the spatial setting in Huizhou residential buildings, where the theme is often co-constructed with the architecture itself. Given the abstract nature of themes, it is often necessary to transform abstract theories into concrete narratives, incorporating both symbolic and story-based narratives. For example, the themes of “fortune” in the front hall and “longevity” in the back hall of Chengzhitang in Hongcun, Yi County, follow the narrative logic of “Fishing, Woodcutting, Farming, Studying—abundant wealth—successful officialdom—prosperous descendants—lasting

wealth and honor". Upon entering the main hall, we see the four wooden carvings supporting the arch, representing "fishing, woodcutting, farming, and studying", which depict the master's intent to educate descendants so that they "hold rituals, show filial piety, work the fields with strength". The doors on the eastern and western sides are shaped like ancient coins, resembling the character for "merchant", symbolizing rolling wealth. The top images on the east depict "Dong Zhuo Enters the Capital" and "The Three Heroes Battle Lu Bu"; on the west, images show "The Battle of Changsha" and "The Battle of Wancheng", with carvings on the crossbeam of "Ganlu Temple", "Changban Slope", and "Dingjun Mountain" from the Romance of the Three Kingdoms. A local folk rhyme from Yi County clearly states: "Reading 'The Three Kingdoms' breeds strategies, 'The Dream of the Red Chamber' brings feminine charm, 'Water Margin' fosters rebellion, 'Journey to the West' leads to no good end in old age". Combined with the "Emperor Suzong Hosting a Banquet for Officials" carving on the front hall's winter melon-shaped beam, this validates the theme of the Chengzhitang master's values around strategizing and crossing the boundaries between officialdom and commerce, reflecting the master's visualized psychological image. The "Hundred Sons Celebrating Lantern Festival" above the central door and the "Nine Generations Under One Roof" on the back hall's crossbeam symbolize a thriving family with many descendants. The wooden grape clusters hanging in the corridors, heavy with fruit, metaphorically suggest the master's ability to ensure lasting fortune and longevity. It is evident that the narrator, based on the popularity of the narrative, chose widely known opera and literary storylines for image expression to achieve a narrative goal [39]. Thus, the images are not merely simple reproductions of entities but, like linguistic symbols, create connections between the signifier and the signified by "evoking" the reader's direct experiences.

5. Discussion

This study demonstrates that cultural factors play a crucial role in the production of space within Huizhou residential buildings. Consequently, exploring the integration of cultural elements with the theory of spatial production [40], and extending this exploration to include an analysis of cultural dimensions, becomes an essential duty of the research. In Huizhou residential buildings, the extensive use of wood-carving art is not merely decorative but must also be considered as a critical topic of discussion. This paper introduces an innovative perspective by linking the cultural elements of wood-carving imagery with the formation of spatial concepts. Traditionally, Huizhou wood carvings have been viewed solely as decorative elements, thereby overlooking their functional role in spatial production; in Huizhou residences, wood carvings not only serve a decorative purpose but also possess narrative properties that can produce or reinforce spatial concepts. The forthcoming discussion will focus on how wood-carving imagery connects social culture with individual emotions and will analyze how these narratives are constructed, identifying the narrative techniques employed. This is a pressing objective for this part of the discussion. It is known in narrative theory that imagery is often considered to be at a disadvantage compared with language in conveying temporal sequences and complex narrative structures [41]. However, the narrative techniques of Huizhou wood carvings challenge this view. How they construct a sense of time and narrative coherence through visual storytelling is a key issue that this research discussion aims to address. By thoroughly analyzing these narrative techniques in wood-carving imagery, this study will provide new insights and directions for research on the cultural heritage of Huizhou wood carvings, the theory of spatial production, and its application in contemporary society.

We believe that the creation of narrative wood carvings is due to the ability of content expressed by images to overcome the barriers of language cognition, meeting educational needs at a time when literacy rates were low. Widely circulated and philosophically rich stories presented in image form can quickly convey content. Images can simultaneously present multiple elements, offering a synchronic perspective for effective communication. Additionally, wood carvings, through their integration into architectural materials, effec-

tively blend into the architectural space, achieving decorative effects. Observing the types of wood carvings reveals that figurative wood carvings undertake the task of narrating, responsible for teaching morals and expressing the specific content of spatial concepts. Still life and pattern wood carvings fulfill decorative roles, highlighting the function of a space's cultural perception. Therefore, in these aspects, Huizhou wood-carved images have unparalleled advantages over language.

Our research draws upon current theories of narrative imagery to further examine the application of narrative imagery in architecture. At the heart of narrative imagery lies its capacity to transform space into time, capturing moments in time within an image. Despite the inherent limitations of spatial imagery in terms of representing the flow of time or narrative progression compared with linear text, imagery holds a significant advantage in depicting spatial orientation or synchronous events. This study adopts a thematic-juxtaposition narrative model, categorizing the narrative methods in Huizhou wood carvings into three types: singular-scene narration, composite-scene narration, and cyclical narration.

Singular-Scene Narration. This narrative method is characterized by the independence of the wood-carving imagery, capturing time's "looking forward and backward" within a single scene through what German playwright Gotthold Ephraim Lessing (1729–1781) termed "the most pregnant moment". This moment allows for the flow of "inner time" within consciousness, facilitating a process of conscious manifestation. "The most pregnant moment" represents the state wherein the image's information is most clue-rich, expanding on cause and effect, a concept akin to Rodin's "movement" [42] seen prevalently in Huizhou wood carvings. It is noteworthy that in Huizhou wood-carving narratives, the depiction extends beyond "the most pregnant moment" in composition, momentum, and form, incorporating widely recognized classic actions and popular styles to achieve the effect of "movement". The sources of Huizhou wood-carving imagery, including mythology, opera scripts, novel illustrations, and opera performances, extend "the most pregnant moment" to "meaningful moments" or "visual symbols of stories", such as classic patterns in illustrations and iconic scenes and actions in opera performances, representing the "climax" of a story. When these "climaxes" are vividly transformed into images or visual symbols, the stories that they denote are restored in the viewer's consciousness. The capture of these deeply meaningful actions creates images that are universally recognized by those familiar with the story, making the cause and effect clear and extending the narrative time in consciousness. Huizhou wood carvings also depict these dramatized actions, as seen in the sculptures "Three Heroes Battle Lu Bu" and "Battle of Changsha" at Chengzhitang, where characters are portrayed in theatrical costumes and the scenes emulate opera stages, with the character poses reflecting typical opera actions (Figure 12).

Composite-Scene Narration. This narrative method involves juxtaposing scenes with similar themes or images of the same theme at different story times within a single frame. Distributed at specific locations, these Huizhou wood carvings share a spatial theme, each carrying a narrative task. Although the images are interrelated, they do not follow a linear cause-and-effect relationship but, rather, nonlinear juxtaposition or categorical relationships. By using a set or multiple sets of images to narrate an event or concept, they collaboratively construct a "sub-narrative". This is partly due to the non-linear reading behavior imposed by space and also because many images narrate a well-known concept rather than a complete story plot. Additionally, the wood carvings offer both decorative and narrative expression. Based on this analysis, the composite-scene narrative images are symbolic, encapsulating the story content and progression within intricate abstract patterns and scene settings. For instance, in the "Fishing, Woodcutting, Farming, studying" series, the "Fishing" image combines an old man fishing with a fish basket, while the other images depict a woodcutter with firewood, a farmer with a water buffalo, a scholar with a folding fan, and a student, all rendered with lifelike expressions and detailed landscapes, combining Huizhou wood carvings' appreciation of patterns and narrative characteristics. However, structurally, this is essentially a juxtaposition and combination of key elements. It

is evident that composite-scene narration does not adhere to a fixed pattern of themes with familiar content, which evolve into schematic categories. That is, the “Fishing, Woodcutting, Farming, studying” theme, despite having generally similar main elements and scene settings, presents variation in its final image form without affecting the viewer’s understanding and self-construction of the story. Even though a linear temporal connection is not present in each frame, the spatial movement of time directly reaches the concept itself.



(a)



(b)

Figure 12. (a) Detailed view of the wood carvings “Guo Ziyi Celebrating Longevity” on the cornice of the rear hall of Chengzhitang, depicting the use of “the most pregnant moment” in the design to show the progression of time in singular-scene narration; (b) wood carvings on the beam of the front hall of Chengzhitang, portraying classic actions from opera illustrations or performances to evoke the flow of time and achieve narrative effects.

Cyclical Narration. This narrative method integrates related story scenes to narrate based on the narrative theme. Since Huizhou wood carvings embody both a decorative function and narrative expression, constructing an appreciative image is a crucial objective of narrative expression. Thus, from a formal perspective, the composition is more complex, featuring visual intuitiveness and symbolic metaphor without narrating the entire event or story in chronological order. The elements within the image lack a clear causal relationship and temporal sequence, instead dissolving time into space through a comprehensive

fusion of multiple plots and scenes. The cyclical narration method in Huizhou wood carvings is not limited to the content expressed but also involves the sociocultural nature of the narrative space, relying on viewers' reconstruction during their appreciation of the images. For example, the large wood carving "Tang Suzong's Banquet for Officials" at Chengzhitang features four groups of characters in the middle, each surrounding an octagonal table, depicting officials playing the qin, playing chess, reading, and painting. Additionally, the scene includes furniture, plants, architecture, and leisure and daily life scenes at both ends, creating an engaging image with dynamic and rhythmic visual effects. Further analysis reveals that the characters' actions do not represent a moment in an activity scene but an organic fusion of different scenes, with an emphasis on officials at literary gatherings and in daily life (Figure 13). The aim is to integrate various literary gathering scenes and living states of officials into a cyclical narrative to, on one hand, present a more comprehensive set of information and, on the other hand, enhance decorativeness through a large number of similar forms, reflecting the Confucian aspirations and the direct expression of learning and advancing in officialdom.



Figure 13. Partial view of the wood carving "Emperor Suzong Banquet for Officials" on the cornice of the rear hall of Chengzhitang, displaying the use of cyclical narration. This narrative method combines multiple related storylines or different plot points in a single composition to express the progression of time.

6. Conclusions

This study introduces the wood carvings in Huizhou residential buildings as a means of narratively expressing spatial concepts, transcending mere visual aesthetic functions to awaken collective memory and cultural norms, thus constructing specific spatial concepts. The article synthesizes literature review and theoretical exposition, integrating traditional Chinese spatial understanding with the theory of space production to expand the exploration of cultural dimensions. The theory of space production offers a dynamic, socio-constructivist perspective, revealing the social dynamics and relations behind the formation of spatial concepts in Huizhou residential buildings and providing a theoretical framework to understand the genesis of complex spatial ideas. Moreover, traditional Chinese spatial concepts profoundly influence Huizhou residential architecture design, reflecting a polyformity shaped by cultural factors, folk beliefs, social ethics, and customary practices, and illustrating the richness and diversity of lifestyles and spiritual worlds.

In this study, Chengzhitang is selected as a case study to analyze the narrative methods of wood carving imagery and their relation to spatial concepts, revealing their interconnection. By delving into the narrative techniques of wood carving imagery, this paper elucidates the transformation from materiality to immateriality in Huizhou wood carvings. As a cultural heritage, Huizhou wood carvings play an important role in spatial production and exist as images and symbols, carrying rich narrative patterns.

The study categorizes the narrative modes of Huizhou wood carvings into a thematic juxtaposition narrative structure and further subdivides them into singular-scene narration, composite-scene narration, and cyclical narration. These narrative structures transform narrative content into concrete spatial concepts, offering new perspectives for understanding the mechanisms behind the spatial concepts of Huizhou residential buildings. Huizhou wood carvings convey the spiritual essence of Confucian and Taoist cul-

tures through their imagery, aiming to trigger social conditioning and value identification among viewers. Under the influence of image narration, community members perceive and identify with the wood carving imagery, transforming its formal value into symbolic value, thereby reflecting and upholding existing social production relations.

Therefore, this research not only systematically analyzes the specific modes of narrative in Huizhou wood-carving imagery but also reveals how these images serve as a medium of cultural transmission within the cultural production and social practices of Huizhou residential spaces. By understanding the narrative techniques and symbolic significance of wood-carving imagery in space, this study provides a theoretical foundation for further research on the role of Huizhou wood carvings in the production of spatial concepts and offers profound insights into the inheritance and modern transformation of traditional culture.

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