

A Case Study of the Relationship Between Traditional Chinese Feng Shui Theory and the Design Philosophy of Guozhuang in Hangzhou

Panxin Zhang

College of Landscape Architecture and Architecture, Zhejiang A&F University, Hangzhou, China

Abstract: Background: As an important component of traditional Chinese architecture, Feng Shui theory profoundly influenced the design of historic gardens and buildings and embodies the philosophical ideal of harmonious coexistence between humanity and nature. Guozhuang in Hangzhou, a representative historic garden beside West Lake, integrates natural scenery with humanistic art and exemplifies the Jiangnan private-garden principle of revealing expansiveness within a limited space. Objective: This study examines how traditional Feng Shui theory shaped the design philosophy and practice of Guozhuang, with particular attention to garden layout, aesthetics, and function. Methods: Using a case-study approach, the research combines a systematic literature review, field investigation, and expert interviews to analyze Guozhuang's geographical setting, spatial layout, landscape elements, and planting design, and to identify their connections with traditional Feng Shui concepts. Results: Guozhuang's overall organization follows Feng Shui principles through its north-south orientation, skillful use of borrowed scenery, and carefully composed water and rockery systems, thereby creating a harmonious relationship between people and nature. Architectural details, including the arrangement of doors and windows and the decorative program, also express ideas of guiding qi and balancing energies, strengthening both the garden's spatial atmosphere and its aesthetic value. Conclusion: Traditional Feng Shui theory played an important role in Guozhuang's design. It enriches the cultural meaning of the garden and offers theoretical and practical guidance for contemporary landscape design, while supporting the protection and transmission of traditional culture.

Keywords: Case Study; Traditional Feng Shui Theory; Guozhuang; Garden Design; Classical Chinese Gardens.

1. Introduction

Traditional Chinese Feng Shui theory is a distinctive cultural phenomenon. It not only influenced the design concepts of historic architecture and gardens, but also expressed, within particular temporal and spatial settings, a philosophy of harmonious coexistence between humanity and nature [1]. Guozhuang in Hangzhou is a representative historic garden beside West Lake. Its design combines natural scenery with humanistic art and embodies the Jiangnan private-garden principle of revealing expansiveness within a limited space. The garden's layout, landscape elements, and planting design are closely associated with core Feng Shui concepts such as sheltering wind and gathering qi, mountains embracing water, and the balance of yin and yang. Yet the relationship between Guozhuang's design and Feng Shui theory has rarely been examined through an in-depth case study. How does the garden express these concepts? What functions and symbolic meanings do its water, rocks, and plants assume within Feng Shui? By addressing these questions through a case study of Guozhuang, this research seeks both to clarify the cultural meaning of its garden space and to provide a theoretical reference for contemporary landscape design.

2. Feng Shui Theory

Feng Shui originated in ancient Chinese philosophy, especially the Book of Changes and Daoist thought. Its central premise is the unity of heaven and humanity, which emphasizes a harmonious relationship between people and the natural world. The term *kanyu* in the *Huainanzi* denotes an early form of Feng Shui concerned with observing and

selecting a geographical environment. The Book of Burial states that burial means taking advantage of vital qi, arguing that natural conditions such as landform and climate influence the gathering and movement of qi and, consequently, human fortune [2][3]. Feng Shui initially developed from accumulated experience in selecting settlements and organizing agricultural production. Its consideration of terrain, hydrology, and climate gradually formed a theory that connects natural conditions with human activity [4].

2.1. Origins and Development of Feng Shui Theory

An early form of Feng Shui emerged during the pre-Qin period, centered on the observation and analysis of topography and patterns of mountains and water. During the Han and Tang dynasties, the theory developed further and became associated with burial culture, especially as Feng Shui for tombs matured. The Song and Yuan periods saw the differentiation of the Compass School and the Form School. Feng Shui reached a high point during the Ming and Qing dynasties, when its theoretical system became more coherent and its applications expanded. It entered urban planning, architectural design, and garden layout, emphasizing principles such as sheltering wind and gathering qi and mountains embracing water. At the same time, it became increasingly entangled with superstition and with excessive interpretations of auspicious orientation and yin-yang balance [5]. From the late Qing through the Republican period, the arrival of Western science and major social changes contributed to its decline, and it was widely dismissed as feudal superstition. Feng Shui was nearly abandoned during the modernization campaigns after the 1950s. In the second

half of the twentieth century, however, advances in ecology and geography renewed interest in it as a form of environmental design theory. Scholars outside China also offered positive assessments of its emphasis on harmony between people and nature. In combination with sustainable development and eco-city planning, Feng Shui gradually

became a subject of modern academic research [6]. Contemporary applications in architecture and landscape design seek scientific interpretations of qi, yin-yang balance, and orientation by drawing on geography, environmental engineering, and related disciplines.



Figure 1. Layout of the Humble Administrator's Garden (source: online); **Figure 2.** Layout of the Lingering Garden (source: online).

2.2. Applications of Feng Shui in Traditional Chinese Gardens

The design of the Humble Administrator's Garden clearly reflects Feng Shui thought, as shown in Figure 1. Its water bodies follow encircling and winding courses, while rockeries rise behind the garden, producing a configuration of mountains at the back and water in front. The principal courtyard develops along a north-south axis: the south opens to sunlight, whereas the north is enclosed by rockeries that gather qi. The composition thus expresses the unity of heaven and humanity. In the Lingering Garden, a water system runs through the entire site, and the balanced distribution of rockeries and trees creates the atmosphere of mountains and water embracing one another, as shown in Figure 2. Buildings respond to the surrounding natural environment, while doors and windows frame borrowed views and allow the garden's

internal and external spatial energies to interact [7][8].

The Summer Palace, an imperial garden of the Qing dynasty, is organized around Kunming Lake and Longevity Hill and functioned both as a residence and a summer retreat, as shown in Figure 3. Longevity Hill stands to the north as a protective backing, while Kunming Lake opens to the south as a bright hall, forming the ideal configuration of mountains embracing water. The expansive lake gathers qi and lends vitality to the garden. The coordinated arrangement of buildings, plants, and water also expresses a balance of the five phases: the lake corresponds to water, Longevity Hill to earth, corridors to wood, and buildings to metal. Major palace buildings face south, with open water before them and protective high ground behind, thereby realizing the Feng Shui principle of a bright hall in front and a supporting mountain at the rear [9][10][11].



Figure 3. Layout of the Summer Palace (photograph by the author).

Across these examples of classical Chinese gardens, Feng Shui informs site selection, spatial organization, and landscape design. Mountains embracing water, sheltering wind and gathering qi, and the balance of yin and yang serve as organizing principles through which natural and cultural elements are combined to create landscapes that are both functional and beautiful.

2.3. Historical and Cultural Status of Guozhuang in Hangzhou

Guozhuang stands on the northwestern shore of West Lake beside the West Lake Scenic Area and is one of the lake's best-known historic gardens. It was first built in the Qing dynasty

by a salt merchant surnamed Guo, from whom the estate takes its name. Originally a private residence and garden for the Guo family, it became renowned for its exceptional location and refined garden design. The estate changed hands several times from the late Qing to the early Republican period, but its overall landscape and architecture remained largely intact. It was both an important setting for elite life and a cultural meeting place for scholars and literati in Hangzhou. After a period of neglect in the mid-twentieth century, Guozhuang was protected and restored by the Hangzhou municipal government [12]. It is now a major attraction at West Lake and forms part of a nationally protected cultural-heritage site, as shown in Figure 4.



Figure 4. Entrance to Guozhuang (photograph by the author); **Figure 5.** Huanzao Pavilion (photograph by the author).

Guozhuang is a classic Jiangnan private garden and embodies the artistic character and design principles of the region's garden tradition. Its compact courtyards and sophisticated use of borrowed scenery weave the natural beauty of West Lake into the garden's constructed landscape,

expressing the ideal of unity between humanity and nature. The arrangement of ponds, rockeries, flowers, and trees exemplifies the Jiangnan garden tradition and possesses high artistic value, as shown in Figure 6.

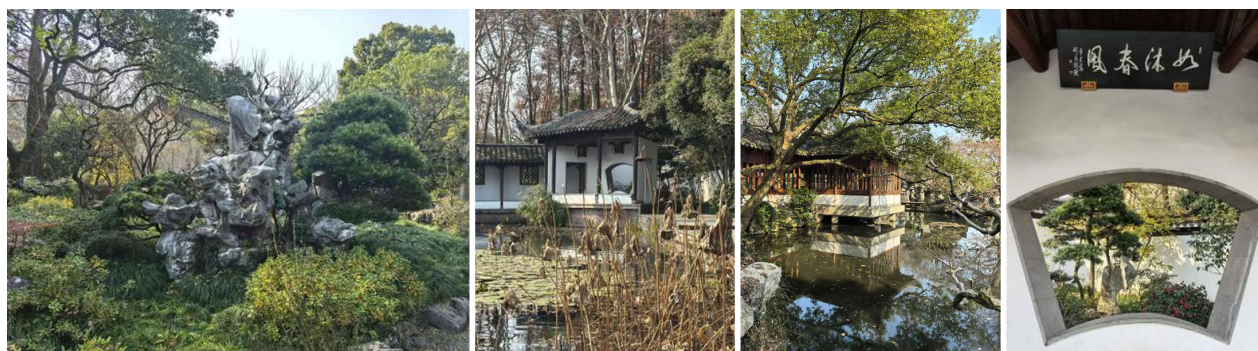


Figure 6. Views of Guozhuang (photographs by the author).

As an important component of West Lake culture, Guozhuang bears witness to Hangzhou's historical development and remains a living embodiment of the city's cultural memory. West Lake was inscribed on the World Heritage List in 2011, and Guozhuang, as one of its important historic gardens, contributed to the value recognized by that inscription. The garden is both a representative work of traditional Chinese landscape art and a window through which international audiences can understand Chinese culture. Its integration of traditional garden design with the natural setting offers an important reference for contemporary ecological landscape design. Through its elegant character and conservation-oriented use, Guozhuang demonstrates a

harmonious relationship between historic fabric and modern cultural life. It is therefore significant to the study of Jiangnan gardens, cultural transmission, and ecological landscape design.

3. Research Methods

3.1. Applicability of the Case Study Method to Classical Chinese Gardens

Classical Chinese gardens embody rich historical, cultural, and philosophical ideas, and their layouts frequently contain concepts such as the unity of heaven and humanity and the

balance of yin and yang. By examining the site selection, spatial organization, and landscape design of a specific garden in depth, the case study method can reveal the cultural logic and design principles behind it. Because Feng Shui plays an important role in classical gardens, a focused case study can show precisely how its concepts are expressed in site selection, spatial layout, and landscape elements.

Classical Chinese gardens are designed in response to local conditions and therefore possess distinctive regional qualities. A case study can address the specificity of one garden and offer a more precise understanding of its contribution to design thought. The method can illuminate the theoretical meaning of the classical garden while also providing practical support for contemporary landscape design, especially where traditional Feng Shui concepts are combined with ecological design.

3.2. Data Collection and Analysis

The study collected historical documents and reviewed literature on Guozhuang's history, architectural design, Feng Shui theory, and classical garden theory. It organized a theoretical framework around several core principles: terrain and site selection, including mountains embracing water and sheltering wind and gathering qi; layout and orientation, including yin-yang balance and the circulation of qi; and the symbolic meanings of water, rocks, and plants. Feng Shui analyses of other classical Chinese gardens, including the Humble Administrator's Garden and the Summer Palace, were then used to clarify the analytical approach.

Fieldwork examined Guozhuang's geographical position and its relationship with West Lake. The analysis focused on how the site's mountain-and-water setting affects its Feng Shui, how West Lake functions as a natural bright hall, whether the surrounding topography shelters wind and gathers qi, and how borrowed views of the lake and nearby

hills strengthen the garden's overall atmosphere. The spatial analysis considered whether the buildings and courtyards follow a north-facing-back and south-facing-front orientation, how functional zones and active and quiet spaces express yin-yang balance, and how corridors, doors, and windows guide qi while avoiding harmful flows [13][14]. The landscape analysis examined water, rockeries, terrain, and planting in relation to principles such as water governing wealth, winding water carrying affection, and mountains governing descendants, as well as their effects on the garden's overall field of qi [15][16][17]. Finally, the study compared these observations with the philosophical concepts of unity between humanity and nature and the harmonization of yin and yang in order to assess the distinctive or innovative character of Guozhuang's use of Feng Shui.

4. Relationship Between Guozhuang's Design Methods and Traditional Feng Shui Theory

4.1. Feng Shui Applications in Layout Design

Guozhuang follows the traditional pattern of a residence in front and a garden behind. In the southern part of the estate, Jingbiju Residence serves as the principal living area. Its main hall, Xiangxue Fenchun, sits to the north and faces south and was used by the owner to receive guests, as shown in Figures 7 and 8. The hall opposite, Shanyu Qishuang, was used for banquets. To the north, Yijing Tiankai was developed as an open garden waterscape [17]. This arrangement expresses the Feng Shui idea of harmonizing yin and yang by coordinating residential and garden spaces, quiet and active uses, and built form and nature. It also makes effective use of the site's environmental advantages to create an atmosphere of harmonious coexistence [18].



Figure 7. Plan of Guozhuang (source: online); **Figure 8.** Jingbiju Residence (photographs by the author).

Guozhuang sits to the north and faces south toward the open bright hall of West Lake. This orientation ensures favorable daylight and draws the vital qi associated with the lake into the garden, giving the site a strong sense of vitality.

The broad water surface also contributes to an advantageous Feng Shui configuration and deepens the garden's spatial atmosphere.



Figure 9. West Lake east of Jingsu Pavilion (photographs by the author).

Guozhuang's use of borrowed scenery is particularly accomplished. West Lake lies immediately to the east, while distant views incorporate Leifeng Pagoda and Baochu Pagoda. Twin Peaks Piercing the Clouds and Nanping Hill frame the site from the west and north, creating an exemplary setting of mountains embracing water. This configuration accords with the Feng Shui principle of sheltering wind and gathering qi, while the surrounding landscape strengthens the garden's spatial field and artistic conception [19]. Visitors therefore experience a compelling harmony between garden and nature.

The placement of Guozhuang's buildings likewise responds to Feng Shui principles. Jingsu Pavilion, the principal building, stands toward the north on or near the main axis. Its elevated position provides a protective backing and broad views, expressing the idea of sheltering wind while observing qi [20]. Liangyi Pavilion, positioned on the central axis between the inner and outer ponds, simultaneously divides the garden and links its spaces. It acts as a hub for the circulation of qi and corresponds to the principle of receiving qi at the center.

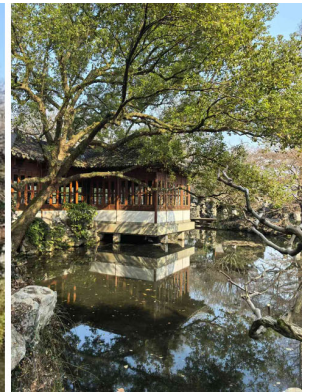


Figure 10. Jingsu Pavilion (photograph by the author); **Figure 11.** Liangyi Pavilion (photographs by the author).

The architectural layout also establishes clear hierarchy and functional zoning. The measured placement and relative positions of buildings make the garden orderly and legible, reinforce the circulation of qi and the balance of yin and yang [21], and provide visitors with a comfortable and harmonious experience.

4.2. Feng Shui Embodied in Landscape Elements

Water is one of Guozhuang's core design elements and gives concentrated expression to the Feng Shui saying that water governs wealth and mountains govern descendants. The water system consists of the inner Mirror Pond and the outer

Huan Pond, linked by winding bridges and channels. Because the water meanders rather than rushing straight through the site, the design avoids the harmful force associated with direct water. The square, tranquil Mirror Pond symbolizes the gathering of qi and prosperity, while the sinuous Huan Pond suggests circulating vitality [22]. The composition is aesthetically coherent and reinforces the auspicious meaning of water. Along the lakeshore, Shangxin Yuemu Pavilion and an adjacent rockery draw West Lake into the garden and create the effect of a spring emerging from the rocks. This arrangement intensifies the sense of circulating air and water and visually connects the garden's internal and external fields of qi, giving form to the principle of drawing in water to gather qi.



Figure 12. Shangxin Yuemu Pavilion and its rockery (photographs by the author).

Guozhuang's planting design applies the principle of balancing the five phases and symbolizes seasonal change and natural vitality. Pines, bamboo, and plum trees represent longevity and moral integrity, while lotuses and aquatic plants at the pond edge combine with the water element and

reinforce the auspicious relationship through which water nourishes wood [23]. Seasonal variations in plant color and form further enrich the garden's yin-yang and five-phase composition and give it sustained vitality.



Figure 13. Plants at Guozhuang (photographs by the author).

Rockeries are another important component of Guozhuang and express the principle of sheltering wind and storing qi. Many stand at strategic points in the north or southeast, creating the effect of a supporting mountain and reinforcing the garden's sense of enclosure and protection. Built largely

from Taihu stones, the rockeries possess irregular but naturalistic forms. They embody the Feng Shui idea that curved forms carry feeling [24] and create, within a limited garden, the artistic impression of a mountain forest at close range.

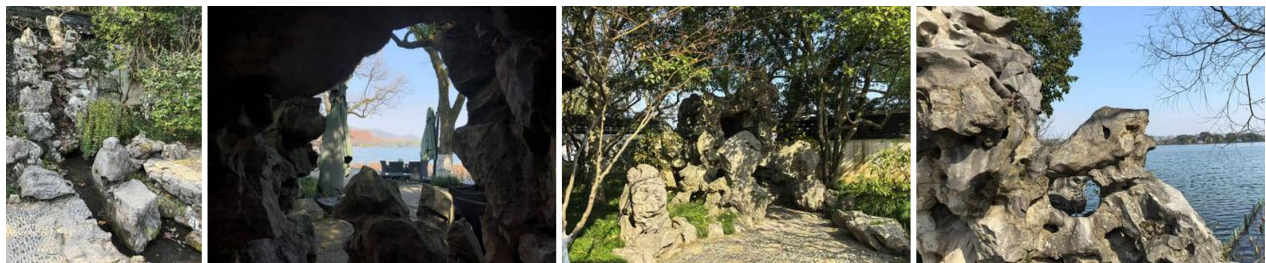


Figure 14. Rockeries at Guozhuang (photographs by the author).

4.3. Feng Shui Considerations in Architectural Details

Guozhuang's doors and windows embody the Feng Shui objective of receiving qi and enabling ventilation. Moon gates at entrances and patterned windows along corridors add spatial depth and beauty, while framed views introduce external scenery, air, and light, improving circulation and

softening illumination within the garden [25]. The entrance sequence to Jingbiju Residence uses contrasts of brightness and shadow, with doors, windows, and courtyards arranged in staggered layers. The gradual unfolding of space gives visitors the experience of encountering a new scene at every step.



Figure 15. Moon gates and patterned windows (photographs by the author).

Interior planning at Guozhuang likewise gives attention to yin-yang balance and the circulation of qi. Major buildings such as Xiangxue Fenchun Hall and Shanyu Qishuang Hall employ symmetrical arrangements that are both dignified and effective in maintaining airflow and distributing daylight,

thereby supporting balance and harmonious coexistence [19]. In the residential area of Jingbiju, the interplay of enclosed rooms and open courtyards coordinates activity and repose, preserves privacy and security, and improves spatial openness and circulation.



Figure 16. Xiangxue Fenchun Hall and Shanyu Qishuang Hall (photographs by the author).

Guozhuang's architectural decoration incorporates numerous Feng Shui motifs and symbols. Carvings at Jingsu Pavilion depict plum, orchid, bamboo, and chrysanthemum, signifying the cycle of the seasons and family prosperity. White walls and dark tiles form a harmonious whole with the

surrounding landscape, while doors, windows, and other details carry auspicious patterns [22]. These decorative arts enhance the architecture's aesthetic and visual value while communicating auspicious meanings and Feng Shui ideas, giving visitors a deeper cultural experience.



Figure 17. Carved plum, orchid, bamboo, and chrysanthemum motifs at Jingsu Pavilion (photographs by the author).

5. Analysis of Representative Scenic Features at Guozhuang

5.1. Jingsu Pavilion: Sitting North and Facing South, Sheltering Wind and Gathering Qi

As Guozhuang's principal building, Jingsu Pavilion occupies an exceptionally well-considered position and embodies core principles of Feng Shui, making it a focal point of the garden.

Sitting north and facing south, it turns toward sunlight, receives qi, and supports the circulation of vitality. The pavilion's carefully chosen orientation strictly follows the principle of facing the sun to receive qi. Its southern exposure takes full advantage of natural light, keeping the interior bright, warm, and lively. The open southern aspect also draws in the expansive field of qi from West Lake and blends it with the garden's internal atmosphere, creating a favorable circulation of vital energy [26][27]. This arrangement enhances the pavilion's own spatial energy and contributes vitality to the garden as a whole.



Figure 18. Jingsu Pavilion with the surrounding Huan Pond and Mirror Pond (photographs by the author).

Its varied elevations shelter wind and store qi. Jingsu Pavilion stands on a rockery and forms the visual high point of the garden. The raised position makes it a focal landmark and creates a strong contrast with the lower Huan Pond and Mirror Pond. This interplay of high and low enriches the garden's spatial layering and corresponds to the Feng Shui principle that the high protects while the low activates [28]. By sheltering wind and storing qi, the pavilion also strengthens the cohesion of the garden's overall field and contributes to a harmonious composition.

Its skillful borrowing of scenery produces a deep artistic conception. The pavilion's windows bring views of West Lake into the garden and set them in dialogue with the constructed landscape. Distant views of Leifeng Pagoda and Baochu Pagoda and downward views over the sparkling Huan Pond merge interior and exterior scenery into a unified composition, realizing the ideal of unity between humanity and nature. The design expands visitors' visual horizons and encourages a direct perception of the harmony between culture and nature, giving Jingsu Pavilion and Guozhuang a distinctive character.



Figure 19. Borrowed views of Leifeng Pagoda and Baochu Pagoda through windows at Guozhuang (photographs by the author).

5.2. Liangyi Pavilion: A Feng Shui Pivot of Connection and Separation

Liangyi Pavilion stands at the center of Guozhuang. Its distinctive design links the inner and outer ponds and demonstrates a close concern with spatial continuity and the movement of qi.

It connects internal and external fields of qi and carries the

garden's source of vitality. Liangyi Pavilion separates the quiet enclosure of Jingbiju Residence from the openness of Yijing Tiankai, yet its open corridors maintain continuity between them. The arrangement avoids the adverse Feng Shui conditions of interrupted or blocked qi and ensures smooth, harmonious circulation through the garden [29][30]. The open corridor acts like a living thread that binds nature and culture, interior and exterior, and brings vitality to the entire estate.



Figure 20. Liangyi Pavilion connecting the inner and outer ponds (photographs by the author).

It combines visual and functional value and exemplifies the integration of activity and repose. Liangyi Pavilion is both a visual focus and a functional place. Visitors can look toward the lake and distant hills while using its sheltered interior to rest and appreciate the scenery. This integration expresses the Feng Shui principle of balancing movement and stillness. Visitors can shift freely between activity and repose, experience the harmony of nature and culture, and enjoy a sense of physical and mental ease. Liangyi Pavilion therefore forms a memorable scenic line within Guozhuang.

5.3. Huan Pond and Mirror Pond: A Dual Expression of Water-System Feng Shui

In Feng Shui, water is a valued carrier of prosperity and life

force. Guozhuang uses Huan Pond and Mirror Pond to create a dual water system that combines poetic expression with practical wisdom and brings Feng Shui principles into the garden's spatial fabric [22][31].

Mirror Pond expresses squareness and the gathering of qi, stability and harmony. Its regular, calm form makes it a visual focus within Guozhuang. The mirror-like water reflects nearby buildings and scenery and creates a tranquil, contemplative atmosphere. The square layout conveys the Feng Shui idea that water can gather qi and forms a symmetrical, harmonious composition with the surrounding architecture [32].

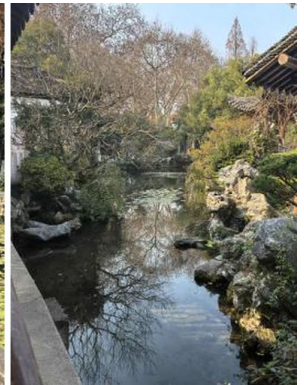


Figure 21. Mirror Pond and its surroundings (photographs by the author); **Figure 22.** Huan Pond and its surroundings (photograph by the author).

Huan Pond expresses curvature and vital qi, movement and liveliness. In contrast to the stability of Mirror Pond, its winding channels create a dynamic landscape. The water meanders like a ribbon, adding animation to the garden. This curved form accords with the Feng Shui principle that winding water carries feeling and avoids the harmful force of a straight, rushing flow [33][34].

The linked water system creates an ecological flow between inside and outside. Bridges and channels connect Mirror Pond and Huan Pond, allowing qi to circulate through the garden and linking the internal system with West Lake. The resulting exchange between interior and exterior strengthens ecological functions, supports water purification and circulation, and gives visitors a place to experience natural vitality at close range [35].



Figure 23. Footbridge connecting the two ponds (photographs by the author); **Figure 24.** Wobo Bridge (photograph by the author).

Through its dual water system, Guozhuang combines stability and harmony in Mirror Pond with the movement and vitality of Huan Pond. Their connection ties the garden closely to the larger natural environment and makes the estate an ecological space filled with both life and design intelligence.

6. Conclusion

This study shows how Guozhuang uses water-system organization, planting, rockeries, and other elements to express the Feng Shui concepts of sheltering wind and gathering qi and harmonizing yin and yang. It thereby achieves a close correspondence between traditional theory and practical design, with a high degree of functional and aesthetic value. The study is limited by the scope of its data and by the representativeness of Guozhuang as a single case. Further research should test patterns of Feng Shui application across more Jiangnan gardens and classical gardens in other regions, expand the range of cases, and examine innovative applications of traditional Feng Shui in contemporary landscape and urban design. In practical terms, the study of Guozhuang provides contemporary landscape design with a valuable traditional theoretical reference, supports the protection and transmission of historic garden-design ideas, strengthens cultural identity, and has lasting implications for cultural-heritage conservation.

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