

Spatial Design and Garden Architecture of Baiyun Taoist Temple in Lanzhou

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Abstract A restoration concept has been developed based on the Baiyun Taoist Temple Map found in the *Continuation of the Gaolan County Annals*. This study systematically analyzes the architectural features of Baiyun Taoist Temple in Lanzhou during the Daoguang period of the Qing Dynasty from three perspectives: overall layout, spatial design, and garden artistic conception. The analysis offers a representative case for understanding the spatial organization principles and cultural connotation of Taoist architecture in the Lanzhou region during the Qing Dynasty.

Keywords Baiyun Taoist Temple, Temple space, Garden architecture, Taoist architecture, Gardens of the Qing Dynasty

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Lanzhou Baiyun Taoist Temple was originally constructed in the 16th year of the Daoguang reign during the Qing Dynasty (1836)^[1]. It is situated on the east bank at the confluence of the Leitan River and the Yellow River, within Chengguan District, Lanzhou City, on the southern side of Binhe East Road. The temple faces the renowned Jinchengguan Site of the ancient Silk Road, located on the northern bank of the Yellow River across the river^[2]. The Taoist temple is oriented northward, with the Yellow River situated to its front. This religious site features a harmonious integration of architectural structures and garden spaces. Upon completion, the architectural complex is symmetrically arranged along the central axis, with the sacrificial area serving as the focal point. From north to south, the sequence of structures includes the mountain gate, theatrical stage, passing hall, main hall, and rear hall. The living area is positioned on the eastern and western sides of the sacrificial area, encompassing the Taoist temple and Yunshui Hall. The garden area encircles the central core and includes various garden architectures, such as the Wanghe Tower, Baxian Pavilion, Qunxian Tower, Xiaosa Pavilion, Sizhao Pavilion, Yingxian Bridge, and Laixian Pavilion. Covering an approximate area of 20,000 m², this Taoist architectural complex integrates religious functions with garden aesthetics and sightseeing. As a significant medium of traditional Chinese culture, the spatial organization and garden design of Taoist architecture embody profound philosophical concepts and aesthetic values.

Lanzhou Baiyun Taoist Temple, a quintessential example of plain-style Taoist temples in Lanzhou during the Qing Dynasty, features a spatial layout that adheres to religious rituals while simultaneously incorporating elements

of natural artistic conception, thereby holding considerable scholarly significance. Currently, academic research on Taoist architecture predominantly concentrates on Taoist temples located on renowned mountains, whereas the study of Taoist temples situated in urban plains remains comparatively underexplored. Despite sustaining multiple damages over time, Baiyun Taoist Temple currently retains only three main halls, the bell and drum tower, and the theatrical stage. Focusing on the Baiyun Taoist Temple in Lanzhou during the Daoguang period of the Qing Dynasty as the subject of study, this research employs on-site investigation, historical document analysis, and image examination to develop conceptual restoration and corresponding diagram. Through a comprehensive analysis of the overall layout, spatial configuration, and garden artistic conception, the study elucidates the spatial organization principles and garden design characteristics. The objective is to provide a representative case study for the investigation of Taoist architectural complexes constructed in Lanzhou during the Qing Dynasty.

1 Overall layout: Functional zoning and streamline organization

1.1 Analysis of functional layout

Zhao Guanghui^[3] categorized the group layouts of temple garden architecture into six types: courtyard style, corridor courtyard style, patio style, curved ruler style, scattered point style, and collection style. The Lanzhou Baiyun Taoist Temple exemplifies a typical courtyard style layout. This layout is characterized by the placement of a garden adjacent to one side of the temple, which preserves the independence and spatial organization of the religious area

while also fulfilling functional requirements for tourism and viewing. The temple's overall layout is characterized by a pronounced central axis (Fig.1). Through the adaptable arrangement of courtyards, it seamlessly integrates religious, living, and sightseeing functions, resulting in a coherent and dynamic spatial organization. Based on functional attributes, the temple can be distinctly divided into three sections: the sacrificial area, the living area, and the garden area (Fig.2).

The sacrificial area is meticulously organized with strict symmetry along the central north-south axis, featuring a five-courtyard layout. The terrain ascends progressively from south to north, thereby augmenting the sanctity of the religious sequence. The courtyard housing the main hall serves as the central element of the building complex, distinguished by its grand spatial scale and architectural design. The square situated before the theatrical stage is frequently filled with spectators and regularly hosts traditional opera performances during temple fairs, exemplifying the fusion of Taoist religious practices and secular entertainment. This area represents a vibrant hub of religious activity. In contrast, the rear hall area is dedicated to quiet worship, characterized by a tranquil and solemn ambiance. The living area is situated on both the eastern and western sides of the sacrificial area, arranged in a compact, inward-facing layout that encompasses the Taoist temple and Yunshui Hall. The Taoist temple serves as the daily living and practice space for Taoists, whereas the Yunshui Hall functions as a reception area for itinerant Taoists and devotees. This spatial configuration balances considerations of privacy and administrative efficiency, while maintaining a suitable distance from the main hall to preserve a tranquil environment conducive to practice. The

garden area encircles the central functional zone as an attached garden. By integrating architectural elements such as pavilions, corridors, and towers with the natural landscape, it fulfills the purposes of sightseeing, relaxation, and evoking a fairytale ambiance. The Wanghe Tower, oriented toward the Yellow River, skillfully incorporates the surrounding scenery into the garden, thereby enhancing the landscape layers and the spatial artistic conception.

1.2 Characteristics of streamline organization

The streamline organization of the Lanzhou Baiyun Taoist Temple is centered around a north-south central axis. Through the innovative design of the pathway system, it effectively integrates the three functional areas of sacrifice, daily life, and sightseeing, establishing a clear hierarchy and an efficient, orderly transportation network (Fig.2).

The sacrificial streamline is organized along a central axis that begins at the mountain gate and extends through the theatrical stage, the passing hall, the main hall, and culminates at the rear hall, thereby establishing a sacred and solemn ritual pathway. Each courtyard is delineated by walls and interconnected by doorways, which both maintain the continuity of the ceremony and facilitate a seamless spatial transition. The living streamline achieves efficient diversion through lateral connections. The east and west monasteries constitute an independent streamline system and are connected to the sacrificial area via the side gate. Yunshui Hall is situated near the mountain gate, facilitating the reception of outsiders while minimizing

disturbances to internal practices. The garden's streamline lines are arranged in a circular pattern and are moderately spaced from the sacrificial streamline lines. By linking various scenic spots through elements such as corridors and stone-paved paths, a tour route encircling the core functional area is established, thereby creating a viewing experience that is free, flexible, and dynamic.

2 Spatial design: Sequence experience and scale perception

2.1 Spatial sequence arrangement

Traditional Chinese garden design typically encompasses three primary forms of spatial sequence arrangement: circular sequence, continuous sequence, and radial sequence^[4]. The spatial sequence of the Lanzhou Baiyun Taoist Temple demonstrates a complex configuration. Specifically, the religious area employs a multi-courtyard layout aligned along a central axis, resulting in a strict and orderly sequence characterized by distinct hierarchical layers. In contrast, the garden area features a circular layout, which facilitates a more open and flexible visitor experience.

The religious sequence commences at the square situated before the mountain gate, which functions as a transitional space from the secular realm to the sacred, thereby facilitating a psychological transformation. The mountain gate distinctly delineates the boundary between the exterior and interior. The low passageway of the theatrical stage located behind the gate, characterized by a sense of repression, accentuates the openness of the initial courtyard.

The five courtyards are interconnected by the moon gate, generating dynamic rhythmic variations: the theatrical stage square is vibrant and bustling; the passing hall square is orderly and solemn; the square in front of the main hall attains a sacred climax; the area of the rear hall is characterized by solemnity and restraint; and the sequence concludes with the leisure pavilion (Fig.3). Each courtyard, by contrasting dimensions, openness and enclosure, as well as light and shadow, establishes a harmonious spatial rhythm and a profound atmosphere conducive to religious ceremonies. The garden sequence centers on the Wanghe Tower, which serves as the primary entrance and exit, and is arranged in a circular layout. Stone-paved paths and corridors interconnect to form a continuous loop for visitors to follow. This design not only effectively directs the flow of people but also creates a dynamic viewing experience, with changing scenes at each step within the limited space, thereby embodying the traditional garden design concept that emphasizes the integration of practicality and artistic expression.

2.2 Spatial scale control

In the traditional concept of scale, it is said that a hundred feet represent form, while a thousand feet signify momentum. Scholar Wang Qiheng has noted that traditional Chinese architectural design embodies this principle of spatial composition^[5]. The Baiyun Taoist Temple also adheres to this traditional principle in its treatment of spatial scale, emphasizing the harmony between human scale and the religious atmosphere.

The courtyard of the sacrificial area is relatively compact in scale, characterized by a pronounced sense of enclosure that fosters an introspective and tranquil religious atmosphere. The main building asserts its prominence by being elevated on a raised platform and possessing a larger volume, whereas the side halls are comparatively smaller and situated on lower platforms, thereby establishing a distinct hierarchical relationship between the primary and secondary structures (Fig.4). The main hall located in the third courtyard, characterized by its elevated platform and substantial volume, serves as the focal point for both visual and ceremonial elements. The garden area, by contrast, is relatively expansive and open, fostering a natural and vibrant environment for sightseeing. This spatial openness sharply contrasts with the solemn and austere atmosphere of the sacrificial area. Such variation in scale not only enhances the spatial experience but also accentuates the distinct environmental qualities of various functional zones.

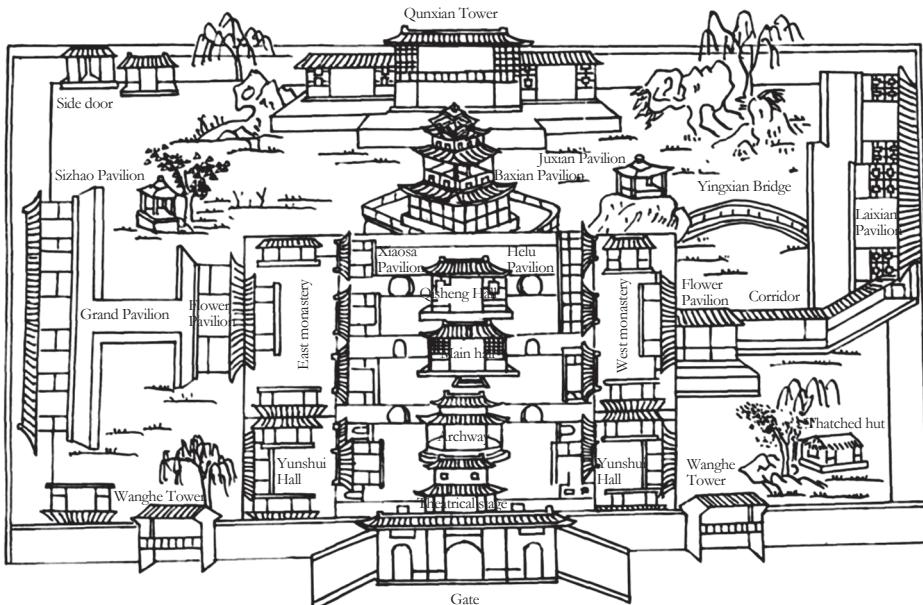


Fig.1 Baiyun Taoist Temple Map in the *Continuation of the Gaolan County Annals*

3 Artistic conception generation: Gardening techniques and cultural connotations

3.1 Analysis of gardening techniques

Lanzhou Baiyun Taoist Temple employs a variety of techniques in its garden design to cultivate a rich spatial artistic conception. (i) The centripetal layout designates the Baxian Pavilion

as the highest point, thereby establishing it as the visual focal point and control center. The buildings surrounding the southwest corner pool are arranged in a centripetal structure, which enhances the sense of spatial cohesion, prevents a dispersed layout, and establishes an organic connection among the various scenic spots. (ii) Spatial penetration facilitates separation

without interruption and enables the interplay between reality and illusion through the use of transparent elements such as door openings, lattice windows, folding screens, and corridors. This approach enhances both the depth of field and spatial fluidity. Moreover, the corridor functions not only as a guide for the tour route but also as a means to create a dynamic viewing experience characterized by continuously changing scenery during movement. (iii) The technique of borrowing scenery is ingeniously employed within the garden. The term “scenery” is broad and not confined to a specific theme or object, nor does it necessitate incorporation within a particular type of frame^[4]. For example, Wanghe Tower provides a distant view of the Yellow River, integrating the magnificent external river landscape into the garden and thereby extending the confined garden vista into the vastness of nature. The pool situated in the courtyard reflects the sky’s light and the shadows of the clouds, producing a scene in which reality and illusion merge, thus broadening the visual scope of the terrestrial space.

3.2 Embodiment of cultural connotation

The garden design of the Lanzhou Baiyun Taoist Temple embodies profound religious philosophy and traditional cultural significance. (i) The concept of “harmony between humanity and nature” is manifested through the seamless integration of architectural elements with the natural environment. For example, the Baxian Pavilion not only exemplifies human mastery over nature but also directs the observer’s gaze toward the Yellow River, thereby facilitating a dialogue and harmonious relationship between humans and the natural world. (ii) The plant configuration highlights cultural metaphors. Within the garden, locust trees, pear trees, and willows thrive, while the flowers and grass remain vibrant and aesthetically pleasing^[6]. The locust tree is considered a spiritual symbol, representing the connection between heaven and earth. The willow tree embodies Taoist philosophy, illustrating the principle of “overcoming rigidity through flexibility”. The pear tree signifies detachment from worldly concerns. (iii) The concept of feng shui significantly influences the overall layout. Lanzhou Baiyun Taoist Temple is situated facing the Yellow River and backed by Gaolan Mountain, aligning with Wang Qiheng’s recommendation for optimal site selection—being supported by high mountains and facing a body of water^[7]. This arrangement conforms to the traditional feng shui ideal of gathering wind and energy while being surrounded by

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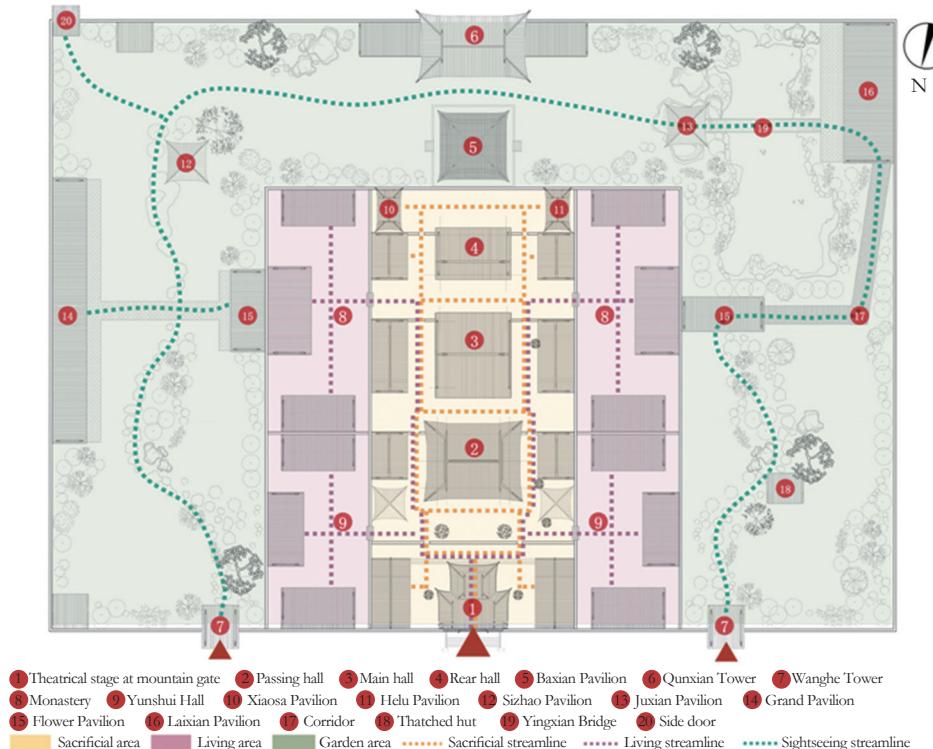


Fig.2 Overall layout of Lanzhou Baiyun Taoist Temple

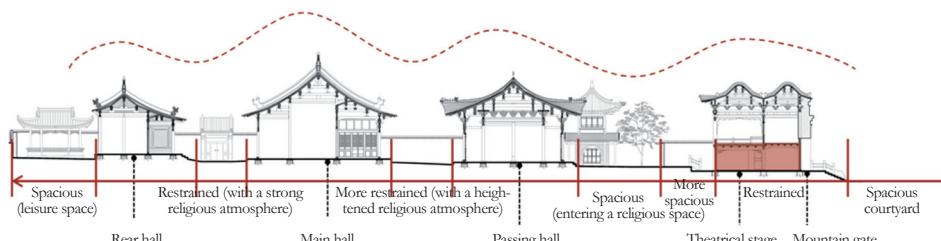


Fig.3 Sequence of sacrificial spaces in Lanzhou Baiyun Taoist Temple

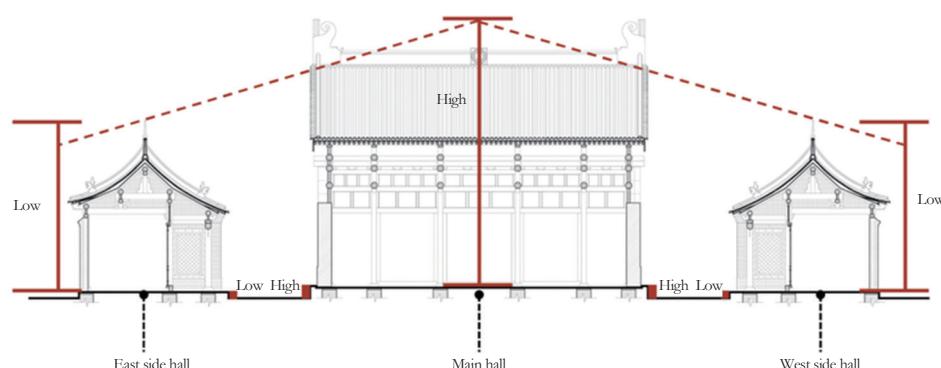


Fig.4 Scale comparison of Lanzhou Baiyun Taoist Temple

as a critical foundation for the implementation of ecological corridor protection and restoration projects. The “construction guidelines” comprise an access list and construction regulations. By explicitly defining use controls for various types of construction land across different zones, these measures restrict construction activities and facilitate precise ecological zoning control, extending from planning guidance to construction execution.

In terms of project management, Jinjiang City has designed and executed three primary categories of ecological initiatives aimed at establishing a comprehensive ecological network and enhancing its structural configuration. The first initiative, the Green Heart Optimization Project, aims to enhance the ecosystem's self-sustaining capacity through the optimization of vegetation communities and habitat restoration. This initiative integrates the needs of local residents and regional cultural elements to incorporate low-disturbance ecological and cultural functions. The second initiative, the Green Corridor Connection Project, focuses on ecological clearance efforts along the mountain corridor fault section, restoring and maintaining the ecological corridor's width, and facilitating wildlife habitat connectivity. The third initiative, the Bay Restoration Project, entails targeted ecological management in severely degraded areas to restore and enhance the aesthetic and

ecological quality of the bays.

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mountains and water.

4 Conclusions

The spatial organization of the Lanzhou Baiyun Taoist Temple exemplifies a profound integration of functionality and artistic expression. By employing a comprehensive approach to architectural layout, spatial sequencing, and garden design techniques, the temple manifests the distinctive features characteristic of plain-style Taoist temples in Lanzhou during the Qing Dynasty.

The overall layout exhibits a distinct pattern comprising three zones: the sacrificial area, the living area, and the garden area. The north-south axis primarily governs the sacrificial sequence, while the living courtyards are positioned on the eastern and western sides. The surrounding area is enclosed by an attached garden. The functional zoning is clearly defined, and the organization of streamline is both coherent and logical. Regarding spatial creation, the sacrificial area employs a multi-courtyard layout that extends

throughout the entire site. By varying scale and architectural forms, a spatial atmosphere aligned with religious rituals is established. The garden area structures the tour routes using circular pathways, thereby providing a continuous and engaging viewing experience. In the creation of artistic conception, a range of techniques, including centripetal layout, spatial infiltration, and the borrowing of scenery, are systematically utilized to enhance visual depth. These methods integrate Taoist philosophy and natural concepts, thereby imbuing the garden landscape with rich cultural significance.

Lanzhou Baiyun Taoist Temple, a quintessential example of Taoist architecture in the Lanzhou region during the Qing Dynasty, exemplifies spatial structures and garden designs that not only reflect the typical characteristics of Taoist architecture but also embody distinctive regional cultural features. This temple thus serves as a significant reference for comprehensive studies of temple and Taoist architectural complexes in the Lanzhou area during the Qing Dynasty.

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