



# The Transformation of Visual Symbols of the Suzhou Canglang Pavilion Leak Patterns in Cultural and Creative Products

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**Abstract.** The Canglang Pavilion in Suzhou, as one of the representative classical gardens of Suzhou, features leak patterns that are not only rich in cultural connotation and aesthetic value but also stand as a treasure of traditional Chinese garden art. This article takes the leak patterns of Canglang Pavilion as its research subject, analyzing the symbolic characteristics of these patterns. It further explores the transformation pathways of these leak patterns into visual symbols in cultural and creative products, and proposes design concepts for incorporating these patterns into such products, followed by specific design practices. The leak pattern is an indispensable visual decorative symbol in traditional Chinese culture. Through this design practice, the organic integration of leak culture with modern design is achieved, which holds significant meaning for the public's understanding of leak culture.

**Keywords:** Suzhou Canglang Pavilion; Leak pattern; Cultural products; Visual symbol transformation.

## 1 Introduction

With the continuous strengthening of national cultural confidence, the inheritance and innovation of traditional culture have gradually become the focus of societal attention. In this context, as a model of Chinese garden art, the classical gardens of Suzhou carry rich historical and cultural connotations as well as artistic essence. Leaks, as an important component of garden architecture, have attracted considerable attention from researchers due to their unique form and profound cultural heritage, making them a highlight of traditional garden art. These patterns not only reflect the wisdom and craftsmanship of ancient artisans but also carry deep cultural symbolic meanings. Therefore, an in-depth analysis of the symbolic characteristics of the leak patterns in the Canglang Pavilion in Suzhou and the transformation of their design concepts into cultural and creative products can not only innovatively explore their artistic value but also provide new ideas and methods for the dissemination of traditional culture and the design of cultural and creative products, expanding the pathways for the spread of leak culture.

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## 2 Cultural Value of the Leak Patterns of the Canglang Pavilion in Suzhou

### 2.1 Cultural Characteristics of Leak Windows

The design of the leak windows in the Canglang Pavilion of Suzhou profoundly reflects several key ideas in traditional Chinese culture, such as reverence for nature, the pursuit of art, and the promotion of humanistic spirit. The patterns on the leak windows are often derived from elements of nature, such as crack patterns, swastika motifs, and vine-like designs. These patterns not only abstractly present natural forms but also reflect the ancient people's deep reverence for nature. In Taoist philosophy, nature is regarded as a symbol of the principle of wu wei (non-action), emphasizing that humans should follow the laws of nature. Therefore, the leak windows, through the clever use of natural elements, convey the philosophical idea of harmony between heaven and humanity, embodying the unity of man and nature[1].

The exquisite design and intricate structure of the leak windows represent the extreme pursuit of art in traditional Chinese culture. Ancient artisans sought perfection in garden design, striving for the harmonious unity of function and aesthetics. As an important visual element in gardens, leak windows not only fulfill practical needs such as ventilation and lighting but also highlight the artisans' dedication to art through their complex patterns and refined structure. The symmetrical designs and arrangement of holes in the leak patterns specifically reflect the core concept of the Zhong Yong (Doctrine of the Mean) in Confucian philosophy[2]. Confucian culture emphasizes finding balance in opposition, and the design of the leak windows is an artistic embodiment of this balancing philosophy, showcasing the unity of harmonious aesthetics.

### 2.2 Regional Characteristics of Leak Windows

Suzhou, as a representative city of the Jiangnan region in China, has its garden and architectural culture deeply influenced by the regional climate, historical background, and cultural traditions. The design of leak windows in Suzhou gardens is shaped by Confucian culture, Zen Buddhist thought, and Taoist philosophy. Garden designers pursue an atmosphere of tian ren he yi (the unity of heaven and man) in the construction of buildings[3], which distinctly reflects the unique cultural features of the Jiangnan region. Jiangnan gardens emphasize the integration of natural elements and the fluidity of space, focusing on the harmonious unity between water features, vegetation, and architecture.

As an important component of garden architecture, leak windows not only possess aesthetic value but also play a key role in regulating the atmosphere and creating a sense of artistic conception in spatial design. Their unique forms and patterns, through ingenious structural arrangements, guide natural light and airflow, reflecting the philosophical idea of tian ren he yi (the unity of heaven and man) in traditional culture, and showcasing the deep interaction between humans and nature. In the gardens of Suzhou, the design of leak windows not only reflects functionality but also serves as a bridge for emotional communication between architecture and landscape. Each leak window,

through its carefully designed proportions, shapes, and patterns, creates a harmonious connection with the natural surroundings. The leak window is not merely a visual "window" but also an emotional "passage." Through these apertures, the garden owner establishes a unique interactive relationship with the landscape, enhancing the psychological perception and emotional experience of the space. The leak window becomes an important link connecting people with the landscape and the soul, offering not only visual enjoyment but also evoking emotional resonance and spiritual immersion, thereby shaping a poetic spatial experience.

### **3 Symbolic Characteristics of the Leak Patterns of the Canglang Pavilion in Suzhou**

#### **3.1 Structural Design of Leak Windows**

The structural design of the leak patterns in the Canglang Pavilion is one of the key features that make them a significant visual symbol. As an important component of garden architecture, the design of the leak windows emphasizes smooth lines and simple forms, achieving both delicacy and minimalist beauty. Each part of the leak window has its own distinctive shape, yet the overall design maintains a harmonious unity, making it a unique decorative element on the walls of Chinese gardens.

The structure of the leak window consists of three main parts: the outer frame, the inner frame, and the window core. The forms of leak windows are diverse, with the window frame designs being especially varied. The shapes of leak windows can be broadly categorized into several types: geometric shapes, such as circles, squares, hexagons, rectangles, and ovals; plant-inspired forms, including shapes like palm leaves, begonia flowers, gardenias, peaches, and lotuses; and object-inspired shapes, such as fans, vases, pomegranates, temple eaves, open books, and silver ingots[4-5].

Particularly, circular and regular polygonal shapes are commonly found at corners or focal areas of corridors and walkways in gardens. This design not only reflects the romantic aesthetic tastes of garden designers but also showcases their rich imagination and creativity.

#### **3.2 Composition Styles**

The design of leak windows in Suzhou gardens presents unique compositional forms when viewed from a planar perspective. These compositions not only have strong visual appeal but also carry profound cultural significance. Although research on the compositional rules of leak windows is still limited, their artistic beauty often arises from a sense of rhythm and harmony. Common compositional methods include repetitive composition, symmetrical composition, and centripetal composition, each of which presents different visual effects and spatial perceptions.

Repetitive composition is a frequently used technique in the design of leak windows in Suzhou gardens. It typically involves the repeated appearance of a specific pattern or element, creating an orderly and rhythmically engaging visual effect. This type of

composition is characterized by the repetition of a single motif, with simple lines that provide a smooth and comfortable visual experience[6]. In gardens like Canglang Pavilion, repetitive compositions often take the form of straight lines or curves, with common patterns such as begonia motifs and their variations. This design not only enhances the overall sense of the window structure but also allows visitors to sense a rhythmic visual order from a distance.

Symmetrical composition occupies an important position in the design of leak windows in gardens, with axial symmetry and central symmetry being the two most common forms. Axial symmetry creates a sense of balance and order through the presentation of mirrored patterns. This layout is often found in the viewing corridors of gardens, where the arrangement of windows is neat and orderly, forming a sense of disciplined alignment. In terms of pattern design, elements such as koi fish and flowers are commonly used in axial symmetry, where they are symmetrically nested, making the overall structure more stable and showcasing the beauty of balance[7].

Central symmetry, on the other hand, is relatively more complex. It divides the pattern along its center point, forming four symmetrical regions. This design enhances the sense of depth in the composition while highlighting the richness of the visual experience[8]. Central symmetry is often found in more intricate and elaborate leak window patterns.

Centripetal composition is a unique design form characterized by patterns or elements converging toward the center, creating radial lines. This type of composition not only focuses the viewer's gaze toward the center but also enhances the visual impact and dynamism of the image. In the design of leak windows in Suzhou gardens, centripetal composition often presents a layered effect. Explicit centripetal composition typically features a large central motif, forming a clear sense of depth, while implicit centripetal composition uses smaller central motifs and weaker inner borders to create a more simple and subtle aesthetic.

These compositional forms not only reflect the garden designer's unique understanding of spatial aesthetics but also embody the pursuit of harmony and order in Chinese traditional culture, deeply revealing the cultural essence of garden art.

### **3.3 Cultural Connotations of Leak Windows**

Traditional Chinese decorative patterns are a cultural heritage that has accumulated over thousands of years of history. With diverse forms and rich content, these patterns carry deep emotional and cultural symbolism. Often employing techniques such as metaphors and symbolism, they exhibit poetic beauty, optimistic emotions, and romantic elements, becoming an integral part of national culture. The decorative patterns in the leak windows of Suzhou gardens, as a typical representative of this traditional art form, not only serve the practical functions of the garden architecture but also display unique artistic aesthetics and symbolic meanings, making them enduring models of artistic excellence.

In the Canglang Pavilion, the leak window patterns are varied and include five major categories: nature, animals, plants, objects, and text. These patterns reflect a rich sense

of formal beauty. Natural elements such as sunburst patterns and the Bagua (Eight Trigrams) design, animal motifs like dragons, bats, and fish, plant patterns such as peonies, lotuses, and plums, object shapes like silver ingots, vases, and chessboards, as well as textual symbols like the characters for happiness, longevity, and double happiness, all create a diverse artistic expression within the leak windows. These elements embody the artistic features of change and unity, symmetry and balance, order and repetition, as well as rhythm and cadence.

These patterns not only possess visual beauty but also carry symbolic significance, often aligning with the spatial layout of the garden and the personal aspirations of the garden designers. Together, they form auspicious meanings deeply rooted in folk traditions. For instance:

The ice crack pattern symbolizes "hard study and the broadening of horizons."

The copper coin pattern represents "prosperity and wealth."

The begonia motif conveys "wealth and well-being."

The fish scale design signifies "continuous prosperity and abundance."

The pine and crane pattern is a symbol of "auspiciousness and longevity."

The bat design represents "happiness and good fortune[9]."

These motifs, through exquisite carving, clever inlay work, and even the use of gold leaf, demonstrate their noble and artistic value. The cultural connotations of the leak window patterns not only reflect practical wisdom but also trace the evolution of aesthetic history. They embody the essence of Daoist thought, revealing a subtle yet profound sense of beauty, making them an essential vehicle for the transmission of traditional Chinese culture.

### 3.4 Materials Used in the Making of Leak Windows in Suzhou Gardens

The materials used in the production of the lou window patterns in the Canglang Pavilion of Suzhou are key elements of their visual symbolism. These materials not only influence the visual impact and durability of the lou windows but also demonstrate the unique charm of traditional Chinese craftsmanship. Traditional lou windows primarily utilize materials such as brick, tile, and stone carvings to adapt to the hot and humid climate of southern China, avoiding the use of wood. Depending on the materials employed, lou windows can be categorized into types such as brick-tile layered windows and pile-sculpted windows. Among these, the brick-tile layered lou window is the more traditional approach, with the frame made from Wang brick (a type of decorative brick), and the window core crafted from select tiles, cylinder tiles, wood chips, bamboo strips (or iron sheets, iron bars) [10].

The silver ingot-patterned lou windows of Canglang Pavilion use rectangular window frames, with the window core consisting of board tiles and cylinder tiles, which are adhered and fixed using mortar. Another method of production is the molding technique, where iron wire is used as the framework, and materials such as hemp twine and cemented paper pulp are layered to form the structure, which is then carved into patterns. Due to the time and effort involved in this molding technique, it is relatively rare in modern garden design. However, the Cui Linglong wall lou windows in Canglang

Pavilion, which depict seasonal scenes such as willow trees, lotus flowers, and winter plum blossoms, are a notable example of this method.

In addition, the patterns of the lou windows also incorporate traditional techniques such as carving, inlay, and painting, making the patterns more delicate and intricate, reflecting the exquisite craftsmanship and artistic value of traditional Chinese arts. The fusion of these materials and techniques imbues the lou windows with unique aesthetic and cultural significance[4].

## 4 The Transformation of Lou Window Patterns into Visual Symbols in Cultural and Creative Products

### 4.1 The Current Application of Lou Window Patterns in Cultural and Creative Products

The lou window, as a gem of traditional Chinese garden architecture, with its unique patterns and structure, provides rich inspiration for the design of cultural and creative products. Guided by modern design principles, elements of lou windows have been ingeniously incorporated into various cultural and creative products, imbuing them with deep cultural significance while achieving innovation and breakthroughs in functionality (see Figure 1).

For example, a hollowed-out gift box themed around the Four Gentlemen—plum, orchid, bamboo, and chrysanthemum—uses intricate patterns and shapes to showcase the essence of traditional Chinese culture. As the gift box is opened, the interplay of light and shadow, along with the overlapping window silhouettes, creates a classical and elegant atmosphere. This allows consumers to experience not only the enjoyment of fine liquor but also the unique charm of Chinese traditional culture. This design not only elevates the cultural value and quality of the liquor but also offers new insights and references for the design ideas and expressive techniques of cultural and creative products.



Fig. 1. Baijiu Packaging Design

### 4.2 Design Concept

First, the visual symbols from the Canglang Pavilion window screens, including patterns of begonia flowers, lotus flowers, butterflies, lingzhi fungus, Kui dragons, and diagonal swastika motifs, will be extracted and summarized. These will then be creatively transformed using modern design language. Second, an in-depth analysis will be conducted on these six selected Suzhou window screen patterns to explore the cultural

connotations they embody. This exploration will serve as the foundation for conceiving and defining the overall design theme, allowing for a deeper expression of the cultural and emotional layers embedded within these patterns. Based on the theme, an appropriate color scheme will be chosen, and finally, leveraging the modern aesthetic values, these patterns will be presented through cultural and creative products, conveying the beautiful symbolic meanings inherent in the window screen culture.

This paper, while maintaining the original artistic characteristics and cultural connotations of the Canglang Pavilion window screen patterns, extracts elements from the begonia, lotus, butterfly, lingzhi fungus, diagonal swastika, and Kui dragon motifs, undergoing morphological transformations and artistic combinations (see Figure 2) to better align with contemporary aesthetic demands.

In the design process, a square window frame serves as the basic structural form, combined with the principles of centripetal composition. The begonia and lotus motifs are merged at the center to create a prominent visual focal point, enhancing the depth and the effect of double borders. In contrast to the surrounding begonia motifs positioned in the four cardinal directions, the central pattern occupies a larger visual space, thus intensifying the overall visual impact. The four corners are decorated with butterfly motifs, adding liveliness and playfulness to the design.

Additionally, the lingzhi fungus and diagonal swastika motifs are cleverly transformed, and the Kui dragon pattern is applied in a manner that integrates modern design techniques such as symmetry, repetition, and rotation. This combination not only reflects the elegance and grace of classical garden culture but also explores and innovates within the realm of minimalist modern aesthetics.

This design is not only a tribute to the inheritance of traditional culture but also represents an artistic innovation and reinterpretation of the window screen patterns within the framework of contemporary aesthetic values.

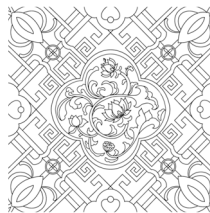


Fig. 2. Motif Combination

### 4.3 Analysis of Motif Meanings and Color Scheme

The six motifs—Begonia, Lotus, Butterfly, Lingzhi, Slanted Swastika, and Kui Dragon—each carry cultural connotations of "wealth," "longevity," and "good fortune." The Begonia motif, a traditional symbol of prosperity, signifies "riches and honor" and, due to its reputation as the "immortal flower," is often used to metaphorically describe noble individuals or women of both talent and beauty. The Lotus symbolizes purity and harmony, with the blooming of paired flowers representing marital bliss; additionally, the homophony between "Lotus" and "Harmony" further emphasizes this meaning. The

Butterfly motif represents wealth and new beginnings. The Lingzhi, as a sacred herb, is a symbol of auspiciousness and longevity, embodying resilience and transcendence. The Slanted Swastika motif, prevalent in both Buddhist and Taoist cultures, symbolizes infinity and eternity, representing the cycle of life and cosmic harmony, and in secular culture, it also signifies good luck, happiness, and longevity. The Kui Dragon motif, blending the features of the dragon and the Kui, symbolizes imperial authority and nobility, signifying peace, safety, and longevity.

These six motifs not only possess high aesthetic value but also hold significant cultural and historical importance, making them ideal elements for the development of motif-based designs in cultural and creative products. The design theme centers around "auspiciousness and completeness," with the primary color palette chosen as pink, complemented by contrasting hues such as gold, blue, and green, creating a strong visual impact. Additionally, the use of gradient effects enhances both the simplicity and opulence of the design, presenting a modern visual experience while retaining traditional refinement and elegance (see Figure 3).

Building upon modern aesthetic needs, the author has innovatively derived and transformed traditional patterns (see Figure 4). First, a hollow design is applied to the central section, with the color adjusted to black to create a sharp contrast with the surrounding elements, thereby enhancing the visual impact. Additionally, hollow elements are incorporated around the perimeter to highlight the traditional "leak" shape of the window, further enriching the visual expression of the pattern.

On this basis, the author employs two-way and four-way continuous composition techniques to redesign the derived pattern. The two-way continuous arrangement creates a strong sense of rhythm in the horizontal or vertical directions, while the four-way continuous design allows the pattern to extend infinitely across the plane, showcasing a more varied and enriched aesthetic effect.



Fig. 3. Design Work

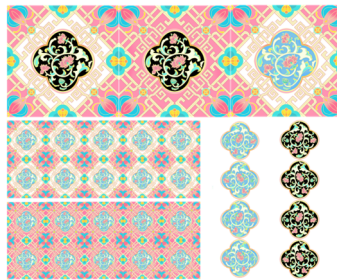


Fig. 4. Derivation of Design Patterns

#### 4.4 Design Scheme Application and Display

This cultural and creative product design is based on the symbolic characteristics of the window patterns, blending modern design concepts with practical functionality, cultural connotation, and aesthetic needs. By applying the Canglang Pavilion window patterns to the design of daily office supplies, the aim is to allow people to experience the profound cultural heritage in their everyday lives. This design not only responds to consumers' pursuit of personalization and cultural depth but also promotes the inheritance and development of cultural symbols by refining window pattern elements, holding significant social and cultural value.

Through the design of a series of office supply products, a diversified consumer experience is provided, quickly meeting market demand while encouraging viewers to explore the cultural meaning embedded in these products. This approach highlights the unique charm of window art (see Figure 5).

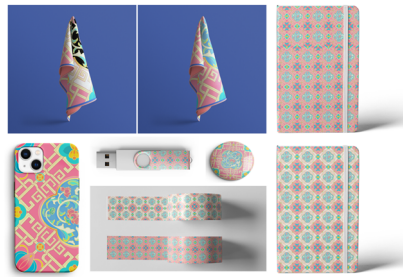


Fig. 5. Cultural and Creative Design of Office Supplies

## 5 Conclusion

The leak window is an important component of traditional Chinese garden art, carrying rich cultural connotations and artistic value. This paper analyzes the symbolic characteristics of the leak window patterns at Canglang Pavilion, revealing the profound meanings embedded in different motifs. For example, the begonia motif symbolizes wealth and health, the butterfly motif signifies happiness and harmony, and the Kui dragon motif represents auspiciousness and strength. These traditional symbols not only present unique artistic effects through exquisite carving techniques but also carry the philosophical thoughts and aesthetic emotions of Chinese culture.

By utilizing modern design language, this paper transforms these traditional motifs into graphic forms, combining modern aesthetic principles with the demands of cultural and creative products. This approach demonstrates the innovative value of leak window culture and its contemporary artistic expression.

In conclusion, this paper emphasizes the protection and inheritance of leak window symbols to ensure their continued cultural significance in contemporary society. It also advocates for the deep integration of traditional Chinese art with modern design.

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