

# The Cultural Connotation of Traditional Garden Landscape Design Techniques and Contemporary Interpretation Research

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**Abstract:** The mountain-making technique and water-making technique are the two main technical methods in the traditional garden construction technology, which reflect the spirit connotation and aesthetic pursuit of Chinese traditional culture. In this paper, we analyze the technical features of the two traditional technologies, discuss their culture meanings such as harmonious relationship between human beings and nature, artistic atmosphere creation and ceremony, discuss problems of conserving or updating such methods in modern landscape architecture, and suggest new ways to use them today; to inherit the wisdom and technicality of traditional landform shaping technique and flood control technology in modern construction, thus encouraging continuous inheritance and innovative development of traditional garden culture.

**Keywords:** Traditional garden; Mountain creation and water management techniques; Cultural connotation; Contemporary interpretation

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## 1. The technical system and expressive characteristics of traditional garden mountain-creation and water-management techniques

### 1.1. Core techniques and morphological design principles of traditional mountain construction methods

Classic Mountain Stacking focuses on “mimicking nature” and develops a standard suite of methods such as stacking, vertical positioning, padding, and hoisting. All methods are used according to the form logic of mountains and water, to obtain natural irregularity in the distribution of rock mass, as well as texture balance. Rocks with stratification provide increasing depth, vertical stones stress vertical majesty; lifted stones give a sense of flight in the air. All the methods imitate landscape textures and contours, avoiding the artificiality of man-made effects in scenery so that “it is not only made but seems natural.”

The construction of Duoshan Mountain follows the basic principle of “primary and secondary clear, solid and hollow, dense and sparse”. First, a main peak determines the outline, followed by placing secondary peaks and other stones for harmonizing with layers in consideration of height differences, distances, and hiding/exposing relations between the rocks.

The study pays attention to mixing solidity with emptiness: rocks are the solid part, whereas voids are represented by holes; peaks represent the solid skeleton, and clouds represent the void.

## **1.2. Configurations of water systems and landscape formation approaches in traditional water management practices**

Conventional water management methods arrange the layout of a water system based upon natural watercourses and produce various shapes including ponds, streams, ditches, springs and waterfalls. It follows “crooked path, open and closed balance, and flowing order”, not straight, rigid and artificial things, but a naturally dynamic waterscape. In small gardens, there are often several ponds, although bigger ones are embellished with their own rivers so that there is “an evident spring head and an ultimate fall” (and they are arranged in such a way that the water system’s sight distance will be further expanded to achieve ‘nearby mountains and forests, with panoramic views in all four directions’.

The garden planning in Li Shui focuses on the “coordination between water and rock, buildings and plants.” Through surrounding the waterscape by rock masses as well as creating gentle waves at the waterfront, buildings are built close to the water to create a close-water space, and aquatic plants are planted on the surface for added perspective; cleverly using borrowed views and opposing views, etc., letting the waterscape match with the environment around it; secondly, using illumination and sounds such as gurgling spring and rippling waves to emphasize on the beauty of water, changing it from just an ornament to make a life for a garden scene <sup>[1]</sup>.

## **1.3. The combined techniques of mountain-cutting and water-management and the logic of landscape space creation**

The essence of the composition method of combining mountain and water is “the unity between mountain and water and the combination of rigidity and flexibility,” rock is the skeleton and water is the blood; the layout of mountain and water should follow the unified relationship of nature: mountain depends on water to live, and water can enhance the beauty of mountains. There is one way that is to guide waters along with mountain contour lines by enclosing the water system in stone to form an overall layout where streams meander around mountains and ponds mirror peaks; the other is to place mountains close to water, rocks stand by the side of the water, which brings about a scene that water runs round the mountain and the two are in good harmony together, to achieve the smooth union between them in shape.

The layout principle of the courtyard building space follows the concept of gardening, which is “the little mountain forest has the spirit of thousands”. According to the method of “one-inch dragon condensed”, the beauty and vastness of nature are reflected in the garden through differences in space scale, concealment, and density. The secluded winding path from entry to the expansive view of the principal landscape feature, and from the rock-shaded interior space to the exterior space that opens up with streams and rivers, this increasingly layered spatial structure enables tourists to feel the artistic idea and beauty of the scenic landscape while moving between views, space-artistic conception unified in harmony.

## **2. Analysis of the cultural connotations of traditional garden techniques for mountain creation and water management**

### **2.1. The cosmological ideal of unity between heaven and humankind and its manifestation in landscape aesthetic culture**

The art of shaping hills and directing rivers embodies the cosmology of “the unity of Heaven and humanity.” The traditional gardeners perceived gardens as microcosmic models of nature, stressing that these activities are all to follow and imitate nature, respect the texture and growth rules of mountains and water and achieve harmony between people’s work and nature. The key is the ancient attitude toward respecting nature: humans need to blend into nature and communicate with nature, through which gardens become spiritual containers in the realization of a human ideal, one that is to live harmoniously within nature.

“Duoshan li shui” (mountain shaping and water management) is a form of artistic creation that carries the ancient Chinese aesthetic culture of landscape, incorporates the beauty criteria of scenic landscapes in gardening methods: it seeks the rock’s quality “slender, wrinkled, porous, translucent, “and ponds to be “clear, meandering, active and soft.” These pond aesthetics were derived through careful study and modification of the surrounding landscape, forming a unique landscape aesthetics system. In this process, the gardener transforms the beauty of natural sceneries into gardens, which can help people enjoy the scenery in the garden as well as obtain a unity of natural aesthetics and spiritual pleasure.

## **2.2. The pursuit of poetic and pictorial aesthetics and the spirituality of the literati**

Landscape architecture is an endeavor toward the beautiful and the picturesque; classical gardens were mostly planned by literati, who fused poetic ideas from the arts of poetry, prose, calligraphy, and painting to produce mountains-and-waterscapes, seeking to create a scene that “looks like a picture or a poem.” The layout of rocks and winding water follows the composition style of paintings and calligraphy, emphasizing balance between void and fullness, focus and openness, and strong contrast and soft color coordination. Thus, forming a scenic space integrating the artistic beauty of paintings and the poetic beauty of poems, achieving the goal of “painting within the courtyard, and poetry within the painting”.

This aesthetic concept has become the spiritual comfort of the ancient scholar-officials; in the feudal society, many scholar-officials used the scenery of gardens to convey feelings, either expressing their frustration about bureaucracy or longing for nature, or expressing their aspiration toward simple, pure lives. The carefully designed mountains and rivers were no longer scenery alone; they became an extension of the literati’s heartland: the mountains stood as their virtue, while rivers symbolized their liberty and convenience. Thus, gardens were a necessary place for the literati to seek spiritual peace, achieving mental emancipation <sup>[2]</sup>.

## **2.3. The institutional order and the traditional philosophical connotations of moderation and harmony**

Duoshan’s garden-making is a practice that enacts the ritual order of tradition. For imperial and official gardens, the disposition, size, and shape of hills and water bodies are all based on ritual needs: a main hill is located in the north, flanked by smaller hills, and ponds are arranged symmetrically or connected along the central axis. Even in private gardens, the landscape composition expresses an attitude of hierarchy that reflects seniority and hierarchy to show how traditional social ritual order pervades and is manifested through garden design.

The artistry reflects a traditional aesthetic sense of “balance and moderation”: mountains do not appear too high or dangerous, while rivers and lakes do not become too agitated. All the mountains’ altitudes, volumes, and population densities are in balance with each other as well as with avoiding extremes. The coordination between the rock-water system and landscape-building plants all pursue the integration as one whole. This idea of “moderation and harmony” brings about tranquility, elegance and harmony to garden spaces, revealing the balance between life and harmony that ancient people pursued.

# **3. The practical basis and core requirements for the contemporary translation of traditional mountain-climbing and water-management techniques**

## **3.1. The inheritance needs of contemporary landscape design for traditional landscape culture**

With the rapid development of cities, people’s demand for a view of nature is getting stronger and stronger. In this case, gardens are playing an important role as mediators between mankind and nature and contemporary garden design desperately needs the power support of traditional landscape culture to solve the problem that there is no sufficient humanistic background behind modern design works, the landscape culture, culture, beauty and soul of the ancient hillside gardening art and irrigation science to add special flavor to modern landscaping: meeting the twin desires of visitors to experience both spirituality and nature.

In terms of cultural confidence, it is necessary to protect and inherit traditional culture today. Traditional culture is one of the important forms of Chinese culture. The continuation of the garden craft, its cultural meaning, is also an important aspect of cultural heritage<sup>[3]</sup>. Today's garden design not only considers functional layout but also pays more attention to cultural expression. Landscape design craftsmanship, the embodiment of Chinese gardening, is a must that needs to be inherited today, and it also requires interpretation in the context of the times, which is the main channel of active transmission of culture.

### **3.2. The contemporary context and constraints for the translation of mountain-climbing and water-management techniques**

The modern application of the mountain arrangement technique and water management technology takes place against the background of city construction. Contemporary landscape architecture embraces not only the garden as it was known in its classical sense (both for private use or in the palace), but also opens up towards urban spaces such as the park, parking lots, plazas, residential courtyards, parks, and streetscapes. The requirement for access by large numbers of people and their use as working environments, instead of the garden's traditional emphasis on privacy and leisure, along with the need for environmental responsibility rather than beauty alone, all argue against using these methods without modification for a wide range of modern applications.

Traditional handicrafts have many limitations in terms of translation. First, the traditional mountain and water management technology is mainly inherited by craftsmen; the lack of modern craftsmen makes it hard to inherit techniques and the use of ancient raw material (lake stone and yellow stone) is rare and extracted in a restricted way. In contrast, modern garden design focuses on convenient construction, low investment, and environmental protection. Because the traditional method has many steps and is expensive to construct, it does not meet the requirements for current garden designs, having potential pitfalls in the way of a successful implementation.

### **3.3. Core principles and value orientation for the contemporary translation of traditional skills**

The main idea for today's new interpretation of the ancient technique in gardening art is "keeping its spirit but creating anew, and being pragmatic". The meaning of "keeping its spirit" lies in maintaining the culture kernel and garden ideology behind this technique - not blindly discarding some important ideas including the human-nature unity and aesthetic atmosphere creation, thus preserving the spiritual essence of traditional landscape culture, and "innovation" refers to combining modern design ideas, materials, tools and conditions needed to perfect or improve methods and shapes without copying exactly and so that the old is blended with the new.

The value concept of craft translation is "cultural inheritance, function innovation, and environmental friendliness." Firstly, the concept values the cultural heritage to inherit and spread the traditional landscape culture into modern garden design; Secondly, it focuses on functionality, which means the transferred methods respond to public/practical needs in contemporary gardens and fit into specific functions of such gardens; last but not least, maintains the environmental quality through use of compatible, non-polluting materials and environmentally sound building practices, thus, the balance of the garden construction and environmental protection is realized to conform to the modern concept of ecological development.

## **4. Exploration of contemporary translation approaches for traditional garden techniques in mountain creation and water management**

### **4.1. Extraction of cultural connotations and transformation into contemporary design language**

The key to the new interpretation for traditional mountain shaping method and water management lies in the accurate extraction of culture's connotation, as well as a good conversion of it to the contemporary designing language. That is not only about the physical form of traditional methods but also about the following: extensively studying and summarizing basic ideas in traditional culture, such as the man-nature relationship, aesthetic environment construction, the use of

mountain and water, as well as the relationship between the actual and the virtual. They need to be converted to a design language that can be perceived, expressive, and applicable to contemporary landscape architecture <sup>[4]</sup>. Instead of just mimicking conventional landscape shapes.

The conversion process of modern design language should be combined with the characteristics of modern design - simple, abstracted and functional. Abstracting the form of the figure in traditional landscape design to minimalistic geometry, fluid line qualities, and subtle volumetric relations, e.g., translating the stratigraphic layering of conventional rocks to the compositional interaction and vertical balance of contemporary rock blocks, and turning the sinuous pathways of conventional hydromancy into the linear arrangements and equilibrium of contemporary hydraulics. At the same time, modern design languages like lighting, colouring and materials are applied to express culture meaning, which allows the garden in its modest, contemporary form to become a microcosm for one of the most profound aspects of the old landscape tradition.

#### **4.2. Innovation and improvement of traditional techniques and the integrated application of modern materials**

To overcome some of these problems caused by complicated procedure, high dependence on workers' skills or poor construction performance in conventional stone pitching and diversion method, it is necessary to make scientific innovation and improve the essence of traditional methods, while retaining some basic landscape ideas such as the unity of mountain and water and the relationship between substance and space, redundant manual procedures to be simplified; combining the new technology of modular building with digital modeling, traditional methods can be upgraded. Taking the combination of traditional manual laying and modern modular prefabrication as an example, it greatly improves the construction efficiency; integrating the natural layout thinking of traditional water conservancy with modern hydraulics and ecology bank protection technology to ensure the ecological integrity and stability of the water system, so that conventional methods were adapted for modern-day construction.

The combination utilization of the new material is an important pragmatic method in the present era's technology adaptability, which makes full use of conventional materials like nature rock and timber with the active introduction of the modern environmental friendly ones-including green concrete, recycled stone; preservative treated wood; and sustainable acrylic, all without needing to rely on scarce or limited supply sources for these materials while balancing construction cost controls along with environmental protection mandates. In addition, the material properties and manufacturing advantages of modern materials allow us to innovate in landscape designs: transparent acrylic makes the translucent and dynamic beauty of waters, wherein metallic sheets establish the modern feel and simple geometry of rocks, allowing for an integration between conventional garden design and new materials' qualities.

#### **4.3. Adaptive design for contemporary contexts and the living transmission of techniques**

The inheritance development of the ancient hill modeling, water regulation should pay more attention to its adaptability for a variety of new applications. Designing in various sites such as urban gardens, local parks, streetscape, retail outdoor space, and waterway environments, the landscape component size, appearance, and function should be flexibly adjusted according to the environment's purpose, spatial context, and the needs of the people. For example, a city park landscape must be beautiful but also open to everyone through waterfront promenades and play areas, while community green spaces focus on the usable scale and linkages with everyday lives that meet the pragmatic need of citizens' recreation or family time spent together between parents and children.

This includes safeguarding artisanal knowledge via apprenticeship and living heritage initiatives, on the one hand, by training professional landscape designers equipped both with classic knowledge and modern ideas through educational programs offered in landscape academies or colleges; and public understanding for the formation of mountains and water management methods as well as traditional landscape culture shall be improved by means of landscape exhibitions, intangible cultural inheritance publicity, and practical experience of garden-making activities, thus improving the

social level of cultural literacy and aesthetic taste. It is also hoped that designers will continue to seek new ways for the transformation of techniques into modern landscape design methods, ensuring that these traditional skills are maintained, inherited and developed continuously by means of further practical innovation, which is what it really means to live the heritage in practice.

## 5. Conclusion

Traditional Chinese gardens are represented by “Duoshan Lishui” (mountain shaping and water management), which is a high-level representation of the essence of Chinese garden landscape, with its unique landscape language and cultural value being an essential part of today’s garden creation. Based on that, we will discuss how to apply it in our times from the following four aspects: technique system, cultural identity, basis of the translation process, and means to achieve this goal; it indicates that any translation is not only form-al imitation, but instead maintaining cultural fundamental value and creative form technique in modern landscape design. It is only by rooting design practice in the traditional culture on one hand, but also including contemporary design ideas on the other hand, material technologies, and diverse spatial requirements that the field may achieve creative transformation and innovation development.

## Disclosure statement

The author declares no conflict of interest.

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