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Topographical Understanding of Artificial Mountain Making in Traditional Chinese Gardens

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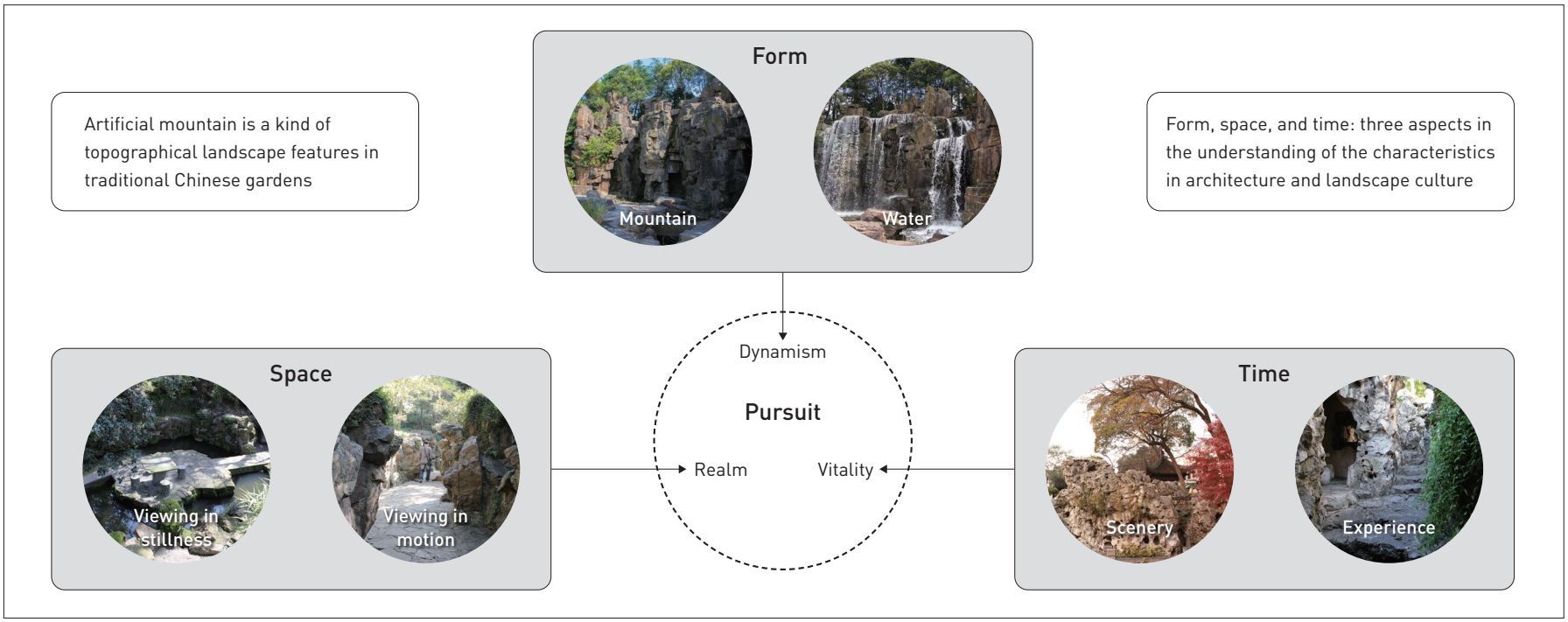
GRAPHICAL ABSTRACT



HIGHLIGHTS

- Integrates the artificial mountain making in traditional Chinese gardens into contemporary Landscape Architecture theories to demonstrate its distinctive value
- Form, space, and time are the three aspects to constructively interpret the theory of topographical landscaping of artificial mountain
- Dynamism, realm, and vitality are key concepts to understand the topographical landscaping of artificial mountain

KEYWORDS

Traditional Chinese Gardens; Artificial Mountain Making; Topography; Form; Space; Time; Dynamism; Realm; Vitality

ABSTRACT

The artificial mountain in traditional Chinese gardens as a kind of topographical landscape features has not been deeply and constructively studied in contemporary landscape theories. This paper analyzes the typical artificial mountain making in traditional Chinese gardens from the perspective of topography, and discusses about the landscaping concepts in three aspects—form, space, and time—according to the understanding of the characteristics of topography in architecture and landscape culture proposed by David Leatherbarrow. For the making of form, the dynamism of both mountain and water is the key consideration. For the spatial experience, it should focus on the arrangement of mountain "realm" in both stillness and motion states. Time management is also important, and both the scenery itself and the experience of visitors should pay attention to the vitality of the mountain and water over time. This paper will help us understand the topographical landscaping art of artificial mountain better, contributing to the theory and practice development of Landscape Architecture in contemporary China.

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1 Introduction

Topography has always received fundamental attention in landscape architecture, as landform has great significance in the landscape because of its direct association with so many other elements and aspects of the outdoor environment[1]; sometimes topography not only composes of landscaping, but also defines it[2], and even "to create works of art by molding landform"[1], which is a particularly prominent phenomenon. In contemporary research, many landscape works with distinctive artistic characteristics have been gradually recognized as a positive design element[3], such as environmental sculpture[1] and landscape art[2] in western landscape architecture that have received much attention. However, due to the comprehensiveness of topographical landscaping, the current research has not yet specially integrated with or discussed about the knowledge of landform design[4], and an in-depth understanding of related theories requires promoting interdisciplinary effort and establishing a new broadened perspective[3]. The artificial mountain making in traditional Chinese gardens is also a significant content of such kind of topographical landscaping art.

The artificial mountain making has a long history since the Qin and Han Dynasties (221 BCE–220 CE) of China, and has developed a highly skilled achievement with the cultural connotation of "mountains and rivers." It is honored as "a unique art of China"[5]; and even in modern times, it still has a strong folk vitality and continues to be built in large quantities. Although there have been many achievements in the research on artificial mountain making from the perspective of craftsmanship[6]~[8], it has not yet been deeply and constructively discussed in the theoretical view of landscape topography. At present, there have been some studies on topographical landscaping of traditional Chinese gardens[9][10], but they mainly learn garden as a whole. The analysis for the topography of artificial mountain making is still relatively immature and lacks an effective connection with existing landscape topography theories, making it provide little guideline and assistance to China's contemporary landscape theory and practice. Generally speaking, on the one hand, it can be seen that artificial mountain making, as a distinctive and active method of landscaping, has been limitedly cognized in contemporary landscape theory. It reveals that the discourse of contemporary landscaping theory in China is still mainly adopting western theories, and China's own landscaping traditions have yet to be well incorporated. On the other hand, most studies on Chinese garden mountain making are still confined in the own traditional discourses and lack the intimate connection with modern landscape theories, and it thus is still difficult to demonstrate its distinctive value in contemporary Landscape Architecture.

This paper attempts to dissect the typical method of artificial mountain making in traditional Chinese gardens from the perspective of topography. Historically there are various methods

of artificial mountain making, such as the huge mountain made mainly with earth in the Han Dynasty (202 BCE–220 CE) , the miniature artificial mountain made of stone which was popular in the Tang Dynasty (618–907), and the combined use of earth and stone to represent a mountain corner started in the Ming and Qing Dynasties (1368–1912).[11] Since it is difficult to fully discuss about such above in one paper, here it mainly focuses on the most recognized method of artificial mountain making that creates the most remarkable artistic effect in practice—for a site of limited space and ordinary conditions, this method is to mimic a real mountainous effect with stones. This follows the artistic characteristics originally developed by Nanyuan Zhang (1587–1666), a master of garden making in the late Ming and early Qing dynasties[12]. Among the contemporary craftsmen, Hui Fang is the representative, who is proficient in practice and made a certain theoretical summary,[7] whose understanding of the typical characteristics of traditional artificial mountain making offers a basis for the further discussion in this paper. This kind of artificial mountain making that pursues the effect of a real mountain has its unique comprehensiveness, not only in the created mountain body itself, but also in the combination of "mountain and river," as well as related plants and buildings, which are also important components in the discussion here.

Contemporary architectural theorist David Leatherbarrow, in his *Topographical Stories: Studies in Landscape and Architecture*, proposed three characteristics of topography in architecture and landscape culture, namely materiality, spatiality, and temporality.[13] Upon this theoretical structure, this paper discusses about the topographical making of artificial mountain in three aspects: form①, space, and time. It not only recognizes the "dynamism" of its material form, but also pays attention to the "realm" of its spatial experience and understands the "vitality" of its temporal presentation; it not only examines the topographical manifestation of artificial mountain making, but also interprets the guiding ideology, principles, and implementation methods. Therefore, in the topographical discourse of contemporary landscape theory, this paper attempts to offer a deeper understanding of the landscaping art of artificial mountain making and inspirations for contemporary landscape practice, and makes contributions to the disciplinary development of China's Landscape Architecture.

① As far as the artificial mountain making is concerned, the materiality is mainly reflected in the form of the scenery that people can perceive.

2 Form: Scenery Making of Artificial Mountain

In terms of material form, artificial mountain, through topographical landscaping, basically is to form natural landscape scenes, as what *Craft of Gardens: The Classic Chinese Text on Garden Design* (*Craft of Gardens* hereafter) described "though man-made, they look like something naturally created"[14]. However, for ordinary gardens with limited materials and space, it is impossible to directly create a real mountain; creating a miniature mountain scene is also not feasible, because it hardly meets visitors' needs to enter and enjoy the mountain in the garden. Therefore, the artificial mountain in ordinary gardens must be an artistic creation that forms excellent natural mountain scenes, and some traditional Chinese aesthetic principles have been well followed. The most important concept of the principles is "Shi" ("势," meaning dynamism and propensity) that presents the appreciable effect of inner vitality. This key concept in traditional Chinese aesthetics is obviously reflected in traditional Chinese arts such as calligraphy and painting[15], as well as artificial mountain making. Artificial mountain manifests an integrated landscape of "mountains and rivers"—the mountain body itself and the water in the mountain, both of which have their own "dynamism." Here, the parsing of the topographical landscaping of mountain and water, i.e. the choreography of the height and the lowness of topographical features, is carried out.

2.1 Topographical Forming of Mountain

The formation of an apparent topographical scene of "mountains" is the main content of artificial mountain making. Within a relatively large space, it may be possible to shape mainly with earth. While, for the sites with a limited area, most of outstanding topographical scenes were created mainly by stones, as "rocks piled up high" described in *Craft of Gardens*.[14] From the perspective of topography, artificial mountain making mainly seeks its dynamism vertically and horizontally. Principles of the traditional Chinese landscape painting have often been adopted in garden making, especially the viewing ways of "three distances"—"high distance," "deep distance," and "level distance"[16], roughly corresponding to looking up, looking beyond, and looking down. Usually, the space of ordinary gardens used for the artificial mountain making is limited, making visitors can hardly feel the level distance when looking down; but in terms of the views of looking up and beyond, one can seek for height and depth.

Vertically, the artificial mountain pursues "growing dynamism" to achieve a sense of majestic height like a real mountain. Natural

mountains often exhibit an inner vitality that seems to grow higher and higher. The artificial mountain simulates the dynamism of growth, giving visitors a feeling of a mountain rising upward, which is mainly in shape of a towering and upright mountain (Fig. 1). In terms of formal effect, if there is a need for a distant view, it can create a beautiful peak; however, for smaller gardens where visitors would barely see the complete mountain peak in a close proximity to the scenery, the upper mountain such as steep and towering overhanging rocks and cliffs can be created: the top of the rocks is overhanging, emphasizing the dynamism and tendency of top-heavy, which would block one's view of looking-up and cause an illusion that there is a higher mountain body behind, just like Yu Li's words that "the top [view] would not end as the propensity of a great cliff appeals."[17] Although the actual height of the cliff and the quantity of stones used does not need to be great, it can generate a sense of infinity in height, and express the sublime of the mountain. While pursuing the towering dynamism of the upper part, it should also pay attention to the harmony between the peak and the lower part of the cliff, including the overall relationship of the lower part, the higher part, and the middle part that connects them with "natural veins."

Horizontally, the artificial mountain pursues "extensive dynamism" to express a deep sense of real mountain. Excellent artificial mountains, though made within a limited size, are either isolated or thin, but rather deep and extensive. It is not simply to create a mountain scene or an image of "the mountain in the garden," but rather a feeling of being in the mountain—or even mountains—and an experience of visiting "the garden in the mountain." This requires a sense of extension of the veins of mountains across the whole garden, seemingly the mountain stretches into the garden from the outside, for which it is important to build mountains adjacent to the garden boundary. For example, in history, Zhang blocked the view of the rear part of the artificial mountain, "level hillocks and gentle slopes, mounds and hummocks can be [...] outlined with low walls and enclosed within thick bamboo […] so that it seems as though amazing peaks and precipitous cliffs are piled up beyond the wall," creating the illusion that the mountain is extending from the outside "that it seems as though one is dwelling at the foot of a great mountain."[18] The artificial mountains of Jingqingzhai in Beijing and Huanxiu Shanzhuang in Suzhou also used this method.[19] As the imaginary "great mountain" comes into the garden, its veins can extend into more distant parts in the garden, fostering an inexhaustible propensity (Fig. 2). For the veins' dynamism, Zhang described them as "the impetus of their rocky veins, falling and rising, protruding and erupting."[18] Congzhou Chen also pointed out that the method of artificial mountain making is inseparable from "momentum and veins,"[20] so that one can perceive the endless continuity of mountains. The layout of artificial mountains in the garden, similar to Chinese landscape paintings, differentiates the primary mountain from the others. Some studies have discussed about the respective forms and characteristics of the "main mountain" and "accompanying mountain" in topographical landscaping.[21] In the formation of the "extensive dynamism" of the overall layout, the creation of specific scenes also strengthens the sense of depth of the mountain with layered rocks and grottoes.[22] In addition, the extension of "mountain foot" is also an important aspect. For example, common rocky scenes can be created all over the garden to enhance the effect of "garden in the mountain," and "if


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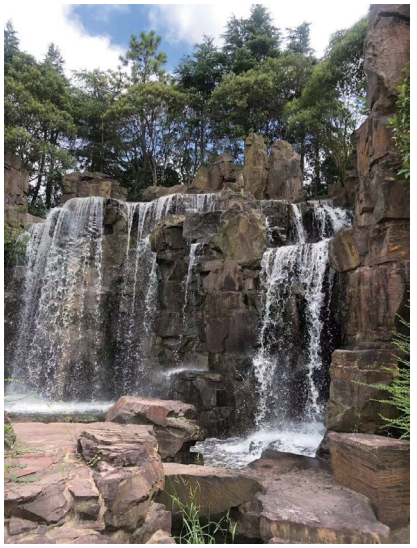
1. The growing dynamism of the artificial mountain at Flower Harbor Garden, Shanghai. The red dotted lines represent the internal rising dynamism by piling up stones.
2. The extensive dynamism of the artificial mountain in Puyuan Gardem, Kunshan. The red dotted lines represent the internal continuity created through the outline and topography of the rockery.

these are arranged sparsely enough they can achieve a good effect," summarized in *Craft of Gardens*.[14]

In practice, the height and the depth of the artificial mountain should be considered comprehensively, where the site and its existing topographical conditions must be primarily respected. This is repeatedly emphasized in *Craft of Gardens*— "you should follow the natural lie of the land to obtain interesting views"; "if it is high and square you should make use of pavilions and terraces"; "if it is low and concave you can dig out pools and ponds"; "high mounds can be further heightened and low-lying places should be dug deeper still."[14] That is to say, if the elevation of the terrain varies, the main body of the artificial mountain can be arranged on the higher side, while the remaining veins and waterscapes can be set at the lower places. In the making of "garden in the mountain," the appropriate location and orientation of the imaged "great mountain" beyond the boundary of the garden need to be wisely considered through the design of the relationship with the main body of the mountain, and the overall artificial mountain is arranged and shaped following its dynamism. Therefore, the vertical height and horizontal depth of the mountain landscape can be defined by its "growing dynamism" and "extensive dynamism," laying the fundamental effect of the topographical landscaping.



3. The waterfall at Flower Harbor Garden, Shanghai.

2.2 Topographical Transforming of Water

Just as there are many waterscapes in real mountains, the construction of artificial mountain also involves water management. For "the water in the mountain," which is different from those isolated waterscapes, the shape of water of the artificial mountain is formed by stones, so the mountain and the water together form the landscape scenery. In the chapter of Raising Mountains in *Craft of Gardens*, there are many descriptions about water management.[14] Contemporary researchers pointed out one important reason why Water Management is included as part of the chapter of Raising Mountains in *Craft of Gardens* is that the relationship between mountain and water is complementary and the form of water is shaped by the form of stones.[23] The waterscape both comes from and contributes to the artificial mountain. On the one hand, it helps form vivid landscape scenes of lively mountain with water,[24] on the other hand, it also demonstrates dynamism. Similar to the two dimensions in the mountain making, the dynamism of the water also should be managed vertically and horizontally, both assisting and strengthening the dynamism of the mountain.

In the vertical direction, artificial mountain waterscapes can make use of the height difference to create water movement from high to low. Moving water is vivid, active, and full of vitality and often in forms of water flows, terraced water, waterfalls, etc.[6], which together with stacked stones form a rich mountain scenery and enhance the image of natural mountains, and also increases the growing dynamism of the mountain. The landscape effect of waterfalls is the strongest, which have been frequently used in artificial mountains in history, such as Genyue (Northeast Mountain) in Kaifeng built in the Northern Song Dynasty; Tu'ershan (Rabbit Mountain) of Xiyuan (West Garden) in Beijing built in the Yuan Dynasty; Xu Tingguan's Garden in Suzhou built in the Ming Dynasty; and Shizilin (Lion Forest) in Suzhou built in the early 20th century. However, the construction of these waterfalls requires the installation of water tank on the top of the artificial mountain, which is maintained through frequent and costly manual pumping. *Craft of Gardens* also records the collection of rainwater from the eaves to form a mountain waterfall[14]—which can be discerned in relics of Huanxiu Shanzhuang in Suzhou[25]—but the waterfall can only be formed in rainy days. Aided with modern technology, it is easier to create the scene of waterfalls and the forms vary depending on the way stones are used. For example, the artificial mountain waterfalls at Flower Harbor Garden in Shanghai were created multiple levels of forms that echoes each other (Fig. 3).[26] Whether it is a spectacular high waterfall, a staggered cascade of rhythmic falls, or a low and soothing stream, these lively waterscapes with varying heights add the vitality of the mountain landscape. At the same time, the downward flow of these water bodies also sets off the upward trend of the mountain, and the water at the bottom of the mountain that eventually converges and creates the contrast with the height of the mountain and the depth of the water.[27] Dunzhen Liu mentioned that the artificial mountain in Huanxiu Shanzhuang

formed narrow and long pools to surround the foot of the mountain or wanders into the "valley" to set off the steepness and depth of the mountain, making the mountain and water complement each other.[25] An effect of "dig[ging] out a watercourse at the bottom," according to Craft of Gardens, can also bring.[14]

In the horizontal direction, diverse artificial mountain waterscapes are linked, creating a flowing connection and contributing to the extensive dynamism of the mountain. In the theory of landscape painting, water is called "the blood of mountains"[28], referring to both the vitality of life and the intimacy of mountain and water. In the garden, the water flow connects scattered mountain scenes and strengthens the image of real mountains. As Chen said, a garden would be alive with the mountain veins and the water sources connected.[24] In *Craft of Gardens*, the emphasis of "source" as that "you should […] find out where the water comes from or flows to"[14] is also consistent with the concept of dynamism in artificial mountain making. The flowing water can make visitors feel that it comes from the depths of the "great mountain" which is imagined as an extension from the outside. For example, reasonably, a high waterfall would bring about a feeling of there is a big mountain behind it. Another example is a design of a cave where the water enters and seems endless would enhance the feeling of depth of the mountain (Fig. 4). Thus, the connected waterscapes and the extended mountains together render the deep and infinite sense of the landscaping as a whole. By coordinating stones and water, various waterscape forms can be introduced, such as pools, streams, valleys, and beaches, and waterways can be high or low, open or narrow, straight or curving, converging or diverging. In the meantime, water management can in turn further highlight the dynamism, mass, and depth of the mountain, consistent with the painting principle of connecting mountains according to water paths and defining waterways according to mountain shapes.[29]

4. The cave in the artificial mountain of Puyuan Garden, Kunshan.

4 © Kai Gu

The creation of waterscapes needs to holistically consider the growing dynamism and the extensive dynamism with the artificial mountain. For example, on Hui Fang's work, Shixian Shen holds that ponds, cascading waterfalls, and streams are integrated to form a whole water system, from the undercurrent of the high water outlet to the cascading waterfall thundering down, the fall of the midstream, and then to the whispering in the shallows, and finally converging into the pond; the lingering sound of all the waterscapes is like an amazing piece of music composed with prelude, climax, interlude, and end, inspiring people's reverie.[27] I also took the artificial mountain making in Pu Garden in Kunshan as an example to review its waterscape making, which connects and integrates the three key mountain scenes in relatively near, medium, and far distances. From the far to the near, the dynamism starts from an open water surface with a small waterfall dropping into a mini pool; then the water floods into a lively and cheerful shallow stream under the peak of the medium mountain scene, and finally flows into the main pool in front of the near scene. The water surface returns to calm, and enters a cave at the focal of the close-up scene, as if entering the belly of the main mountain and extending infinitely. Thus, the water runs through the whole garden, combining the use of rocks, plants, bridges, etc., with its wide or narrow alternate, the dynamic and the static intertwined, not only creating rich natural sceneries but also presenting an ingenious artistic rhythm.[30]

3 Space: Experience Making of Artificial Mountain

For the topographical landscaping of artificial mountain that mimics real mountains, it is not only about the visual appearance, but also about visitors' experience of the landscape space. The concept of "space" commonly used in contemporary architecture and landscape disciplines is meaningful for gardens only when it is combined with human perception. The "realm" (境) in the traditional Chinese aesthetic concept is a better expression: realm is a multi-sensory, immersive perception of complex and overall atmosphere; in the experience of realm, better landscape effects can also be realized, which is called "scenery from the realm."[31] The creation of an excellent artificial mountain realm is to fully form the experience of "the garden in the mountain." Chen's division of "viewing in stillness vs. in motion" as "the first consideration in the design of a garden"[24] is also applicable to the experience making of artificial mountain. Thus, in this paper the realm of artificial mountain is

understood from two perspectives of spatial experiences: viewing in stillness and viewing in motion.

3.1 Topographical Making of Experience in Stillness

The garden experience in relatively static state of the body was the most common viewing way in ancient Chinese garden literature, such as "sitting quietly and watching in the wonders" that presents a "mind-comforting" appreciation. As far as viewing in stillness is concerned, the focus of mountain experience is on the places with strong effects, especially two opposite spatial types: "openness" and "secludedness" summarized by Zongyuan Liu in Tang Dynasty,[32] which is confirmed by *Craft of Gardens* that describes as the "gaze into the distance" and "effect of deepness"[14].

The space of "secludedness" in the artificial mountain has a strong inward atmosphere. Due to the limited visual range, appreciation is more about mobilizing a variety of senses for perception, which also helps generate rich introspection and emotions. For artificial mountain making, it is necessary to arrange the mountain to create a "embracing dynamism" that is like being in a real mountain and has a strong sense of immersion. Within the limited garden space, such place is often the most important viewing point, facing the main mountain scenery with growing dynamism. At the same time, at other locations around the viewing point, it is also necessary to arrange certain mountain scenery that echoes the main mountain to form a sense of envelopment.[22] For example, in the Wenquan Pavilion area of Huanxiu Shanzhuang, a sense of being surrounded is formed by the main mountain and its valleys in the southeast and the auxiliary mountains in the northwest. Another example is the artificial mountain of Haiyan Qiyuan Garden in Jiaxing, a secluded area of pond and isle was created (Fig. 5). The embracing dynamism can also be enhanced through terrain transformation. By sinking the main viewing point and lowering the viewpoint, one's sight is confined by the boundaries of the site, submerging in a sense of elevation, which contributes to the sense of immersion. For example, the sinking of the main viewing point of Puyuan Garden in Kunshan makes the surrounding mountain scenery not massive in size but still have a strong sense of introversion.[30] For the realm with a more secluded effect, "habitable" caves can especially produce a "quiet" experience.[33]

For gardens having limited space, it is appropriate to create a realm of "secludedness." However, if there are settings for distant perspectives, such as a good view outside the garden and adjacent to a large area of water, it can also create a special experience of "openness" dominated by visual pleasure. Such places offer a combination of various distant and near scenes, and one's association and emotions can be aroused. *Craft of Gardens* refers to the pursuit of a distant outlook on the mountain top,[14] which is an important aesthetic effect in artificial mountain making. On the top of an artificial mountain as the viewing point, pavilions or platforms are usually constructed. "Pavilions perching on the top of the mountain"[34] is commonly built in gardens not only to offer a distant view but also to shelter from sun and rain, in addition to enrich the mountain scenery (Fig. 6). Platforms, with the view unobstructed, are also widely used, and their flat surfaces are suitable for sitting and lying. They can be set either at a higher place on the mountain or at a lower place near the water to enjoy the waterscape, and sometimes they can also be replaced with large flat stones.

3.2 Topographical Making of Experience in Motion

The mountain landscape in small gardens is often appreciated in meditation, such as Chen's assertion that "small gardens should

5. The secluded pool of Haiyan Qiyuan Garden in Jiaxing
6. The Wangjiang Pavilion on the artificial mountain of Yuyuan Garden in Shanghai

focus on viewing in stillness" and "the courtyard is dedicated to quiet appreciation."[24] However, if possible, it is important to set up sightseeing tours to better enrich the experience in the mountain. The aforementioned openness and secludedness are still the foundation for creating a comprehensive spatial sense of realm, and they can be further integrated into viewing effects in motion. For the spatial tour of artificial mountain, there have been two significant construction approaches methods used in history: one is the Jiangnan rockery commonly built in the late 16th century, often presenting complex mountain paths with twists and turns, and obtaining diverse and interesting experiences through sophisticated and novel creation of "artfulness"; the other, represented by Zhang's work in the 17th century, puts its emphasis more on the peaceful roaming experience with the landscape painting idea of "ancient insipidness and naturalness."[35] Both approaches have been used in outstanding artificial mountain work, and both have profoundly influenced later constructions till today.

The pursuit of a relatively gentle, leisurely, and enjoyable mountain realm is represented by the Jichang Garden rebuilt by Zhang's nephew, Shi Zhang. The gully made of yellow stone (known as "Gully of Eight Tones" since the 20th century) is more than 30 meters long and featured with slight twists and turns, as well as the openness and secludedness. One would be surrounded by the visual pleasure of the gully and dense forests and immersed with the melodious sound of the gurgling water, coupled with the cool by the wind, the tough sensation of the rocks. As the body turns and moves, one can quite enjoy the charm of mountains and valleys, and obtain a rich experience of "wandering in the midst of thousands of mountains." However, the paths are less dramatically changed, allowing visitors to enjoy a leisurely experience (Fig. 7). Such a creation of easy walking and strong mountainous realm is exactly what Nanyuan Zhang advocated that an excellent realm making would let "one has all the beauty of woods and springs without the effort of mountaineering."[18]

What has had a greater impact on the construction of rockeries over the later generations is to show the rich changes in the space and scenery along the complex and diverse paths of artificial mountain. In *Craft of Gardens*, it is said that "you may set stepping-stones in the water or build a flying bridge accoss from the mountain side"[14]. During the sightseeing, the ups and downs and the moves and stops brings about various visual scenes and abrupt changes in space, forming rich or even strong focal interests, which can be clearly seen in many large-size artificial mountains built in the late Ming Dynasty represented by Yanshan Garden in Taicang.[35]

In contrast to the complicated rockeries in the late 16th century that pursued the sensory interest of "artfulness" instead of the effect of real mountains, Nanyuan Zhang's artificial mountain making in the 17th pursued a realm of "naturalness." However, some excellent artificial mountain works of the Qing Dynasty, such as those in Huanxiu Shanzhuang in Suzhou (Fig. 8) and Jingxinzhai in Beijing, combined the advantages of these two approaches, not only including diverse landscapes and spatial sensations such as waters, rocks, caves, valleys, peaks, and slopes, but also having a distinct effect on mountains; in other words, they have achieved the realm of the real mountain together with the construction of complex paths in the artificial mountain making.[19]

For large-size artificial mountains, covered walkways can also be built as a connection between pavilions on the mountain and buildings below or along the water. In *Craft of Gardens*, Cheng Ji summarized the flexibility of covered walkway as "it may ascend half way up a mountain or go right down to the water's edge, following the rise and fall, the twisting and turning of the ground,

7. The Gully of Eight Tones in Jichang Garden of Wuxi
8. Huanxiu Shanzhuang in Suzhou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stopping and starting, curving and bending in a natural way. No garden should lack this particular feature." And "winding walkways bend like the letter S, curving with the form of the ground and bending with the lie of the land. They may curl round the middle of a hill or run down to the water's edge, pass among flowers or cross a moat, endlessly twisting and turning." He has the "Seal Cloud Walkway" constructed on the artificial mountain of Wuyuan Garden in Yizheng.[14] In terms of form, such construction should focus on the enhancement of mountain dynamism, rather than disproportionately "oppressing" or splitting the mountain effect; due to such a concern, Ji only suggested to place the covered walkways on hillside rather than on the top of the mountain. In addition, the setting of mountain tours also involves temporal considerations, which is to be discussed below.

4 Time: Vitality Making of Artificial Mountain

Regarding the temporal characteristics of landscape topography, Leatherbarrow pointed out two important aspects: one is that "seen over time the materials of the landscape continually renew themselves," and the other is that "time is also the medium of one's experience of the landscape."[13] The following provides an understanding of the topography of artificial mountain in these two aspects, and unifies both in the making of vitality.

4.1 Making of Sceneries Changing With Time

As for the material composition of landscape topography, the artificial mountains purely made of stone, seemly pursuing the eternal existence of the mountain, give visitors' a feeling of long-term stability that will not change over time. But in fact, a good artificial mountain is not only the representation of the mountain body itself, but also the realm of the real mountain landscape—in addition to the mountain body composed of stones and earth, it also contains waterscapes, plants, and even various structures, so it shows multiple temporal characteristics, which also becomes the content that artificial mountain making needs to be paid attention to.

Like other scenes, the temporal characteristics of artificial mountain scenery are primarily presented as traces accumulated over time, and even some decay. These forms often make visitors feel the existence of the power of time, and produce special aesthetic emotions, which are true at all times and in all over the world—Austrian art historian Alois Riegl called it "age-value."[36] In China, this kind of time traces are valuable because they can often make visitors reminiscent about the nostalgia of the past. When discussing about Zhuozheng Garden in Suzhou in his *Records of Jiangnan Garden*, Jun Tong mentioned that "all those who talk about gardens of 'antiquity' are talking about Zhuozheng Garden. Today, although the houses and pavilions have been declined, the mountains and pools have aroused elegant delights,"[5] which reflects a deep appreciation of the imprints of time in the garden. The timeliness that can reflect the beauty of naturalness is also often embodied in garden elements such as ruins, mosses, ancient trees or even dead wood, creating a "realm of antiquity." Among them, as to the pursuit of the "withered beauty," Liangzhi Zhu pointed out that this aesthetics comes from Zen Buddhism, both in China and Japan, but differing from the Japanese "seeing stillness in dryness," the Chinese style values "seeing life (vitality) in dryness."[37] In the construction of artificial mountain topography, in addition to paying attention to the preservation of ruins and ancient trees, we also should to pay attention to the shaping of the shade and depth of the artificial mountain, especially the aesthetic perception accumulated over time by the growth of moss.

As far as the specific contents of mountain scenery is concerned, what best reflects the timeliness lies in the sense of vitality brought by vegetation, which are the most important life forms in gardens. An artificial mountain lacking plants is lifeless and barren, which normally is not accepted in Chinese gardens. In the traditional Chinese aesthetics, the consciousness of vitality is the fundamental pursuit of all arts; mountains and rivers have their own sense of life, especially embodied in landscape gardens.[38] In the famous painting theory work *Lofty Ambition in Forests and Streams* of the Song Dynasty, the saying "mountains use water as their blood, vegetation as their hair, and mists and clouds as their expressions"[28] can also be well used for interpreting garden mountains: the mountain itself has a sense of life, as its growing dynamism; the water further brings vitality to the mountain, as the aforementioned lively waterscapes and features; and, the best embodiment of the sense of life over time of the artificial mountain lies in the use of plants.

The temporality of plants in the artificial mountains making manifests in two aspects. On the one hand, the flowers and trees grow with time, bringing about scenery changes. The growth of plants shows rich vitality and interests in all stages of life—seedlings and early growth, flowering and fruiting, flourishing and withering. Especially for woody plants, since the continuous growth brings about changes in the shape of the trees, it is necessary to carefully decide the planting location by presetting the growth scenes for years after the construction of the artificial mountain, including how the shade forms and changes, and

how the tree assists the mountain dynamism and completes the mountain shape. For example, on the artificial mountain in Huanxiu Shanzhuang, the shade formed by the large canopy of *Celtis sinensis* increases the mountain realm effect, and *Lagerstroemia indica* assists the extensive dynamism of the mountain. Some commentators have pointed out that it "needs the process of 'waiting,' which is formed with the integration between natural beings."[39] On the other hand, the creation of changing temporal scenes of flowers and trees lies in the rhythm of life cycles, showing the spirit of endless life. A manifestation is the annual changes of many herbaceous and deciduous plants, from which one can clearly feel the cycle of life. What is more commonly perceived is the seasonal changes. Since the Song Dynasty, people have paid special attention to the seasonal rhythm of the mountain landscape, as stated in *Lofty Ambition in Forests and Streams* that "in spring the mountains are as bright as a smile, in summer the mountains are as verdant as a jewel, in autumn the mountains are as clear as a beauty's face, and in winter the mountains are as bleak as drowsiness."[28] And *Craft of Gardens* also emphasizes to "contain the changing brilliance of the four seasons."[14] For artificial mountains in gardens, visitors' appreciation often comes from the colorful flowers in spring, the lush greenery in summer, the golden leaves in autumn, and the red plum blossoms with snow in winter, like a song of rhythm of life. Therefore, in the topographical landscaping of artificial mountains, attention should be paid to the plant design both vertically and horizontally, which not only support the lasting vitality of evergreen trees, but also has seasonal changes, so as to fully celebrate the vivacity of the whole mountain scenery.

In addition, some gardens created so-called "four seasons rockery." For example, in Geyuan Garden in Yangzhou, a variety of stone features were used to symbolize the simultaneous existence of "four seasons" in the garden. But this symbolic method of "freezing" time has not yet been included in the mainstream of Chinese garden culture.

4.2 Making of Experience Unfolding Time

In addition to the temporality displayed by the scenery itself, the visitors' experience is another important presentation of time. As for the experience in the artificial mountain, here we focus on the in-depth discussion from the perspective of time, and understand it in the aspects of "viewing in stillness" and "viewing in motion" as Chen proposed.

For viewing in stillness, the timeliness of the garden and mountain scenery is especially presented in the contrast of the visitors' stillness (such as sitting quietly) with dynamic scenes (such as waterfalls, flowing streams, mountain ponds with fish swimming, and mountain flowers swaying), insubstantial sceneries (such as shadows moving, fragrance floating, sound of wind rising and stopping), as well as the scenes of changing weather (such as sunny morning, cloudy afternoon, rainy and foggy days). All these bring about the aesthetic experience of the passing of time, which is exactly what Chen called "the interweaving of stillness and movement, forming its delighting charm" during "observing motion through stillness."[24] Stanislaus Fung also pointed out that this kind of deep understanding obtained from moving water and insubstantial scenery in "viewing in stillness" is of great concern to Chinese traditional aesthetics.[40] It can be seen that this kind of time experience is an important purpose, and the dynamic and insubstantial scenes should be well considered in the topographical making of the artificial mountain.

For viewing in motion, visitors gradually unfold the experience in the process of appreciating the artificial mountain; the aforementioned spatial experience of the artificial mountain is actually the combined effect of space and time. As stated in the article "The Cosmological Setting of Chinese Gardens" by American philosophers David L. Hall and Roger T. Ames, there is "inseparability" of time and space in Chinese tradition[41]; Zhu further pointed out that in the consciousness of the integration of time and space, Chinese culture attaches more importance to time and emphasizes that time dominates space as putting space into the changing flow of life.[38] Through the presentation of the concept of "flowing view" in Chinese gardens, Chunyan Zhang believed that this way of viewing has obvious subjective feelings and the sense of time, which is specifically reflected during the process of sightseeing that connects the originally isolated static spaces and makes them penetrate each other, creating a sense of flow—exactly a sense of time brought by the "flowing view."[42] This is also true in the artificial mountain making. Through the arrangement of paths, buildings, and scenes, along with the body of stopping or moving, slow or fast, in the unfolding of time as cadence and rhythm, visitors obtain the sense of space up or down, high or low, curved or straight, open or secluded, as well as psychological tension or relief, expectation or pleasure, excitement or relaxation, so as to gain the full artistic enjoyment of the artificial mountain. And such dynamic temporality, like rich spatiality, is also the content of the creation, just as Hall and Ames pointed out, "space and time in a Chinese garden [...] may be selected, constructed, and arranged as is every other element comprising the garden"[41], and thus become an important part of the topographical landscaping of artificial mountain.

Both viewings in stillness and in motion are often combined, from which one can fully feel the charm of garden realm in the passing of time, and also arouse the feeling of time and space that transcend reality and objectivity. In terms of space, as mentioned above that it pursues a grand realm beyond the limitations of the site and creates a sense of extension of the mountains inside and outside the garden; while in terms of time, it often produces a fleeting experience that transcends the reality, such as a trance as the saying of "one day in the mountain, a thousand years in the world." In *Craft of Gardens*, there is a phrase of "endlessly twisting and turning"[14]—here "endless" is not only about the spatial effect, but also about the perception of time. It is in the realm of the mountain and water in the garden isolated from the outside world where undisturbed inner ease and a unique aesthetic experience are produced. Contemporary philosopher Tingyang Zhao held that the mountain and water are the transcendent places in the world[43], and the artificial mountain pursues precisely this realm—it is beyond the mundane world, as an artistic experience at the level of ideal realm. This higher-level realm pursuit also provides further guidance in the topographical making of artificial mountain.

5 Conclusions

The artificial mountain making in traditional Chinese gardens is a distinctive topographical landscaping art, which still has been vigorous in contemporary practice as an important part of the cognition of landscape topography. The construction of a typical artificial mountain topography can be understood in three aspects: form, space, and time. For the making of form, the dynamism of both mountains and water is the key consideration. For spatial experience, it should focus on both aspects of stillness and motion. The management of time is also important, and for both the scenery itself and the experience of visitors it should pay attention to the vitality of mountain and water over time.

In this way, this paper establishes a preliminary theoretical framework for the topographical understanding of the artificial mountain making in traditional Chinese gardens, which also will help integrate the topographical construction of the artificial mountain into the discourse of contemporary Landscape Architecture. On this basis, future research is expected to explore more types, methods, approaches, and craftsmanship of artificial mountain making, so as to further make contribution from Chinese traditions to contemporary landscape architecture in both theory and practice.

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中国传统园林假山营造的地形学理解

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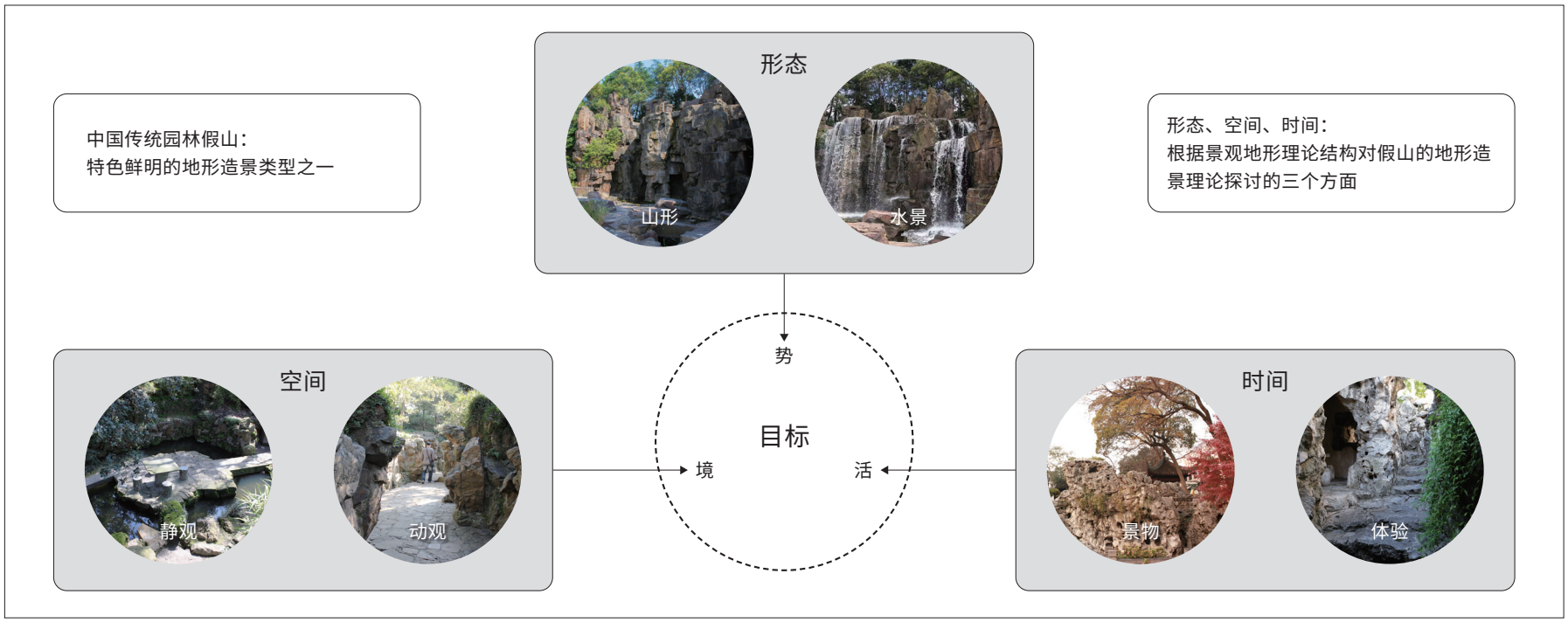
图文摘要



文章亮点

- 将中国传统园林假山纳入当代景观学理论体系而体现出其特色价值
- 形态、空间、时间是有效探讨园林假山地形造景理论的三个方面
- “势”“境”“活”是认识园林假山地形造景目标的重要关键词

关键词

中国传统园林；假山营造；地形学；形态；空间；时间；势；境；活

摘要

中国传统园林假山是特色鲜明的一类地形造景内容，但在当代景观理论视野中尚未得到深入而有效的探讨。本文从地形学的视角分析典型的中国传统园林假山营造，依据戴维·莱瑟巴罗关于建筑与景观营造文化中地形特征的理论结构认识，从形态、空间、时间三个方面探讨假山的地形造景理论。对于假山景象形态的营造，山、水二者的脉势都是关键考虑对象；对假山的空间体验，可从静、动两方面关注山境的安排；假山中的时间经营也是重要方面，无论景物自身还是游人体验都应关注山水在时间维度的生机活力。从而更深刻地认识假山的地形造景艺术，并对当代中国风景园林学科的理论与实践做出积极贡献。

编辑 田乐

1 引论

地形在景观营造中一向受到基础性关注。有学者强调，地形在景观中有重要意义，因其直接联系着众多的户外环境因素和方面[1]，甚至“地形不仅参与造景，而且在造景中起着决定性的作用”[2]；而通过地形造型创造出艺术作品[1]，是其中尤其突出的现象。在当代研究中，“地形成为一种积极的设计要素”而具有鲜明艺术特色的诸多景观作品已逐渐得到认识[3]，如西方景观营造中的“环境雕塑”[1]或“地景艺术”[2]等类型尤其受到关注。但由于地形造景的综合性，目前研究中尚未“对‘地形造景’的知识进行专门的整合和探讨”[4]，对相关理论的深入认知需要“跨越专业分支”并“建立一种新的视角”[3]，其中，中国传统园林中的假山也是此类地形造景艺术的显著内容。

假山作为中国传统园林中的地形造景，有着自秦汉以来绵延不绝的悠久历史，承载着山水的文化意涵，并且发展出高度的技艺成就，被誉为“吾国独有之艺术”[5]；即使在当代，仍有着旺盛的民间生命力而继续被大量营造。对假山营造的研究，尽管从技艺角度已有较多成果[6]~[8]，然而作为地形造景的显著内容，在景观的地形学视野中尚未得到深入而有效的理论探讨。目前已有一些关于中国传统园林的地形造景研究[9][10]，但主要是就园林整体为讨论对象，专门针对假山营造的分析还相对薄弱，缺乏与已有景观地形学理论的有效衔接，难以更广泛而有效地助益当代中国的景观理论及实践。可以看到，假山作为特色鲜明、且营造活跃的一类地形造景在当代景观理论中的认知还相当有限，这反映出我们的地形造景理论还主要是西方相关理论的引入与延伸、尚有待将中国自身传统更好地纳入；而就中国园林假山认知而言，目前多为传统话语中的自身营造研究，也还缺乏与当代理论的衔接，尚难以更好地进入当代景观学理论的体系而体现出其特色价值。

本文尝试从地形学的视角分析典型的中国传统园林假山营造、总结其中的地形造景理论。由于假山在历史发展中出现了多样类型，比如汉代多见写实土筑大山、唐代流行写意微缩垒石小山、明清以来又有土石结合再现大山一角[11]，这些多样性难以在一篇论文中论述全面，这里主要讨论目前实践中最受认可、艺术效果最为显著的一类假山——以普通用地条件、在有限空间范围、以叠石为主营造、求真山景境效果，这主要是追随明末清初造园叠山大师张南垣（1587—1666）的营造特色取向[12]。当代匠师中以方惠为代表，有着较为纯熟的实践并有一定理论总结[7]，从中可以得到对传统假山的典型认识，也能成为进一步讨论的基础。这种以真山效果为追求的假山营造有着综合性，不仅在于山体的本身，山、水结合也非常必要，而且相关的植物、建筑也常是重要的营造内容，这里一起纳入讨论。

当代建筑理论家戴维·莱瑟巴罗在其关于地形学的名著《地形学故事》中，提炼出建筑与景观营造文化中地形的三方面特征认识：物质性、空间性和时间性[13]。本文就遵循这一理论结构，从形态①、空间、时间三个方面对假山的地形营造展开探讨。不仅认知其物质形态之“势”，也关注人的空间体验之“境”，并且理解其时间呈现之“活”；不仅认识假山的地形造景现象，也探寻其背后的指导思想，并提炼出核心原则及其实现方法。从而，以地形学为依托进入当代景观的语境，能更深刻地认识假山造景艺术，并对当代景观实践产生有益的启示意义，也在理论上为建设涵盖自身传统、更具本土适应性的当代中国风景园林学科作出贡献。

2 形态：假山地形的景象营造

从物质形态角度，作为地形造景的假山，其基本目的在于模拟自然，以人工形成天然山水般的景象，即《园冶》所谓“虽由人作，宛自天开”[14]。然而，在普通园林的有限空间范围内、以有限土石材料，必然无法直接照搬天然大山，而如果如做成微缩模拟的山景，则又会比例失调，难以妥善满足园林中人可进入游赏的需求。因而普通园林的假山要形成出色的真山景象，一定是艺术性的创作，中国传统美学的一些规律就在其中产生重要指导作用。呈现着对内在生命力的直观效果感受的“势”，是传统美学中的一个极为重要的概念，这显著体现于中国传统书法、绘画等艺术之中[15]，也是假山营造中的关键。假山要营造的是综合的山水之景，既有山体本身、也有山中之水，其中的山与水各自都有“势”的考虑。这里就山与水二者、分别对应于地形特征的高与低，展开对其地形造景的分析。

2.1 掇石而高：山的地形生成

形成“山”的显著地形景象，是假山营造活动的主体内容。在足够大的空间范围内，或许能以土为主进行塑造；但在一般园林的有限场地内，大多通过以石为主、结合用土来产生突出的地形景象，《园冶》中即称“掇石而高”[14]。从地形的形态角度，假山营造主要在竖向和横向两个方面求其势。山水画中追求“三远”——高远、深远、平远[16]，大致对应仰视、平视与俯视；一般园林用地有限，难以形成俯视之平远，但在仰视与平视上可以求其高与其深。

在竖向上，假山追求“生长势”，以获得如真山的高峻之感。自然真山往往呈现一种似乎日渐往上长高的内在生命力，假山可模拟这种生长的动感态势，使人获得山体向上高起而似有活力的大山之感，这在营造上主要体现于耸立挺拔的山形（图1）。形态效果上，若有远观需要，可营造秀拔的峰顶；但小型庭园中空间有限，一般是靠近赏景，此时难

① 就假山营造而言，物质层面的关注主要体现于人能感知到的景物形态。

以观赏完整形貌的山峰，而主要营造具有峭拔、高耸特征的悬岩、峭壁等上部山体。岩顶出挑，着重表现上大下小的压顶之势，仰观者视线受阻于此，会产生其后还有更高处的错觉，李渔所谓“不能穷其巅末，斯有万丈悬崖之势”[17]；此种崖壁实际高度不必太大、用石不需太多，却可产生高度上的不尽感，也烘托出整座大山之感。在上部求高耸之态的同时，也要注意峰、崖下部的衬托配合，关注低处的下沉衬托、高处的结顶取势，以及其间岩面脉络的顺势贯气，在小型庭园中即可通过有限的山石营造出高山之感。

在横向上，假山追求“延伸势”，以获得如真山的深厚之感。优秀的假山作品，在有限范围内，所造之山不是孤立、单薄的，而是深厚、绵延的；并非只营造出独立山景、仅是“山在园中”的有限景象，而要营造身处山中、甚至山外有山的感受，形成“园在山中”的阔大真山境界。这需要通过全园山势脉络的延伸感，尤其还要使人感受到有园外大山延伸入园内。要形成大山延入之感，紧邻有遮挡的边界造山是必要手段，如历史上的张南垣通过园中山体后部“缭以短垣，翳以密篠”的边界遮挡，让人产生园外大山“累累乎墙外”的错觉，从而使园中之山成为“大山之麓”[18]。北京北海镜清斋假山和苏州环秀山庄假山也为此手法[19]。而想象中的“大山”延伸入园之后，再由此顺势延伸出余脉大形并延伸至园内远处，甚至呈现继续延展的不尽之意（图2）。园中山体的动态脉势，如张南垣叠山中关注“石脉之所奔注，伏而起，突而怒”[18]，陈从周也指出假山营造之法和“气势与脉络”密不可分[20]，以此使人获得山脉深远的绵延不绝之感。在园中山体的脉势布局，也可产生如山水画中的主次山体之别，已有研究对假山地形造景中呈现的“主山”“客山”各自形态及其特点有所讨论[21]。在整体布局的延伸势形成中，对具体景象的营造，也多通过岩面的层次、洞穴的幽深来加强山体的深厚感[22]。此外，“山脚”的绵延也是重要方面，如山中常见的石景点缀可遍布园中，《园冶》所谓“散漫理之，可得佳境”[14]，更成“园在山中”的效果。

实际的营造过程中，假山的高峻与深厚二者是综合考虑的。往往首先关注现有场地的现状条件、顺应结合现有的地形状况，《园冶》中对此反复强调——“得景随形”“高方欲就亭台，低凹可开池沼”“高阜可培，低方宜挖”[14]。也就是说，如场地有地形高程变化，假山主体可因山就势，于高处一侧布局假山主体，而于低处延伸余脉、设置水景。“园在山中”的营造，更要关注合适边界处想象“大山”的来向位置，主体高峻山体与之配合，再通过“势”的引导而布置与生成整体假山。从而，通过生长势与延伸势的关注，获得山体景象形态的竖向之高与横向之厚，奠定假山的地形造景的主体效果。

2.2 就低凿水：水的地形改造

正如真山之中多有水景，假山营造也涉及理水，与那些在假山之外的独立水景不同，对此“山中之水”，水的形态由叠石而形成，因而山、水共同形成假山之景。《园冶》“掇山”篇中就多处提及理水[14]，当代论者指出其中一个重要原因：“基于山、水两者互成的关系，《园冶》中‘理水’的内容被收录到‘掇山’章节中，之所以理水内容可以在掇山章节内是因为水的形态难以脱离固态的山石而单独自有，而是得形于水所在的容器——山石形态”[23]，可见而假山有着兼容山水的包纳力。假山水景，一方面有助于形成“山因水活”[24]的生动山水景象，另一方面，山中之水的营造也有明显的脉势；与两类山势有类似之处，山中理水之势也有竖向和横向两个方面，都对山体之势起到辅助、加强的作用。

在竖向上，假山水景可以利用高差，产生高下之动感。“动水具有生动、活跃、富有生命力的特征”、形成“流水、落水、跌水、瀑布等”[6]，在与叠石共同形成丰富山景、增强真山感的同时，也增助山体的生长势。其中瀑布的景观效果最为强烈，历史上就常在假山中使用，如北宋开封的艮岳、元代北京西苑兔儿山、明代苏州的徐廷裸园、近代苏州的狮子林等，但这些瀑布营造都需要在假山顶部预设水柜、人工汲水，代价大而持续短；《园冶》记载收集屋檐雨水而成假山瀑布[14]，这在苏州环秀山庄假山也有遗迹[25]，但这种方式只能在雨天得景。当代则因技术的便利而可较易营造此景，瀑布的形态也可随用石方式而有多种可能，如上海鲜花港假山瀑布形成了多个层次形态与离落呼应（图3）[26]。无论是酣畅淋漓效果的高瀑、参差层叠节奏的跌水、抑或低平舒缓姿态的泉涧，这些高下不一的活泼水景都使园中山境更添生机活力。与此同时，这些水体向下的流落也衬托着山体向上挺拔的态势，而最终汇聚的山下之水，也有着“欲求山之高，先向水中深”[27]映衬效果；刘敦桢曾谈及环秀山庄“用狭长如带的水池环绕于山下或伸入山谷，以衬托山势的峥嵘和深邃，使山水相得益彰”[25]，这也是《园冶》所谓“就低凿水”[14]可带来的效果。

在横向上，多样的假山水景以其源流连通，产生动感联络之势，也增助了山体的延伸之势。山水画论中所谓“山以水为血脉”[28]，既指生命动力，也指贯穿的整体性；尤其贯穿各处，将分散的山景连贯起来，更加强真山感的整体性。陈从周谓“山贵有脉，水贵有源，脉源贯通，全园生动”[24]，对水的源与流、所谓“来龙去脉”加以关注；《园冶》里强调“疏源之去由，察水之来历”[14]，这也正与山体脉势关注“大山”来势相一致。流水可令人感觉来自主山深处，如高瀑应有后侧大山之感的配合，否则生硬而不真；又如可设水洞，水面可入洞中而似无尽，尤能显深（图4）。从而，水景在流动中联系延展的各处山体，与延伸山势共同形成山水的深远无尽之意。营造中需山水配合，通过叠石形成潭池、溪涧、滩矶等丰富水景类型，以及其中高低、宽窄、曲直、分流等多样水路形态；而通过理水也可辅助山势的延伸与山形的构成，画理所谓“山脉之通，按其水径；水道之达，理其山形”[29]，增加山的深厚之感。

假山水景的实际营造也是综合高下与延伸二势、且与山体整体考虑的。如沈实现论述方惠的水景营造，“把塘池和叠瀑、溪涧融合在一起而成为一个整体的水系统，由高处出水口的潜流暗涌，到层叠的瀑布雷鸣而下，至中游溪涧的琤瑽跌落，再到浅滩处的低声轻吟，最后汇聚到塘池中余音袅袅，犹如一曲音乐有前奏、高潮、间奏、尾声，起承转合，引人遐思”[27]。笔者也曾以昆山璞园假山为例，讨论其水景脉络将原本相对分散的近、中、远三处重点山景进行了连接与统合：由远及近，从远山处的一汪开阔水面开始，以一段小瀑跌落于小潭而开始出现动感，继而漫水而为中景山峰之下的一段活泼欢快的浅滩溪流，最后汇入主山前的主水潭，水面复归平静，且又进入作为近景核心的山洞，仿佛进入主山之腹而延伸无穷，从而水景将全园各景贯穿，结合了用石、种植、桥梁等多样配合，以其广狭相替、幽明有致、动静交织，既营造出丰富的自然景致，又呈现出巧妙的艺术韵律[30]。

3 空间：假山地形的体验营造

对于追求真山效果的假山地形营造，不仅在于得到外在视觉欣赏的景象形态，还在于游人置身其中对景观空间效果的体验感受。当代建筑与景观等学科中被普遍使用的“空间”概念，必须与人的感知结合才有意义，传统美学概念中的“境”是更好的概括：“境”是多感官、沉浸式的偏综合、整体的氛围感知，并且在“境”的体验中，也能获得更好山水景象效果，即所谓“景从境出”[31]。出色的假山之境的营造，正是要充分形成“园在山中”的体验；陈从周对“造园之先，首要考虑”的“静观、动观之分”[24]，也适用于假山中体验营造的认识，这里通过静观与动观两种空间体验的视角来认识假山之“境”。

3.1 似有深境：静观场所体验的地形营造

身体相对静止状态下的园境体验，在中国古代园林文献中最为常见，如“静坐参众妙”，呈现着“适意”的欣赏。就静观而言，山境体验的重点在于某些效果强烈的场所，尤其是取向相反、而效果都很显著的这样两类：即唐代柳宗元总结的“旷如”与“奥如”（冯纪忠先生解释为“空间的敞与蔽”[32]），文献中也常以“畅”与“幽”来概括，《园冶》也有“纵目凭远”与“似有深境”的表达[14]。

假山中的“奥如”空间，环境相对内向，往往有着“幽境”的强烈氛围感；由于视觉范围有限，欣赏中更在于调动多种感官进行感知，也有助于产生丰富的内省与情思。对于假山营造，则要通过山势布置，使人获得如在真山之内、具有浑厚沉浸感的“环抱势”。在有限的园林空间内，此处往往是最重要的观赏场所，面对具有“生长势”的主体山景，同时在观赏点周围其他位置，也要布置与主山呼应的一定山景，共同形成包绕感[22]。如环秀山庄的问泉亭一带，东南主体山壑与西北一带辅山共同形成环抱于山中之感；又如嘉兴海盐绮园假山之内，营造出幽邃的潭岛一区（图5）。环抱势还可通过地形改造来加强，通过主观赏场地下沉、视点下降的处理方式，利用场地边界将人们视线收摄其中，在体验上使周围山林环境产生上升感，从而有助于沉浸感的获得；如昆山璞园主观赏点的下沉，使周围山景营造体量不大而仍有强烈的山势环抱的内向感[30]。而更具幽奥之境的，要数具“可居”效果的山洞，尤其能产生“静”的特色体验[33]。

一般园林中空间有限，重点在于幽奥山境营造，但如果有特殊的远景条件，如园外的良好借景、毗邻大片水面，也可再为假山营造出“旷如”的高处空间体验。此类环境相对开放旷达，以视觉感知为主，是各种远近之景的整体结合，这时的内心活动往往是联想与情感的激发。《园冶》中的“纵目凭远”“按景山颠”[14]，都是对假山之顶的畅远效果追求，是园林假山的一种重要取向。作为假山之顶的体验场所，营造中常设建筑，亭、台最为常见。设亭可避免日晒雨淋，也可增添山势，故而“亭踞山巅”以赏远景为园中常见[34]（图6）。台的表面平坦而适合坐卧、露天开敞而赏景无碍，因而使用普遍；既可设于假山高处，也可置于低处水边而畅观水景，此处也可用大块石矶代替。

3.2 蹑山落水：动观空间体验的地形营造

小型园林中的山境营造往往以静观为主，如陈从周主张“小园应以静观为主……庭院专主静观”[24]；但若条件允许，仍要尽量设置人的动观游赏，以更好地获得丰富的山境体验。此时对于“境”的综合空间感营造，前述奥、旷之境仍是重要基础，并且进一步结合动态游观效果，因而更具难度。对于假山的空间游赏，历史上曾出现两种效果尤为显著的营造方式：一为16世纪后期诸多江南石构假山中常见，往往呈现高下曲折的复杂山道，通过复杂新奇的“人巧”营造丰富趣味性的体验；一以17世纪张南垣的营造为代表，更重视具有“古淡天然”山水画意的平和漫游体验[35]。二者成就都很突出，且都对当代营造产生重要影响，这里重点加以认识。

追求相对平缓、悠闲游赏的山境营造，现实案例以张南垣的侄子张鈖所改筑的寄畅园为代表，其中所凿谷涧（民国以来称“八音涧”），为一道长三十余米的黄石涧峡，伴随着空间上稍许曲折高下、阔狭旷奥的变化，峡谷密林的视景将人包绕，潺潺流水的声景将人沉浸，加上风的清凉温觉、石的坚硬触觉，随着身体的回转行进，颇可得深山幽谷之趣，得到“忽忽在万山之中”的真山水内游观的丰富体验，但其游径较少起伏变化，游人可作安闲而悠然的品赏（图7）。这种行进轻松而山境强烈的营造，正是张南垣主张的“有林泉之美，无登顿之劳”[18]，是“境”的真正佳例。

而对后世以石为主的假山营造影响更大的，是通过复杂多样的游径而展示假山空间景境的丰富变化，《园冶》中所谓“就水点其步石，从

巅架以飞梁；洞穴潜藏，穿岩径水”[14]；在游赏行进过程中，随着起伏的身体感知、行停的节奏调整，有着视觉景象的多样变换、空间旷奥的突变对比，形成丰富的、乃至强烈的游赏趣味，这在以太仓弇山园为代表的晚明诸多大型园林假山中可以明显看到[35]。

由于16世纪后期的这些复杂假山往往过于追求“人巧”的游山感官趣味刺激而忽略真山效果，17世纪的张南垣叠山对此加以反对而更追求“天然”的境界。而清代的一些优秀作品，如苏州环秀山庄假山（图8）、北京北海镜心斋假山中，已经能很好地结合这两种假山的优点，既有水际、岩间、洞穴、谷涧、峰顶、坡麓等多样景象与空间感受的变化，又有鲜明的大山之中效果，在复杂假山游径营造中也关注对真山境界的烘托[19]。

有一定规模的假山，也可以营建爬山廊，作为山上亭台与山下、水际建筑的联系，计成在《园冶》中谈及山廊的灵活性：“蹑山腰，落水面，任高低曲折，自然断续蜿蜒，园林中不可少斯一断境界”、以及“随形而弯，依势而曲。或蟠山腰，或穷水际，通花渡壑，蜿蜒无尽”，他在仪征寤园假山中即有“篆云”廊的设置[14]。这一营造在形式上应关注对山势的助益，而不能比例不称地“欺山”或割裂山势；计成只谈“山腰”，而非置于山顶，应当即有此考虑。此外，假山的游赏营造中也涉及时间问题，这在下文中叙述。

4 时间：假山地形的活力营造

对于景观地形的时间性特质，莱瑟巴罗指出两个重要方面，其一是“地景中的物质组成在持续地更新着自己”，其二，“时间还是体验景观的媒介”[13]。下文也从这两方面对园林假山地形营造加以认识，并将认识二者都统一于生命活力的追求。

4.1 四时烂熳：呈现时间的山林景物营造

对于景观地形的物质组成，一些常见园林假山为纯石营造，似乎在追求山体的永恒存在，而给人以一种长久稳定、与时间性无关的感受；但事实上，好的园林假山不只是山体的呈现，而是追求真山景境，除了土石所构成的山体本身，还包含水景、植物、乃至各类人工构筑物，从而会有着丰富的时间性特点，这也成为假山营造需要关注的内容。

就整体而言，与其他景物一样，园林山景的时间性特点，也首先呈现为随着时间流逝而累积的痕迹、甚至会产生某些衰朽。这些形态往往能令人感受到时间力量的存在，而产生特殊的审美情感，这在古今中外都是如此。奥地利艺术史学家阿洛伊斯·李格尔甚至将此赋予一种专门的价值，称为“沧桑价值”[36]；在中国，这类时间痕迹常能令人“发思古之幽情”而也被认可。童寯先生在《江南园林志》中论述苏州拙政园时提及，“惟谈园林之苍古者，咸推拙政。今虽狐鼠穿屋，蓁苔蔽路，而山池天然，丹青淡剥，反觉逸趣横生”[5]，体现出对园林时间印痕的深层欣赏。这种能映衬“山池天然”美感的时间性，也常体现于古迹、苔痕、老树、乃至枯木等园林内容，产生具有时间感的“苍古”之境；其中对“枯”的追求，朱良志指出这种审美来自禅宗，中日都有，但与日本人的“枯中见寂”不同，中国人则要“枯中见活”[37]，可见又有自身的特点。假山地形营造中，除了重视遗迹、古木的保留，也常关注对假山阴、深之处的塑造，尤其是以苔藓滋生而生发时间积淀的美感。

而就具体山景内容而言，最能体现时间性的，则在于在植物带来的生命感。植物（园林中常称“花木”），是作为园林及假山营造要素中最主要的生命体，直接为假山带来勃勃生机之景，缺少植物的假山则是没有生机的荒山秃岭，在中国园林中不被接受。在中国传统审美中，生命意识是一切艺术的根本追求，山水就有其生命感，山水园林更是典型体现[38]。宋代画论名著《林泉高致》中所谓“山以水为血脉，以草木为毛发，以烟云为神彩”[28]，也可很好用于园林假山的认识：山本身是有生命感的，前述形态讨论中的“生长势”就有体现；水为山进一步带来生命活力，前述种种活泼水景正是其表现；而最能体现假山生命感在时间中的呈现，则在于假山植物的运用。

假山景境营造中植物的时间性有两个方面。一方面，是花木随时间而生长，带来景致效果变化。植物自身有其生命生长过程的展开，在幼苗与初长、开花与结实、浓荫与凋零等等生命的各个阶段无不展现出丰富的生机意趣。尤其是木本植物，由于不断生长会带来树木形态的变化，在假山最初营造时就需要设定种植的位置、预设多年后的场景，需设想树苗长为大树后提升地形景象营造的效果，如成树荫、助山势、添山形等，如环秀山庄假山，其上长成的朴树（*Celtis sinensis*）大型树冠所成树荫增添山境效果，而原有紫薇（*Lagerstroemia indica*）则辅助了山形延伸之势。对此类演变，也有论者指出这是园林生成之后需要“磨合、交融”的“后熟”过程[39]。另一方面，花木带来的时间性景境营造更在于所呈现出的节律变化与生命循环，展现出生生不息的精神。一个显著呈现是许多草本及落叶植物的“一岁一枯荣”，可以从中明显感受生命的循环往复。更常见的则是生命在四季的节奏变化、循环轮回，宋代以来，人们对山水尤其关注“四时”往复的生命循环，如《林泉高致》所言：“春山澹冶而如笑，夏山苍翠而如滴，秋山明净而如妆，冬山惨淡而如睡”[28]，《园冶》中也强调“收四时之烂熳”[14]。对园林假山，人们也常通过植物来欣赏春天的姹紫嫣红、夏天的绿意盎然、秋天的金叶铺地、冬天的雪中红梅等等，各有生命节律呈现。从而，在假山的地形营造中，关注高下、前后的植物配置，既有一定常绿树的稳定生机效果，又多有四时变化效果，以充分展现山林景象的活力。

此外，有的园林也有所谓“四季假山”的设置，如扬州个园中，用山石特色象征“四时”在一座园林的同时性存在，但这种将时间“凝固”的象征做法，尚不是中国园林文化中的主流。

4.2 蜿蜒无尽：展开时间的体验过程营造

在景物自身所展示的时间性外，人的体验是另一种重要的时间性呈现。对于假山中的体验，前文已从空间性方面有所讨论，这里则关注从时间性的视角出发加以深入探讨，也可从陈从周所分的“静观”与“动观”两个方面来认识。

从静赏的角度，园林山景的时间性尤其呈现于人在安坐等休憩状态所体验到的一些相对动态之景，如山瀑流水、山潭游鱼、山花摇曳等的物景，山光明暗、暗香浮动、风声起灭等的虚景，以及晨昏、阴晴、雨雾等气象变化之景，从中带来时间流逝中的美感体验，正是陈从周所谓“静动交织，自成佳趣”的“以静观动”[24]；冯仕达也指出这种在“静观”中从动水、虚景等获得深层次的体悟是中国传统审美中极为关注的[40]。可见这种时间体验是重要的旨趣目标，相关动态的物景及虚景应设法体现于假山地形营造考虑之中。

从动观的角度，则是游人在时间性的游赏过程中逐渐展开假山的体验；此前已叙述空间性视角的假山体验，但这其实是空间和时间的共同作用。正如美国哲学家郝大维与安乐哲在《中国园林的宇宙论背景》一文中所述，中国传统中的时间和空间具有“不可分割性”[41]；朱良志进一步指出，“在时空合一意识中，中国文化更重视时间，它强调的是以时间统领空间……重在把空间投入到生命的变化之流中”[38]。张春彦等在通过“流观”这一概念在园林中的呈现，指出“这种看的方式带有明显的主观感受和时间感”，具体体现为“在游赏的行进过程中，串联原本被分隔的静态空间，各空间之间互相渗透，产生流动感”，这正是一种“由流动视点带来的时间感”[42]。在假山中也是如此，通过路径、建筑与景物配合的设置，随着或停或步、或缓或急的身体进行，在如音乐般的节奏、韵律的时间过程展开之中，游人获得空间感的高与下、曲与直、旷与奥，以及心理上的紧张与舒缓、期待与愉悦、兴奋与放松等的变化效果，从而对假山景境效果获得充分的艺术享受。而这种饱含活力的游山节奏、韵律的时间性，如同丰富的空间性一样，也正是营造关注的内容，如郝大维与安乐哲指出，“中国园林中的空间和时间……就像园林中所包含的其他任一要素一样，可以被选择、营造和安排”[41]，因而也成为假山地形营造的重要对象。

而静观与动观也往往是相结合的，在动静结合的时间流逝中充分感受园林山水境界的魅力，从中还能产生超越实在客观性的时间和空间的感受特点。空间上，前已有述要追求超越用地限制、具有园内外大山延伸感的宏阔境界；而在时间上，则往往会产生超越外部世界的流逝体验，如“山中方一日，世上已千年”这样的恍惚。《园冶》中有“蜿蜒无尽”之语[14]，这种“无尽”，既是空间效果，也是一种对时间的心理感受。正是在与外界尘世隔绝的园林山水境界中，产生出不受干扰的内心自在、一种独特的美感体验；当代哲学家赵汀阳指出“山水是大地中的超越之地”[43]，假山所追求的正是这种境界——虽仍处于大地之上的此岸世界，却要超越于尘俗之外——这也正是“意境”层面的艺术体验。这种更高层次的追求，也对园林假山地形营造中“境”的追求提出进一步的指引。

5 结语

中国传统园林假山营造是特色鲜明的地形造景艺术，在当代仍有着旺盛的生命力，是景观地形学认知的重要组成部分。典型的假山地形营造可以从形态、空间、时间三个方面加以认识：对于景象形态的营造，山、水二者的脉势都是关键考虑对象；对空间体验，可从静、动两方面关注山境的安排；时间的经营也是重要方面，无论景物自身还是游人体验都应关注山水在时间维度的生机活力。

以此，本文为中国传统园林假山营造的地形学理解树立一个初步的理论框架，有助于将中国传统假山的地形营造更好地纳入当代风景园林学科的话语体系，同时其自身也得到更深入的理解。以此为基础，将来的研究还可进一步拓展至更丰富的类型、更具体的方法、以及更深入的匠师技艺，从而在理论和实践两方面对当代景观设计进一步产生来自中国传统的新贡献。

图 1. 上海鲜花港假山的生长势。红色虚线代表通过组合叠石而呈现的竖向升起的内在之势。
图 2. 昆山璞园假山的延伸势。红色虚线代表通过假山石轮廓及形态呈现的内在连续之势。
图 3. 上海鲜花港假山瀑布
图 4. 昆山璞园假山水洞
图 5. 嘉兴海盐绮园假山中的幽邃潭岛
图 6. 上海豫园大假山上的望江亭
图 7. 无锡寄畅园八音涧局部
图 8. 苏州环秀山庄假山局部