

An Accessible Frame:

Research on ancient Chinese landscape architecture, towards an interactive practice paradigm

Introduction

In the contemporary interpretation of Chinese gardens, 框景, pinyin: *Kuang Jing*, is often mentioned as a very typical technique in garden composition. As early as the beginning of the last century, in the first systematic introduction book in English of Chinese gardens: *Gardens of China*, by Osvald Sirén, it was mentioned as a concrete means of the design principle of "borrowing the scenery", which is recorded in 园冶, pinyin: *YuanYe*, the most important, also the most early, ancient Chinese garden design book.

In this Ph.D. research, beginning with a narrative of special *Kuang Jing* that is defined as "*enframing the scene*"; then tracing back the epistemological and ontological level reason of this phenomenon; ultimately, it aims to discuss a sort of interactive practice method for today's spatial design.

In the innovative created word *enframing*, the root *frame* is present as a verb, means to place (a picture or photograph) in a frame.

The first step, to add the suffix '-ing', it aims to form the verb present participle of verbs, into an ongoing state. Here, it is to show that this is a synchronic phenomenon, especially it happened during the visits/experiencers standing in front of the frame.

The second step is to add prefix 'en-', according to the interpretation of the Oxford Dictionary, it means: (added to nouns and adjectives) forming verbs expressing conversion into the specified state. Here, it implies that the visitors/users also put themselves in the scene when they *enframing* intentionally or unintentionally. In other words, '*enframing the scenery*' is not only a design method but also a spatial experience mode, that requires both designers and users to hold some common empathic perception to enable it to work.

It is a special kind of *Kuang Jing*, that the *frame* here, is accessible.

Narrative of one piece of personal experience

Wangshi Garden, 网师园, pinyin: Wangshi Yuan, literally: Garden of the Fisherman, is one of the eight UNESCO World Heritage-listed sites in Suzhou. It is located in the hinterland of Suzhou urban area. As the typical representative scholar garden, limited by its small size, Wangshi Garden adeptly synthesizes art, nature, and architecture to create unique metaphysical masterpieces. "This garden", wrote by Chen Congzhou, who is one of the most authoritative garden historians in contemporary China. "is implicit in expression and infinite in meaning, a good illustration of the aesthetic appeal that less is more."

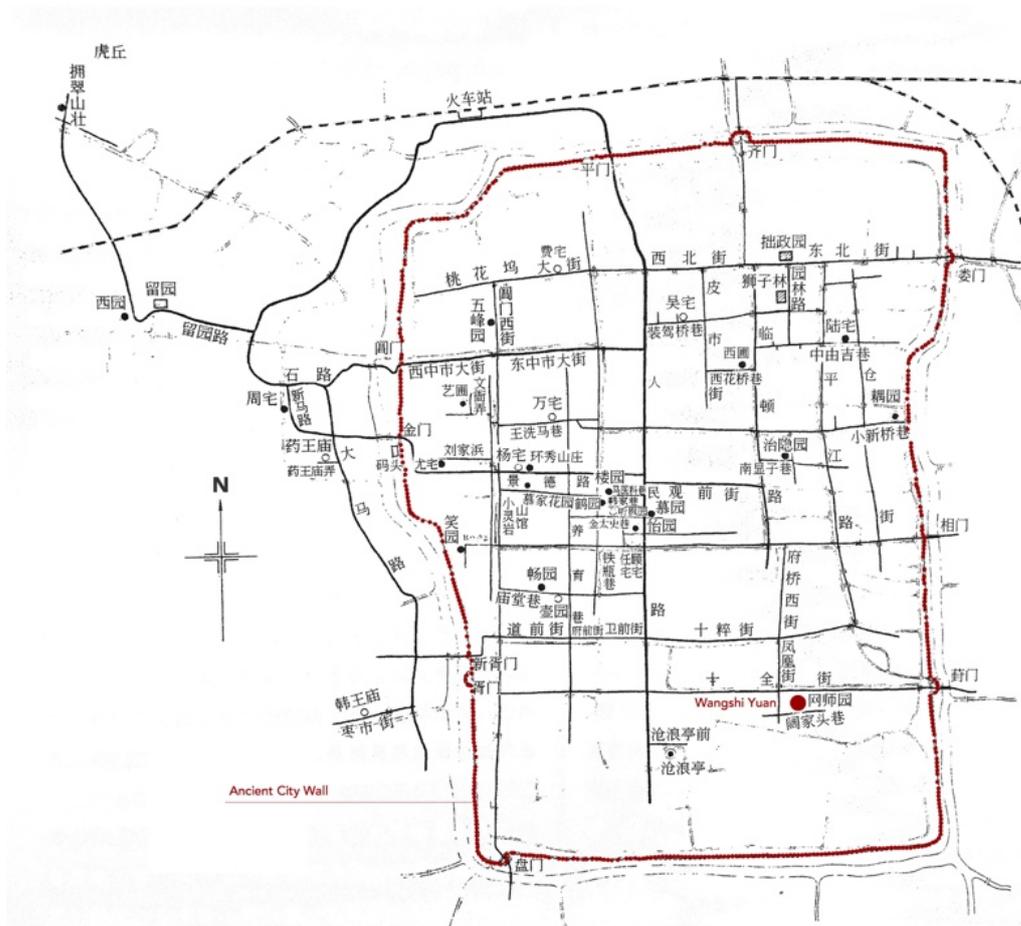


Fig. 1. The location of Wangshi Garden in Suzhou City.
Adapted from Liu Dunzhen (1979)

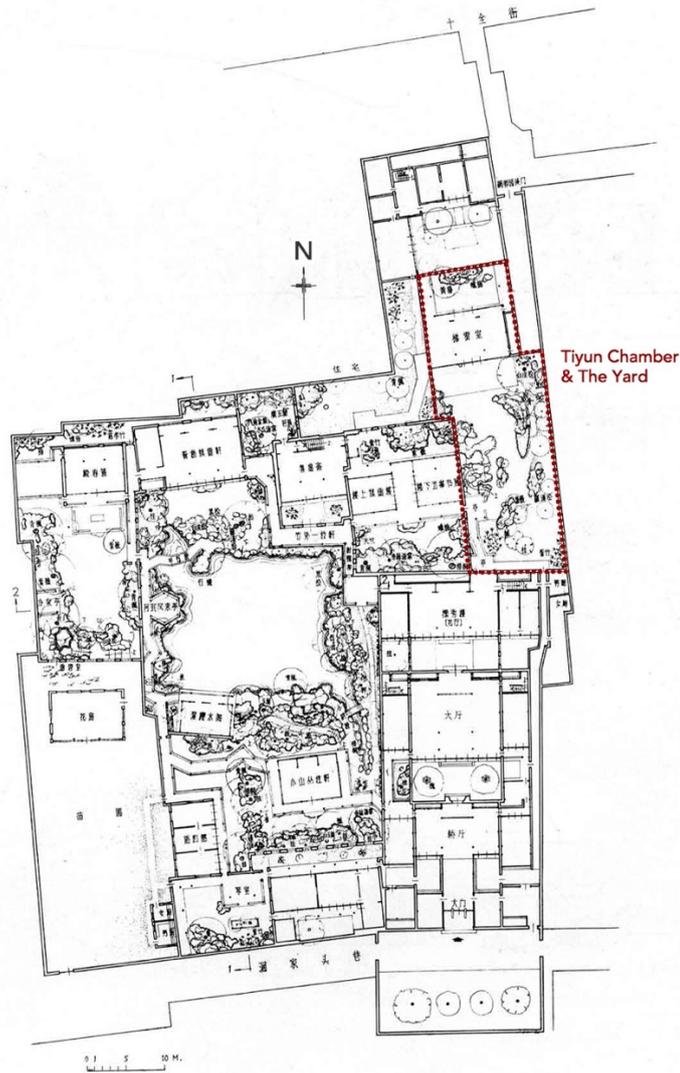


Fig. 2. Plan of Wangshi Garden, and the location of Tiyun Chamber
Adapted from Liu Dunzhen (1979).

Under the contemporary architectural perspective, the well-known phenomenology architecture scholars Steven Holl mentioned that Wangshi Garden is “a miniature model of ultra-modern architecture”¹



Fig. 3. Photograph of Wangshi Garden. by Author, Sep.2016.

¹ *Trips to China – selected journals of Steven Holl*, Journal of World Architecture, 1 (2007) pp. 22~33

In the North-East part of the Garden, there is a courtyard named 梯云室, pinyin: Tiyun Shi, meaning: a chamber by stepping the clouds into. It used to be the study-room for the owner. When I visited there, it was a common cloudy day. There were few visitors in this remote little yard. I stood in the room, looking toward the courtyard and making a sketch, in that moment of stillness, I found the view I saw looked much like a traditional Chinese landscape painting. Close to me were, the wooden pillars and beams of the chamber, in the backlighting the details were lost, very resembling the painting frame, reminding the viewer, me, of the memory and visual experience of painting.

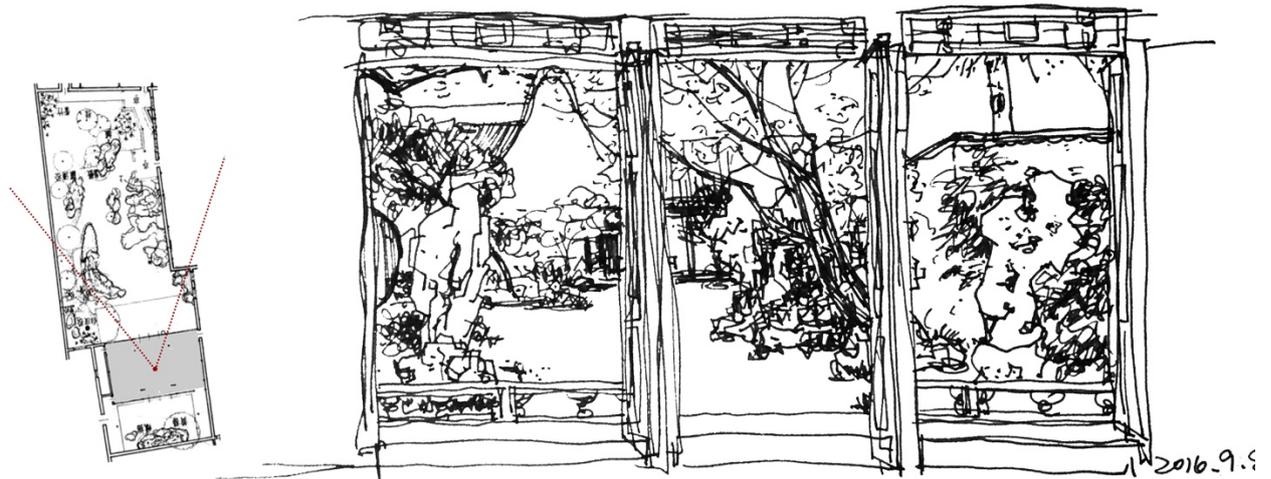


Fig. 4. Sketch of the Yard of Tiyun, by Author, Sep.2016.

This was a typical game of Chinese scholar garden as I have read in many contemporary interpretation books, not unusual. But when I really strolled inside the yard, abnormal things had happened: I found the real size of the yard was much deeper than I felt when I had been looking at it and sketching the scene.



Fig. 5. The comparing photographs that show the different depth of the yard in visual perception when standing opposite sides of the yard.

I realized that the situation in the yard of that day, and my experience both of modern architecture training and implicit Chinese landscape painting, made me misjudge the spatial scale in front of me. The real space size by current body experience cognition was greater than the previous judgment based on visual perception memory or knowledge.

The relevant theories in contemporary architecture discourse

The topics related to this personal experience mainly lie in the domain of cognition/expression and representation/medium of space.

In short, human beings need both the optic and haptic senses working together to cognize a space comprehensively, which is three-dimension, and the perception of the different direction of the space is not homogenous. This conception, mentioned by Bishop Berkeley in *An Essay Towards a New Theory of Vision*, in 18centure, has later been confirmed by contemporary behavioral cognitive science.

There are a number of philosophers and art historians discussed about this topic through times. While, in the spatial design field, Bernard Lassus, a French landscape designer, combining his practice working to expound "The tactile scale is the one in which we move, in which it is required to acknowledge ourselves with precision: to park our cars, locate the stairs, and open the door, ... this tactile scale is the zone within which the confrontation of imprecise information, transmitted by the eye, must correspond to images registered in our memory to allow ourselves to move easily."²

This idea is beyond the classic representation system of modern architecture that on the basis of linear perspective and mathematical projective cast, in which, by unilateral emphasising on vision and erasing of ambiguous in perception, the real space and human being's perception were arrested in the projection homogenous visualization. To Colin Rowe, this kind of image system should be beneficial to the sharenessity of architectural knowledge. Ocularcentrism has its western cultural roots, and influences so far, from Plato regarded that vision is the greatest gift for humanity, to Le Corbusier claimed that "I exist in life only if I can see."³ nevertheless, more and more theories criticize it. Pallasmaa, in *The Eyes of the Skin*, argued that retina architecture leads the loss of the plasticity of space; further, called to reject the Alberti's window. Also, he believed memory and imagination could act space and evoke the entire senses of the built-space-users.

Robin Evans, schemed a concise illustration to summary the geometry of architecture cast by projection. In this scheme, to describe the relation number (7): Perspectival space (three-dimensional) between the object and any mobile observer, he wrote: "The building is projected toward the observer, but what is projected toward the building? ... The answer has to be that the building presents itself to us as a field of action, ... When we look at the building and imagine it otherwise, then decide to alter something about it, the building becomes as irresistibly impressed with us as we have been with it." Ultimately, he pointed out "There are two further targets, the perception and the imagination belonging to the observer, and two further projective spaces behind them, (9) and (10). Imagination and visual perception are shown as pictures, because that is how they are normally described. They are not pictures, but the very fact that both are thought of in that way is very significant."⁴

² *The Landscape Approach*, University of Pennsylvania Press, Philadelphia, 1998, p43

³ *Precisions*, MIT, 1991, p7

⁴ *The Projective Cast, Architecture and Its Three Geometries*, 1995, p369-370

So, my experience in *Tiyun* yard might be a valuable case to study. It is not only a concrete mode responding aforementioned theories, but might also can reveal how the observer's imagination and perception cast and act the built space.

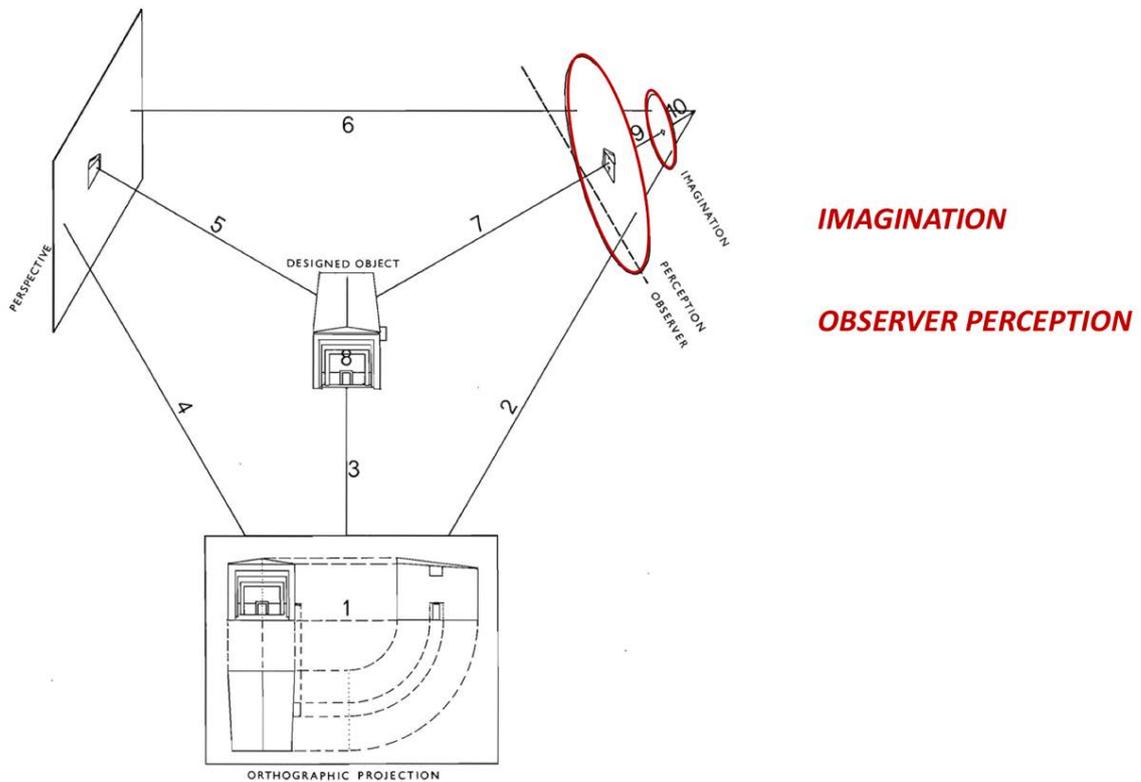


Fig. 6. Scheme highlighting the relation of Observer's perception/Imagination and the Design object.
Adapted from Robin Evans, *Projection and its analogues: The Arrested Image*. (1995)

In the experience that I spend in *Tiyun* yard, the most interesting and researchable part is relating to Chinese traditional painting, relating to another visual perception, which seems to be different from the general visual habit that has been worldwide domesticated by linear perspective nowadays.

Another way of seeing: Chinese Traditional Painting

It is generally believed that unlike the Western paintings (mainly in the period since the Renaissance era until Impressionism), Chinese paintings had not chosen to develop the technique of an accurate linear perspective⁵. By relevant literature reviews, in PhD thesis analysis, this has led to two important characteristics of Chinese painting: *flatness*, and the *frameless*, which offer the original formation and legitimacy for the spatial composition in garden design, shown as the *accessible frame* as one kind.

⁵ Although as early as the middle of the fifth century A.D, Zong Bing 宗炳 (375-443 A.D.) explained the principle of the vanishing point perspective in his *Prologue of Painting the Landscape*, 山水画序. It hadn't been developed more. [昆仑山之大，瞳子之小，迫目以寸，则其形莫睹，迥以数里，则可围于寸眸。诚由去之稍阔，则其见弥小。今张绢素以远映，则昆、阆之形，可围于方寸之内。竖划三寸，当千仞之高；横墨数尺，体百里之迥。] "Human eyes are small, while the real world is big. If standing nearby the object, you cannot get the complete body of it; moving far away, you will get it. Set a piece of transparent fabric between you and the object, for casting: one inch on the fabric implies thousands of kilometers of the mountain..." (Translate by Author)

Contemporary famous art historian Wu Hung, in his book *Space in Art History*, defined “two fundamental ways of using spatial concepts in conventional art historical research of images.” One is pictorial space, “which conceives space as a constitutive element in the literary or religious meaning of an image”; while the other one is *visual space*, “which conforms with the framework of formal analysis and visual psychology and treats space as the substance and means of visual perception and representation.” (2018)

The *flatness* discussed in this article is in the context of *visual space*; while the *frameless* sets in the consideration of *pictorial space*.

Flatness : Compression of Space on the Z-axis

It is general knowledge, by linear perspective drawing technique, the *visual space* of Western classic painting extends inward beyond the plane of the canvas successfully. Since there is no development of scientific linear perspective, Chinese painting lacked the technique that creates the illusion extending along the deep direction, namely Z axis. Therefore, the *visual space* of Chinese painting tended to extend in the direction of the X and Y axes. This characteristic of Chinese painting can be simply defined as *flatness*.

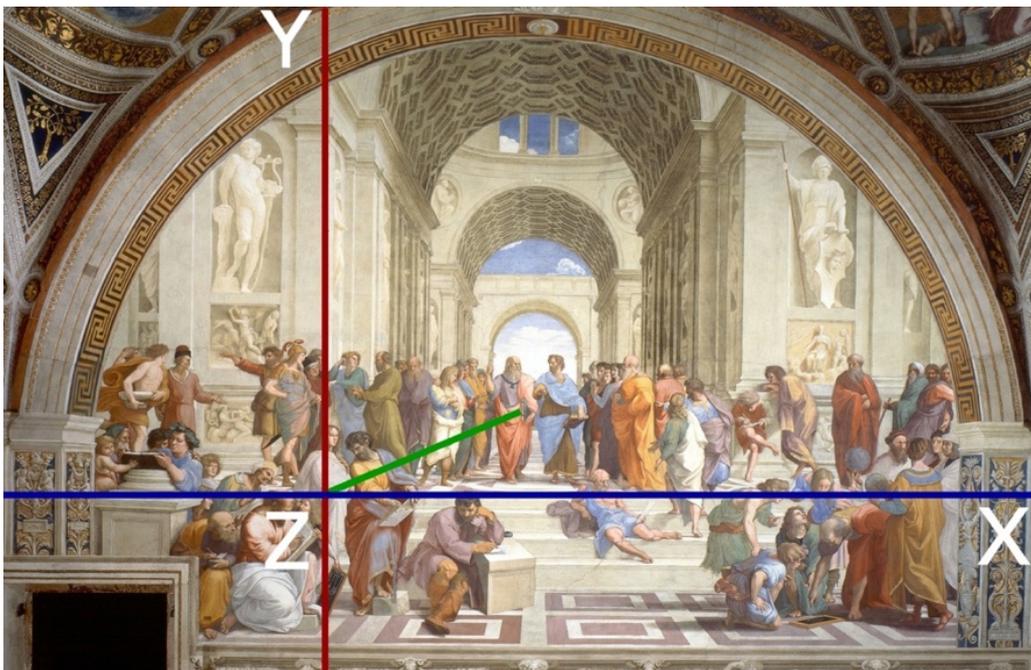


Fig. 7. Scheme of the X,Y,Z – axis in *pictorial space*.

Adapted from Scuola di Atene (fresco, 1509-1510 A. D), by Raffaello Sanzio

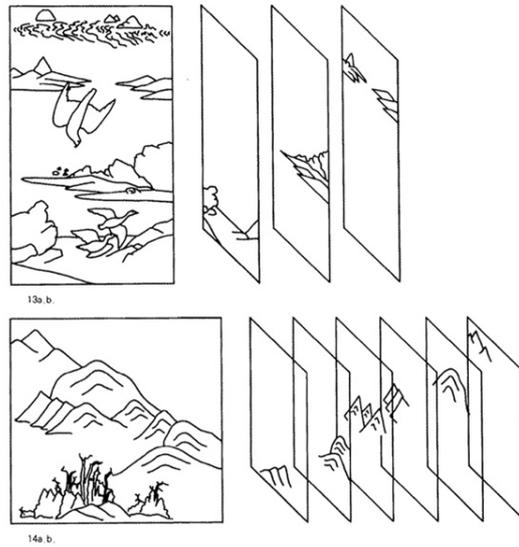


Fig. 8. *Flatness of the pictorial space, form analysis of Chinese Landscape Painting (1984), by Wen Fong (1930 – 2018)*

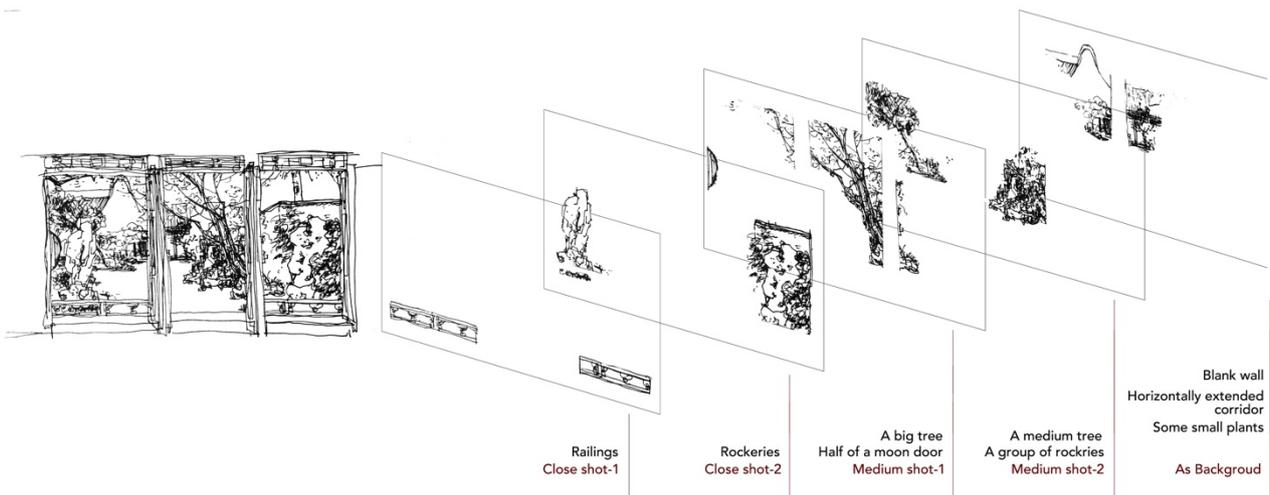


Fig. 9. *Flatness in the sketch, by Author*

It can be said that, this viewing experience from the *visual space* of Chinese painting led me to compressional judge the spatial depth of the front yard of *Tiyun*. It is worth adding that the cloudy weather of the day let the scenery inside the yard to look just like a Chinese landscape painting, without strong light and shadow. This also strengthened the *flatness*.

Frameless painting: Handscroll

The handscroll is a long, narrow, horizontal scroll format of paintings, which usually measures up to several meters in length and around 25–40 cm in width. They require viewers to unroll the image by hand when they want to see and enjoy them. It is a dynamic process. This process also implies that there is no painting frame for the image. When you roll the picture, you can stop at any width, anywhere. This implies that there is actually no picture *frame*.

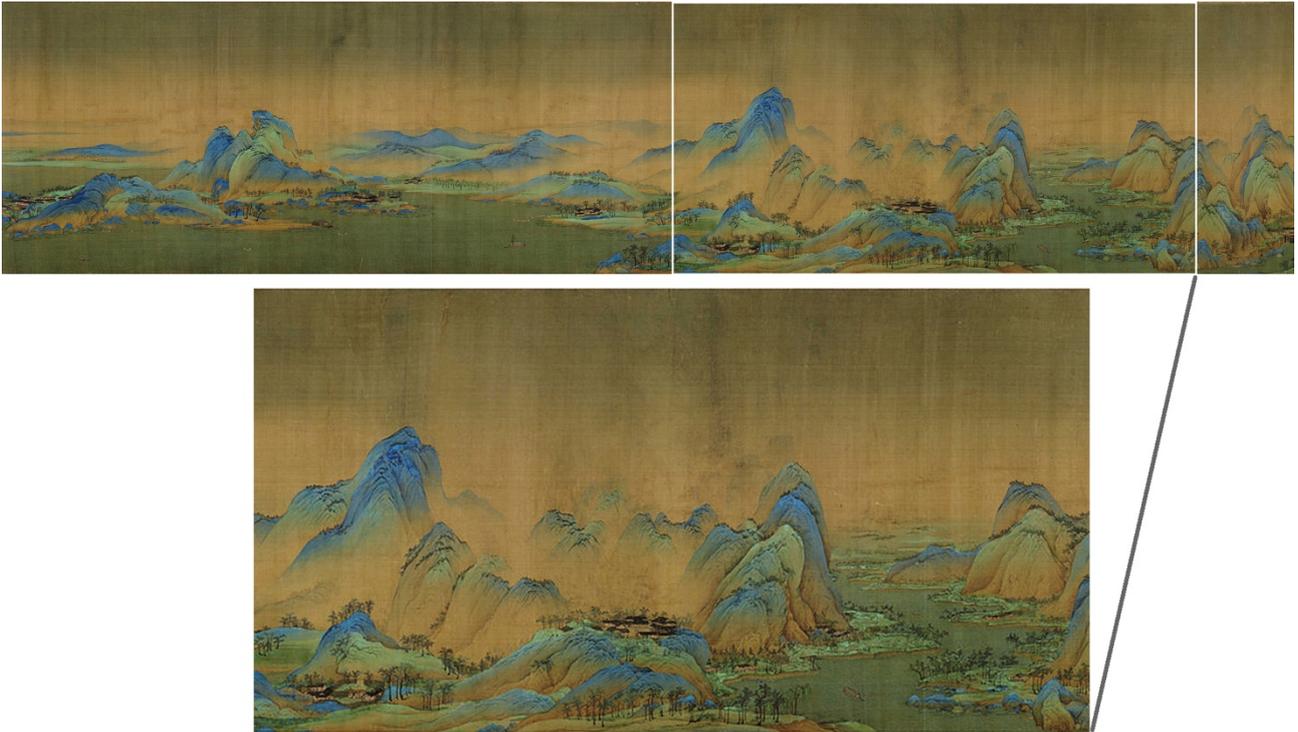


Fig. 10. Partly framed from "A Thousand Li of Rivers and Mountains" (1114 A. D.)
(complete, 51.3 × 1191.5 cm),
by Wang Ximeng (1096 - 1119 A.D.), Palace Museum, Beijing

Indeed, there is, for the *visual space* that extending in X and Y axes, no need *frame* to mark the boundary between the illusion and real space, they are in parallel, not interfere with each other. Unlike the illusion world in which Western painting stretches on the Z axis, it must be terminated by a frame to prevent erosion of the real world.

Because of this parallelism, non-involvement, the person who reads the painting gets permission to enter the illusion world, she or he can go into there, then come back to the real world. Actually, in ancient China, there are thousands of legends, novels, etc. recorded this kind of story.⁶

The existence of *frameless* paintings provides the legitimacy of cultural roots for the existence of an accessible *frame* in a garden spatial organization.

Perceptual Interaction

To find out the root of these phenomena, we should look back into history.

It is well known that the *Tao Te Ching* is one of the most important Chinese classical texts, which was credited to 6th-century BC. It is also the fundamental text for both philosophical and religious Taoism. Based on the conception of harmony between human beings with nature, nature is not treated as an object that needs to be domesticated, instead, it is the meta of *Tao*. In this culture, a person should develop the ability to grasp *Tao* in vast nature, learn and express it in various ways. Meanwhile, based on the conception that human cognition and knowledge are limited and personalized, in the process of grasping and expressing *Tao*, ambiguous is not only allowed but encouraged. The metaphorical consensus is not accurate science but perceptual empathy; personal perception and imagination play an important role. This conception widely and strongly influenced

⁶ Taking an example: **Mural**, in *Strange Stories from a Chinese Studio*, 聊斋志异, pinyin: Liaozhai Zhiyi, by Pu Songling, 1740 a.d.

the whole ancient Chinese culture; Chinese scholars including poets, painters, calligraphers, and gardeners took it as a source of inspiration.

In Painting: two dimensions

For painting, there is a record by Wang Wei, 王微 (415-453 A.D.) in Xu Hua, 叙画, "The fixed human eyes cannot see things completely and thoroughly. Painting essentially aims to express the Tao, embody it; it should create a more holographic visual space by moving the viewpoint to judge, choose, logical reason. " [目有所极，故所见不周。于是乎以一管之笔，拟太虚之体，(以)判躯之状，画寸眸之明。]

Wang Wei was from the same era of Zong Bing, who clearly described the plain perspective principle (See footnote 5 for details). Wang Wei's declaration explained the reason, in epistemological and ontological level, why in ancient China linear perspective technique has not been developed.

Recent scholar Wen Fong (1950-2018) in his research, discussed Chinese traditional painting be as "images of the Mind" (1984). That is to say, it is more about expressing subjective visual experience than an objective visual experience. This difference led to the appearance of traditional Chinese painting very different from Western painting in both medium and content. It developed a different visual habit which can also be said as a turned paradigm, for simply, to name it *perceptual interaction*.

Taking a famous landscape handscroll as a typical example, to explain how *perception interaction* working during the appreciation process.



Fig. 11. Analysis diagram of the various reading view trajectory.
Adapted from *Along the River During the Qingming Festival*, (25.5 × 525 cm),
by Zhang Zeduan (1085–1145 A.D.).

In the landscape handscroll, the larger scene in the image, there is no element with a strong body block to divide the *pictorial space*, the viewer's line of sight is free to stroll under the guidance of hidden perspective points. Different people with different backgrounds would get different track of view movements to produce different *visual space*. Even if the same person, each time she or he reads the same painting, the trajectory of the moving viewpoint may not be the same. That is to say, by every time a handscroll is unfolded, the *visual space* understood/deciphered from the painting, which certainly has a stable *pictorial space*, by even the same viewer, is various. Further, in this process of space interpretation, because the painting themselves are not created according to the scientific precise linear perspective technique, the interaction of information about the space is not based on knowledge, but on perception, and imagination. It is *perception interaction*.

In Space: Three dimensions

Turn to spatial domain, In Chapter 11 of *Tao Te Ching*, it writes: "... Mould clay into a vessel; From its not-being (in the vessel's hollow) arises the utility of the vessel. Cut out doors and windows in the house (-walls), from their not-being (empty space) arises the utility of the house. Therefore, by

the existence of things we profit. And by the non-existence of things we are served” [... 埴埴以为器，当其无，有器之用。凿户牖以为室，当其无，有室之用。故有之以为利，无之以为用。]

In this piece of a sentence, here are three times of appearance of the character 无 (pinyin: WU.) The first two "WU"s were tagged separately, to explain the hollow of the vessels and the empty space of a room, that is, the physical space in the real world. But they both allude and allegorize the last philosophical WU in this sentence, that is, the not-being. In other words, space here does not only mean the physical void as part of architecture. It somehow means the space/gap between human perceptual/cognition/memories/experiences and the material world, in other words, the space between realities and minds. It is rather similar to the idea of a perception field in phenomenology when the interaction of perceptions/memory /imagination is happening.

In the scholar garden, the space experience of ‘*enframing the scene*’, the frame not only framed the scene/landscape into the interior space. It also allows people walk inside it, inside the image which they might have gazed at just seconds before. When they walked inside the frame (as inside the illusion space), for them, the image translates into space, they would update the recognition of their perception about that space. The original cognition of space through visual experience was questioned by the updated body perception spatial cognition.

So, relative to two-dimensional painting, in three-dimensional space, the perceptual interaction happens in the ongoing suspense of *visual experience* and *body perception*

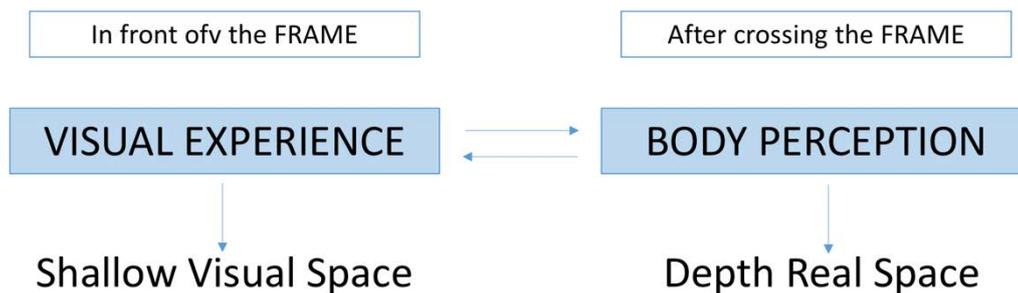


Fig. 12. The working mechanism scheme about the suspense that visual experience and body perception.

In fact, this kind of continuous activity that is generated by visitors is guided and spontaneous, not only happens in ‘*enframing the scene*’. It also can be found in many places and moments during the whole process of strolling through the scholar garden. It seems like it is carefully designed to deliberately create this kind of ambiguity in the perception of space.

Ongoing research: an interactive practice paradigm

In the above analysis, we see that logically another way of seeing in traditional Chinese painting is highly consistent with the phenomenon of "*enframing the scene*" in Chinese garden space. This fits Panofsky's chain about visual habits: the way of seeing - the way to create the space to match this visual habit.

Moreover, this *another visual chain*, unlike the one tamed by the linear perspective that solidifies and simplifies human being's entire but not homogeneous in various direction perception about space, it retains the ambiguous of personal cognition to let memory and imagination able to cast/act the built space. In Chinese ancient cases, it can be simply understood that worked under the *Tao*, a conception that gained widespread but has never been clearly explained.

This design tool that defined in this article as the *perception interaction*, not only can be discussed in case-study at methodological level. Furthermore, because it originates from another cultural context, it is another *mental habit*⁷ that might offer one kind of turned paradigm, which could work as an interactive way in epistemological and ontological level. In present-day condition, it is expected could support a more context-sensitive and function-flexible spatial design practice.

Referred to the design approach/progress of the traditional Chinese scholar garden, this PhD thesis is making an ongoing practical project under this kind of *interactive paradigm*.

It is a home construction project, in a sensitive culture context space, with well-educated clients.

It is working under an open designing framework, in which the architect plays as a guide instead of the decider, while users are the decision-makers of their living space. In this case, it is expected that the user's perception/memory/imagination of space could be included in the whole progress of space designing⁸.

Frame here is the practical projects' work-frame, it is *accessible*.

⁷ Erwin Panofsky, 1976, *Gothic architecture and scholasticism*. New American Library.

⁸ This part is still ongoing, and due to the coronavirus outbreak in the site, the planned fieldwork and interview have to be canceled. Hope during the conference, an alternate text interview and relevant analysis can be shown and discussed.

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