Exploring a spatial-experiential structure within the Chinese literati garden
The Master of the Nets Garden as a case study

Lu, Li; Liu, Mei

DOI
10.1016/j.foar.2023.05.011

Publication date
2023

Document Version
Final published version

Published in
Frontiers of Architectural Research

Frontiers of Architectural Research 12 (2023) 923–946

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.keaipublishing.com/foar

RESEARCH ARTICLE

Exploring a spatial-experiential structure within the Chinese literati garden: The Master of the Nets Garden as a case study

Li Lu [a], Mei Liu [b,*]

[a] *Department of Architecture, Faculty of Architecture and the Built Environment, Delft University of Technology, Delft 2628 BL, the Netherlands*
[b] *School of Architecture, Harbin Institute of Technology, Shenzhen 518055, China*

Received 3 March 2023; received in revised form 15 May 2023; accepted 24 May 2023

KEYWORDS
Chinese literati garden;
The FS-FW structure;
Focused world;
Focusing space;
Spatial-experiential mechanism;
GIS-based analysis;
The Master of the Nets Garden

Abstract Experts in the field of architecture and landscape design have reached a broad consensus that the Chinese literati garden is a type of built environment that seamlessly integrates architecture and landscape with exceptional cultural, artistic, and historical values. However, previous site-based studies have often leaned towards either a subjective description of the experience or a technical analysis of the space. Both approaches may result in oversimplified interpretations of the Chinese literati garden, failing to adequately capture its fundamental spatial-experiential structure.

This paper aims to address this challenge through the lens of phenomenology. Specifically, it examines an essential spatial-experiential structure—the FS-FW structure—embedded within the Chinese literati garden. The term FS-FW structure, as meticulously established in this paper, refers to the spatial-experiential structure formed by the relationship between one's experience within a single "focusing space" (a space built for visitors to linger and mindfully appreciate their surroundings) and that within its "focused world" (a phenomenal world of surroundings generated during visitors' stay in the focusing space).

Using the Master of the Nets Garden as a case study, this paper investigates how the FS-FW structure shapes one's experiences within a literati garden and explores several important mechanisms related to it. A variety of methods are employed throughout, with GIS-based spatial-visual analysis being particularly significant. The case study leads to a series of original results, including some significant mechanisms, that explain how Chinese literati gardens shape visitors' experiences. This paper concludes that the FS-FW structure is a key factor responsible for shaping a continuous, rich, and clearly formulated experience within the Chinese literati garden.

* Corresponding author.
E-mail addresses: llu7195@gmail.com (L. Lu), mei.liu@hit.edu.cn (M. Liu).
Peer review under responsibility of Southeast University.

https://doi.org/10.1016/j.foar.2023.05.011

1. Introduction

In a broad sense, the term "Chinese literati garden" refers to a distinct type of built environment that was primarily designed, constructed (often in collaboration with skilled artisans), and owned by the ancient Chinese literati class.[1] Predominantly located in ancient southern China, these gardens serve as a manifestation of the collective state of being of the ancient literati, reflecting their esteemed social, cultural, and political status in ancient China. As a result, these gardens embody exceptional cultural, artistic, and historical values that showcase the refinement and taste of the literati, setting them apart from temple and royal gardens in ancient China (see Tong, 1963; Zhou, 1999).

1.1. Research problem

This research seeks to address the insufficient understanding of the inherent spatial-experiential structure of Chinese literati gardens. For a long time, scholars have been fascinated by the Chinese literati garden and have explored it from various perspectives. Since the 1910s, when these gardens first captured the attention of modern scholars, extensive research has been conducted on their historical evolution, cultural significance, spatial complexity, experiential richness, and the diverse architectural and landscape design techniques employed in their creation. Site-based studies of literati gardens have typically focused on two main aspects: the spatial aspect and the experiential aspect. While these two aspects are intertwined, researchers tend to adopt different approaches depending on their focus.

Studies that concentrate on the experiential aspect typically interpret and describe the garden experience as a collection of a series of fragmented subjective sensations, such as "perceiving the vast in the small", "seeing the void through the solid", "experiencing a depression before inspiration", and "appreciating the poetic atmosphere and picturesque imagery of the garden" (see Bedingfeld, 1997; Chen, 2004; Keswick et al., 2003; Tong, 1963).[2] However, as these sensations are often abstract and subtle, relying solely on sensitive descriptions is often not enough to reach a thorough understanding. On the other hand, studies that highlight the spatial aspect of gardens generally offer a more objective analysis of diverse spatial characteristics within a garden. These analyses can be conducted using digital tools, such as Geographic Information Systems (GIS) and Space Syntax, or through more traditional mapping techniques. While these studies have revealed critical spatial characteristics of literati gardens, such as "rich connectivity among spaces" and "balanced correlation between volume and space", there has been limited effort to investigate the unique experiential structure generated by these spatial traits (Li, 2011; Yu et al., 2014; Zhang et al., 2019). Some other studies attempt to examine literati gardens through a nuanced spatial-experiential lens, often leading to more balanced spatial-experiential understandings of garden-making techniques (Lu, 2011; Peng, 1988; Tong, 2016). However, a systematic interpretation of the spatial-experiential structure on which these techniques rely, using a clear and well-defined methodology, is often lacking in these studies.

Most times, as Stanislaus Fung alerts, there is a dangerous tendency to "slip into a reading of the Chinese tradition that maintains a strict subject-object dichotomy in the construal of design" (Fung, 2015). As a result, these site-based studies often lean towards either a subjective description of the experience or a technical analysis of the space. Both approaches can result in oversimplified interpretations of the Chinese literati garden, as well as the occurrence of garden experience, failing to capture its full complexity.

1.2. Research questions and theoretical novelty

To put it in brief, the inherent structure integrating the spatial and experiential aspects of a literati garden has not yet been thoroughly understood. This gap in knowledge has left researchers, architects, and theorists puzzled about how the labyrinth-like spaces of a literati garden shape its visitors' experiences. Therefore, this paper seeks to address two questions: 1) What is the fundamental spatial-experiential structure responsible for shaping one's experience within a literati garden? 2) How does one's experience actually occur within this structure?

As the preceding literature review suggests, uncovering the inherent spatial-experiential structure of the literati garden necessitates an effective analytical approach that accurately addresses both its spatial and experiential dimensions, which is challenging without a novel theoretical framework. To address this challenge, this paper introduces two interdependent concepts—"focusing space" (FS) and "focused world" (FW)—as a theoretical tool to form our framework. As demonstrated in the following sessions of this paper, these two concepts suggest a fundamental structure, referred to as the FS-FW structure, which enables an in-depth analysis integrating both the spatial and experiential aspects of a literati garden at a deep level. Taking the Master of the Nets Garden as a case study, this paper examines some important facets of the FS-FW

[1] The relationship between the ancient Chinese literati class and the formation of this type of garden is a complicated issue. As its name suggests, the ancient literati class had deeply involved in the formation of this type of garden throughout history. However, a literati garden can last for hundreds of years and have many generations of owners who did not always belong to the ancient literati class.

[2] These concepts are broadly discussed in many works, mostly through a descriptive approach.

structure embedded within the Chinese literati garden and, in turn, explores a series of spatial-experiential mechanisms related to this structure. Through this analysis, the paper presents an original methodological framework for how visitors' experiences occur within literati gardens.

1.3. A context of analysis: The Master of the Nets Garden

Before delving further, we would like to briefly introduce the context of our case study, the Master of the Nets Garden, to clarify why we have chosen this garden and a tiny pavilion within it as our breakthrough point for exploring the FS-FW structure within the Chinese literati garden.

1.3.1. The Master of the Nets Garden: A remarkable case study for investigating Chinese literati gardens

Without exception, all existing literati gardens have undergone significant transformations throughout history (Tong, 1963). Most of them have been thoroughly restored since the 1980s. Among the surviving Chinese literati gardens, the Master of the Nets Garden is particularly remarkable, influential, and globally renowned.[3] Located in central Suzhou, where the ancient town once stood, it is one of the smallest literati gardens, covering just 5400 m^2. This is considerably smaller than other famous literati gardens, such as the Lion Grove Garden (11,000 m^2), the Lingering Garden (23,300 m^2), and the Humble Administrator's Garden (52,000 m^2).

We have chosen the Master of the Nets Garden as our case study for two reasons. Firstly, despite its small size, the garden's delicate spatial design, finely balanced layout, picturesque landscape, and poetic atmosphere make it an excellent example of this built type. Its ability to generate almost infinite experiences within a highly constrained area is remarkable. Secondly, compared with other renowned gardens, the garden's smaller size provides practicality and convenience in conducting an in-depth spatial-experiential analysis, regardless of the methodology employed. Therefore, this garden serves as an invaluable example for investigating the fundamental spatial-experiential structure commonly embedded in Chinese literati gardens.

1.3.2. Spatial and functional layout

Like most other surviving gardens, the modern state of the Master of the Nets Garden stems from long-term developments rather than a single point of construction (Qian, 1796).[4] Throughout its history, its owners, scale, and layout have all varied drastically. The current form of the garden is the result of a major restoration during the late Qing Dynasty (Cao, 2004; Li, 2017).

Regarding the spatial layout, two distinctive parts can be intuitively identified: one for managing necessary daily routines and one for enjoying leisurely moments with nature (or, more precisely, representations of natural environs rooted in Chinese cosmology). The part built for daily routines can be regarded as the "residence", while that built for leisure can be regarded as the "landscape". Peter Blundell Jones notes this dichotomy, describing it as a contrast between "formality" and "informality" (Jones and Woudstra, 2014). As can be seen in the master plan, this contrast dominates the garden's spatial layout (Fig. 1). In fact, this dichotomous layout is common across Chinese literati gardens that still exist today.

The formation of this layout may be attributed to ideas, values, and faiths present in ancient Chinese schools of thought, particularly Daoism and Confucianism. While the residence may represent the social order advocated by Confucianism, the landscape area appears to be strongly linked to Daoism, which encourages individuals to integrate themselves into the transcendental Nature (see Keswick et al., 2003; Li, 1992; Makeham, 1998). However, as will become evident in the following analysis, these two parts intertwine with and permeate each other in numerous ways, rendering the distinction between them ambiguous.

1.3.3. The significance of the Pavilion for the Advent of Moon and Wind

The master plan of the Master of the Nets Garden reveals that its architecture is thoughtfully organised around a central water-focused landscape area, where various landscape elements, such as water, plants, rockery mountains, and pedestrian paths, are meticulously arranged in relation to their surrounding architectural elements.

However, one's experience in this central landscape area is predominantly influenced by a small space situated west of the water—the Pavilion for the Advent of Moon and Wind. The pavilion features a hexagonal plan, covering an area of only about 13 m^2. One of its six sides functions as the entrance, while the other five are enclosed by Beauty's Arm Bench, a specially designed linear bench that runs along the boundary of the space with continuous seating and a curved backrest. Six red wooden columns make up the pavilion's main structure, supporting the roof whose six corners elegantly curve upward to form a graceful, curvilinear shape. Positioned adjacent to the wall that separates the central landscape from the western residential section, the pavilion offers a place for visitors to remain for a while and enjoy the essential landscape of the Garden (Fig. 2). Keswick et al. (2003) describes its significance as follows:

> *"Apparently floating out over the lake, its stilts shadowy and half-invisible among the rocks, the pavilion is the focal point for the whole little lake. Setting off south round the water towards it, however, the visitor will find himself diverted from his purpose by many other charming resting places, unexpected groves, and little works of architecture."*

[3] In 1982, the Master of the Nets Garden was made a National Heritage Conservation Unit by the Chinese government. Later, in 1997, it was made a UNESCO World Heritage Site alongside three other literati gardens in Suzhou.

[4] According to Qian Daxin, the origins of the Master of the Nets Garden can be traced back to the Southern Song Dynasty (1127–1279). During that time, Shi Zhengzhi (1119–1179), the Deputy Civil Service Minister, constructed the garden with just one hall called the Hall of Scrolls. Remarkably, the original site of the Hall of Scrolls has endured over the years and has evolved into the magnificent garden we behold today. See: Qian Daxin, A Record of the Master of the Nets Garden [网师园记], 1796.

Fig. 1 The master plan of the Master the of Nets Garden. Source: Redrawn based on Liu Dunzhen's map in *Suzhou Classical Gardens*. Beijing: China Architecture and Building Press, 1979.

As Keswick et al. (2003) intuitively observes, the pavilion plays an essential role in shaping one's experience of the central landscape area and the garden as a whole. In fact, the pavilion is not only the focal point for the entire lake but also the best viewing point for enjoying the landscape surrounding the lake. Therefore, this research decides on the Pavilion for the Advent of Moon and Wind, including the environment where it situates, as a case study to investigate the spatial-experiential structure and related mechanisms responsible for shaping one's garden experience.

1.4. Layout

This paper is structured into six main sections. Section 2 provides an overview of the materials, methods, and the

Fig. 2 The central landscape area of the Master of the Nets Garden. Source: Liu Dunzhen, *Suzhou Classical Gardens*. Beijing: China Architecture and Building Press, 1979, p. 403 (in Chinese).

analytical process involved in our case study of the Master of the Nets Garden. Following that, Section 3.1 develops the concepts of "focused world" (FW) and "focusing space" (FS) at the theoretical level. Next, in Section 3.2, sixteen focusing spaces and their corresponding focused worlds in the Master of the Nets Garden are identified. Using GIS as a technical support, Section 3.3 conducts a detailed examination of the spatial-visual characteristics of the focused world formed by the Pavilion for the Advent of Moon and Wind. Building upon the theoretical framework and findings presented in Section 3, Section 4 further explores three significant mechanisms related to the FS-FW structure that contribute to shaping one's experience within a literati garden. This is followed by a discussion section that particularly focuses on the uniqueness of literati gardens' FS-FW structure and the significance of understanding it for contemporary spatial practitioners. In the subsequent section, a discussion follows, which underscores the uniqueness of the FS-FW structure within literati gardens and discusses the significance of understanding this structure for contemporary spatial practitioners. The paper concludes that the FS-FW structure is an essential spatial-experiential structure that plays a dominant role in creating continuous, rich, and clearly formulated experiences within Chinese literati gardens.

2. Materials, methods, and process

2.1. Materials: First-hand experiences as the main source

As previously mentioned, our case study focuses on the Master of the Nets Garden, with a specific emphasis on the Pavilion for the Advent of Moon and Wind and its surroundings, which we consider a significant and noteworthy example. It is important to clarify that this research does not aim to provide a historical or discourse analysis of the garden but rather a phenomenological analysis. To achieve this, we primarily rely on first-hand empirical sources obtained through participatory observation, visual perception, and behavioural performances during our on-site investigations. These serve as the primary materials for our analysis. Additionally, theoretical and historical sources are occasionally incorporated as supplementary information. For instance, we utilise Liu Dun-zhen's surveying and mapping work to establish the digital terrain model (DTM) in the GIS-based spatial-visual analysis, as elaborated further in the following sections.

2.2. Methods: Combination of multiple methods

To conduct a spatial-experiential analysis based on the empirical materials, we employ an iterative phenomenological reduction throughout this research. This method, in a Husserlian sense, involves suspending our preconceptions and judgments about the phenomena under investigation to focus solely on the pure description of the experienced phenomena. David Seamon claims that phenomenology is "a way of study whereby the researcher seeks to be open to the phenomenon and to allow it to show itself in its fullness and complexity through her own direct involvement and understanding" (Seamon, 2000). In order to be "open to the phenomenon and to allow it to show itself", a researcher must be deeply immersed into the research context and, sometimes, conduct the research by taking part in the research object—essentially an epistemological process of reflexivity. Therefore, during the summer of 2018, we visited the Master of the Nets Garden dozens of times to conduct an on-site, iterative phenomenological reduction. This intensive process allowed us to develop a comprehensive understanding of how the FS-FW structure shapes individual experiences within the garden. In addition, we investigated a number of other excellent examples of literati gardens in Suzhou (such as the Lion Grove Garden and the Humble Administrator's Garden) to validate the primary findings obtained from the Master of the Nets Garden. This process involves a combination of multiple approaches, including participatory observation.

In pursuit of an appropriate method that can achieve an accurate spatial-experiential analysis, we have chosen GIS-based spatial-visual mapping as our technical support. This decision is based on two key considerations. First, mapping has proven to be an effective medium for associating and visualising information, facilitating the comprehension of complex and abstract knowledge of space (Abrams and Hall, 2006). Second, cognitive psychology has suggested that visual senses contributes to 80%—85% of environmental sensory perception, making it the dominant factor that shapes one's experience of the environment more than other senses (Nijhuis et al., 2011). The influential role of visual senses in shaping one's experience is supported by both theoretical and empirical research of the Chinese literati garden, where "seeing has a psychological value that drives the visitor's exploration" (Lu, 2011). Therefore, we employ GIS-based

mapping as a technical support to validate, illustrate, and enhance our understanding acquired through on-site phenomenological reduction. While various approaches, such as Space Syntax or traditional manual mapping, can be utilised to explore different dimensions of the FS-FW-structure, GIS proves particularly advantageous in supporting a fundamental-level phenomenological analysis, which is the focus of this research. It serves as a robust technical tool for spatial-visual investigations, effectively bridging the gap between spatial reality and experiential understanding in an accurate and reliable manner, while avoiding unnecessary and excessive technical complexity.

It is important to note that a number of theoretical ideas, concepts, and models were employed throughout the study to aid in interpreting the results obtained through our phenomenological reduction. These included insights from Heideggerian philosophy, architectural phenomenology, Fretag's dramatic narrative model, and Ji Chen's classical garden-making theory. Traditional social science research methods, such as questionnaires and interviews, however, are deliberately avoided. We find these methods more suitable for gathering data on the interpretation of experiences rather than directly capturing the experiences themselves. Our focus is on understanding the lived experiences within the garden, and as such, we rely on alternative approaches that enable a more direct exploration of experiences.

2.3. An overview of the analytical process

Our case study is conducted through a series of steps. Each step, as illustrated in the diagram, involves the utilisation of specific materials and methods, and leads to different results (Fig. 3). The first step involved establishing a conceptual framework for our study, which was mainly derived from the insights gained through our on-site phenomenological reduction. This framework encompasses the concepts of focusing space, focused world, and the FS-FW structure, which are interpreted through specific theoretical lenses as needed (Section 3.1). Subsequently, the analysis was conducted within the elements defined by this conceptual framework.

Next, focusing on the Pavilion for the Advent of Moon and Wind, we conducted a precise technical analysis of the spatial-visual experience within this tiny place and analysed its FS-FW structure (Sections 3.2 and 3.3). To initiate our analysis, we utilised GIS-based viewshed analysis, which is a widely employed technique enabling three-dimensional calculations to determine the geographical regions that are visible from a given position in software such as ArcGIS or other 3D analytical tools (Nijhuis et al., 2011). This approach enabled us to identify and map all the visible areas covered by the visual sight while excluding those obstructed areas (Liu and Nijhuis, 2020; Office of Environmental Policy, 1981). Specifically, a raster digital terrain model (DTM) was established based on Liu Dunzhen's map included in Suzhou Classical Garden, which served as the foundation. In this model, two categories of elements, plants and walls, are distinctively addressed according to their heights: canopies and walls above eye level are neglected, with only the area and height of trunks included; vegetation (such as shrubs with dense canopies) and walls below eye level are included as solid masses.

Based on the DTM, we then established a grid of analytical viewpoints covering the entire accessible area of the Pavilion for the Advent of Moon and Wind. Each of these analytical viewpoints simulates a spatial-visual experience that one may have while standing at a specific location within the pavilion. Parameters for controlling the viewshed analysis involves various factors, including the elevation value of observation point, vertical offset (visual height), and scanning distances (Esri, 2016). In our analysis, we set the vertical offset at 1.6 m, which corresponds to the average human height. The vertical view spans from -90° (VERT 1) to 90° (VERT 2), capturing a comprehensive field of vision. Additionally, to simulate visitors' free visual experience generated by mindfully savouring the moment within the pavilion, we approximated a 360° horizontal view range. The result reveals the visual perception of the focused world formed by a visitor's experience within the pavilion at each analytical viewpoint and subsequently integrates them all.

After that, we employed the same GIS-based approach to other lingering spaces and delved deeper into several essential phenomenological mechanisms related to the FS-FW structure to examine how it specifically shapes one's experience within the literati garden (Section 4). It is noteworthy that we mainly conducted the analysis according to our on-site phenomenological reduction throughout. GIS is only used as a technical support to validate, visualise, and enhance the result acquired from the phenomenological reduction. Finally, a discussion was conducted to delve deeper into the findings, providing a comprehensive exploration and elaboration on the results obtained.

3. Exploring the FS-FW structure within the Master of the Nets Garden

In this section, we present our analysis of the interplay between focusing spaces and their corresponding focused worlds within a garden, leading to the formation of a structure known as the FS-FW structure. The analysis is presented in three parts, providing a comprehensive exploration of this phenomenon. Section 3.1 introduces the concepts of "focusing space" and "focused world" at the theoretical level. Following that, Section 3.2 identifies sixteen focusing spaces within the Master of the Nets Garden and discusses their roles in shaping one's experience. Finally, Section 3.3 analyses four critical aspects of the focused world formed by the Pavilion for the Advent of Moon and Wind (namely, the focused area, the focused boundary, the focused layer, and the focused distribution) and examines their spatial-experiential characteristics through GIS.

3.1. The concepts of "focusing space" and "focused world": An analytical framework

The concepts of "focusing space" and "focused world" are developed based on an understanding of the fundamental relationship between a human being, a built environment, and the world. In order to provide further clarity on the

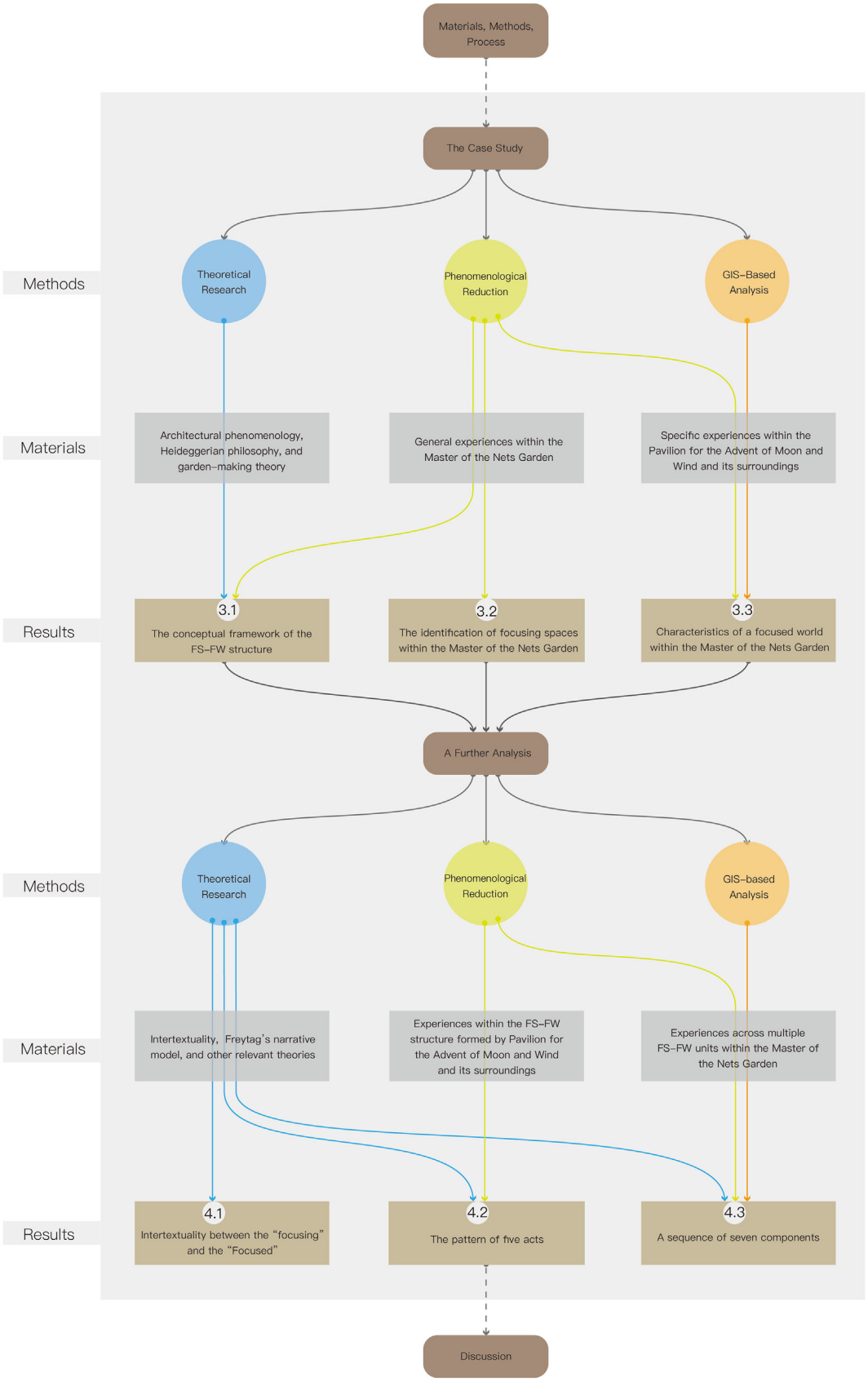

Fig. 3 An overview of the analytical process. Source: Authors.

meanings of these concepts, we can turn to Amos Rapoport's four-layer model of the environment, which elucidates the connections between these elements. Rapoport points out that "the environment can be defined as any condition or influence outside the organism, group, or whatever system is being studied" (Rapoport, 1977, p. 13). Further, he asserts that the environment has four layers: the physical or geographical environment, the operational environment, the behavioural environment, and the perceptual environment (Rapoport, 1977, p. 13). More specifically, he defines the behavioural environment as that "people are not only aware [of] but [that] which also elicits some behavioural response" and the perceptual environment as that "people are conscious directly and to which they give symbolic meaning" (Rapoport, 1977, p. 17). A similar theoretical understanding of different environment layers is evident in Lewin's concepts of *Merkwelt*, *Wirkwelt*, and *Umwelt* (Stojanovski and Axelsson, 2018, p. 829). These discussions aid in understanding how humans are connected to the world through their built environments.

While Rapoport and Lewin's discussions regarding these environmental layers remain in a broad sense, they can be adapted and applied to a more specific context. In this paper, we propose a narrower scope that focuses on an individual's state of being within a built space. According to Rapoport's model, a built space constitutes a particular "behavioural environment" related to a "perceptual environment", since it consistently accommodates and facilitates one's everyday behaviours. Based on this understanding, we define the following: 1) when a built space enables one to mindfully perceive an environment, that space becomes a focusing space; 2) the phenomenal representation of the perceptual environment associated with that focusing space, encompassing all entities perceived from it and represented in one's consciousness, becomes its focused world.

The definition of "Focus" in Cambridge Dictionary (2020) is described as "careful attention that is given to something". From a psychological perspective, this "careful attention" is associated with the notion of mindfulness. As Bishop defines it, mindfulness is a "process of regulating attention in order to bring a quality of nonelaborative awareness to current experience and a quality of relating to one's experience within an orientation of curiosity, experiential openness, and acceptance" (Kee et al., 2012, p. 562). Therefore, a focused world serves a phenomenal world that can be mindfully perceived in one's experience within a given architectural or landscape space, which constitutes its focusing space (Fig. 4). Conversely, given a specific space, there is always an identifiable phenomenal world of perception related to it. Nevertheless, only under appropriate spatial conditions can one experience this world of perception in a mindful manner. Therefore, in order to understand the FS-FW structure, it is crucial to identify both the spaces that enable one to have mindful experiences and the focused worlds potentially generated by such experiences.

Furthermore, it is meaningful to delve into the existential dimension of the concept of "world" as discussed by philosophers such as Martin Heidegger. As Heidegger explains, the concept of "world" can be interpreted in multiple ways. In his philosophy, the ontological meaning holds greater significance compared to the physical, cultural, and social

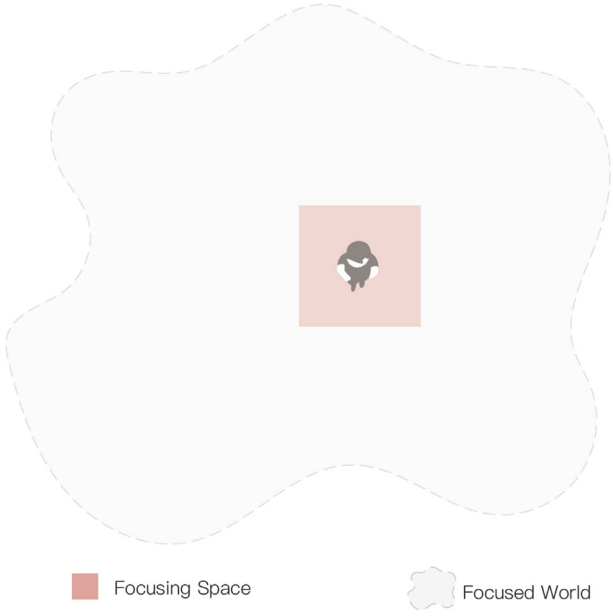

Fig. 4 The concept of the focused world. Source: Authors.

meanings. For Heidegger, the "world" is a "phenomenon" rather than an "objective being" (Heidegger, 1996). Hence, when referring to the concept of "focused world", it is important to recognise that the term "world" encompasses not only "the totality of beings" humans encounter in their everyday lives, but also serves as a "structural factor" for Dasein (as a being-in-the-world) (Heidegger, 1996).

Thus, from a Heideggerian perspective, a focusing space is a place that warrants a particular phenomenal world. In other words, it enables its visitors to examine the "phenomenon of the world" through mindfully perceiving various "innerworldly beings" that are exclusively related to the "here" and "now" (Heidegger, 1996).[5] Notably, Heidegger emphasises that the existential determination of human individual's being-in-the-world is "the being of the ontic condition of the possibility of discovering innerworldly beings in general" (Heidegger, 1996). Building on this understanding, this paper seeks to address the "ontic condition of the possibility of discovering innerworldly beings" through the exploration of the FS-FW structure of the Chinese literati garden.

In general, different focusing spaces leads to the formation of different focused worlds, thereby resulting in diverse experiences. The FS-FW structure provides a theoretical framework that allows for the analysis and comparison of various architectural spaces based on a shared concern. This makes it a valuable tool for investigating the enlightening differences between the spaces of a literati garden and those found in other built

[5] Heidegger claims that "the path of the investigation of the phenomenon of 'world' must be taken by way of innerworldly beings and their being". In Heideggerian philosophy, the concept of "innerworldly beings" refers to beings that exist within the world and are engaged in individual's everyday activities. These beings, which include human beings, are characterised by their involvement in the world and their capacity for practical concerns and interactions.

environments. In comparison to other built environments, the FS-FW structure plays an especially significant role in shaping one's experience within a literati garden. For the ancient Chinese literati, as David Hall and Roger Ames points out, "the world is a set of foci which negotiate relatedness to what at the moment is deemed 'centre'" (Hall and Ames, 1998, p. 176). As discussed by Wei (2017), this worldview is evident in numerous forms of literati creations,[6] including their particular attention to the FS-FW structure in the art of garden-making.

3.2. Identifying focusing spaces in the literati garden

To examine how the FS-FW structure shapes one's experience within a literati garden, the identification of the garden's focusing spaces is crucial. In a Chinese literati garden, various types of spaces, such as pavilions [亭], halls [厅], platforms [台], and stories [阁], are specifically built to serve a singular purpose: to encourage visitors to slow down, linger for a while, and immerse themselves in the "here" and "now" (Tong, 1963). While the specific functions these spaces serve may have evolved significantly throughout history, we refer to them as "lingering spaces" based on their intended purpose, which is to provide a space for lingering.

In the Master of the Nets Garden, there are sixteen distinct lingering architectural spaces that can be identified (Fig. 5). These spaces facilitate mindful experiences and contribute to the formation of overall atmosphere and enjoyment of the garden. Compared with spaces built for wandering through, lingering spaces possess various spatial conditions that allow visitors to pause and stay for a while. During their stay, a phenomenal world of mindful perception is always generated, turning these lingering spaces into focusing spaces. Although spaces built for "lingering" can be found in many different built environments, a preliminary examination of these sixteen lingering spaces within the Master of the Nets Garden suggests that they play a more significant role in the Chinese literati garden than in other built environments, particularly in terms of shaping a well-defined FS-FW structure. The significant role of focusing spaces within a literati garden can be discussed in two aspects.

First, most of these lingering spaces feature rich spatial conditions that encourage visitors to engage in specific activities, such as meeting a guest, enjoying a landscape, reading a book, painting a picture, or dining with family. As a result, visitors are more likely to frequent these spaces and stay longer, leading to these spaces having a greater influence on shaping one's overall garden experience compared to other spaces within the garden (Chen, 2004). This tendency was evident in our on-site investigation of the Master of the Nets Garden, even though many of the daily activities for which these spaces were originally intended are no longer permitted within the garden.

Fig. 5 Identifying architectural focusing spaces within the Master of the Nets Garden. Source: Authors.

Second, the design and construction of most lingering spaces are meticulously linked to their surroundings, generating a high-quality perceptual environment for their visitors. The emphasis on the relation between lingering space and their surroundings is not only notable in factual gardens but also in garden-making theories. As Ji Cheng points out in *Yuan Ye*: "The most important element in the layout of gardens is the siting of the principal buildings. The primary consideration [for sitting of principal buildings] is the view, and it is all the better if the buildings can also face south" (Ji and Chen, 2009).[7] For Ji, the term "principal buildings" refers to significant lingering spaces, such as the Hall of Scrolls in the Master of the Nets Garden. Ji's note suggests that how to generate a high-quality perceptual environment through these lingering spaces is a primary concern for an ancient Chinese garden-makers when planning a garden. In fact, many well-known spatial techniques in garden-making, such as borrowing views and framing views, revolve around constructing such relationships. Therefore, one can assume that the sixteen lingering spaces within the Master of the Nets Garden form a

[6] For instance, in landscape paintings, the arrangement of elements is meticulously done in relation to various "places" where human presence is depicted. For a more comprehensive exploration of this topic, see: Xi Wei, Zhao Ye Bai [照夜白：山水、折叠、循环、拼贴、时空的诗学], Taihai Publishing House, 2017.

[7] Original Chinese: "凡园圃立基，定厅堂为主。先乎取景，妙在朝南".

structural referential system, according to which other architectural and landscape elements (e.g., trees, flowers, rockeries, corridors, walkways) are arranged, providing visitors high-quality perceptual environments.

In summary, these sixteen lingering spaces play a vital role in shaping the FS-FW structure within the Master of the Nets Garden. Compared with other more dynamic spatial-experiential settings within a literati garden, lingering spaces contain more predictable and stable conditions in shaping one's experiences. Consequently, these spaces provide a dependable breakthrough point for conducting in-depth spatial-experiential analysis in terms of how the FS-FW structure shapes one's experience within the garden.

3.3. Exploring the characteristics of focused world in the literati garden

After identifying the sixteen focusing spaces, our analysis proceeds to examine the Pavilion for the Advent of Moon and Wind as a specific example to address two related issues: 1) how a single lingering space forms the focused world and 2) what characteristics are embedded within its focused world. Enabled by GIS, we delve into some important characteristics embedded within the FS-FW structure formed by the Pavilion for the Advent of Moon and Wind and its focused world. In this section, we examine in greater detail its four essential spatial-visual aspects: focused area, focused boundary, focused layers, and focused distribution.

- Focused Area

The first result of the GIS analysis reveals the visual zone a visitor can cover from the accessible area of the Pavilion, which we refer to as the "focused area" (Fig. 6). As a direct representation of a visitor's visual experience within the focusing space, this factor provides a basis for exploring other spatial-visual characteristics of the focused world. The red and yellow colours in the diagram indicate the focusing space (i.e., the Pavilion) and its focused area, respectively. The result suggests that the pavilion dominates one's experience of the entire garden. As can be seen from the result, while the pavilion only occupies an area of 13 m^2, it covers a focused area of approximately 652 m^2—almost the entire central landscape area. Moreover, it is worth noting that some focused areas extend beyond the central landscape area through intentional openings in walls. For instance, a visitor's sight may penetrate through the lattice window in the west wall of the corridor adjacent to the pavilion and, as a result, generate a focused area that includes landscape settings in the west courtyard, which features the Cold Spring Pavilion. In these penetrated areas, landscape elements are often deliberately arranged to enable visitors to encounter them from afar through these openings. Scholars have passionately analysed the visual effects achieved through spatial-experiential techniques related to this mechanism, such as borrowing views, framing views, and leaking views.

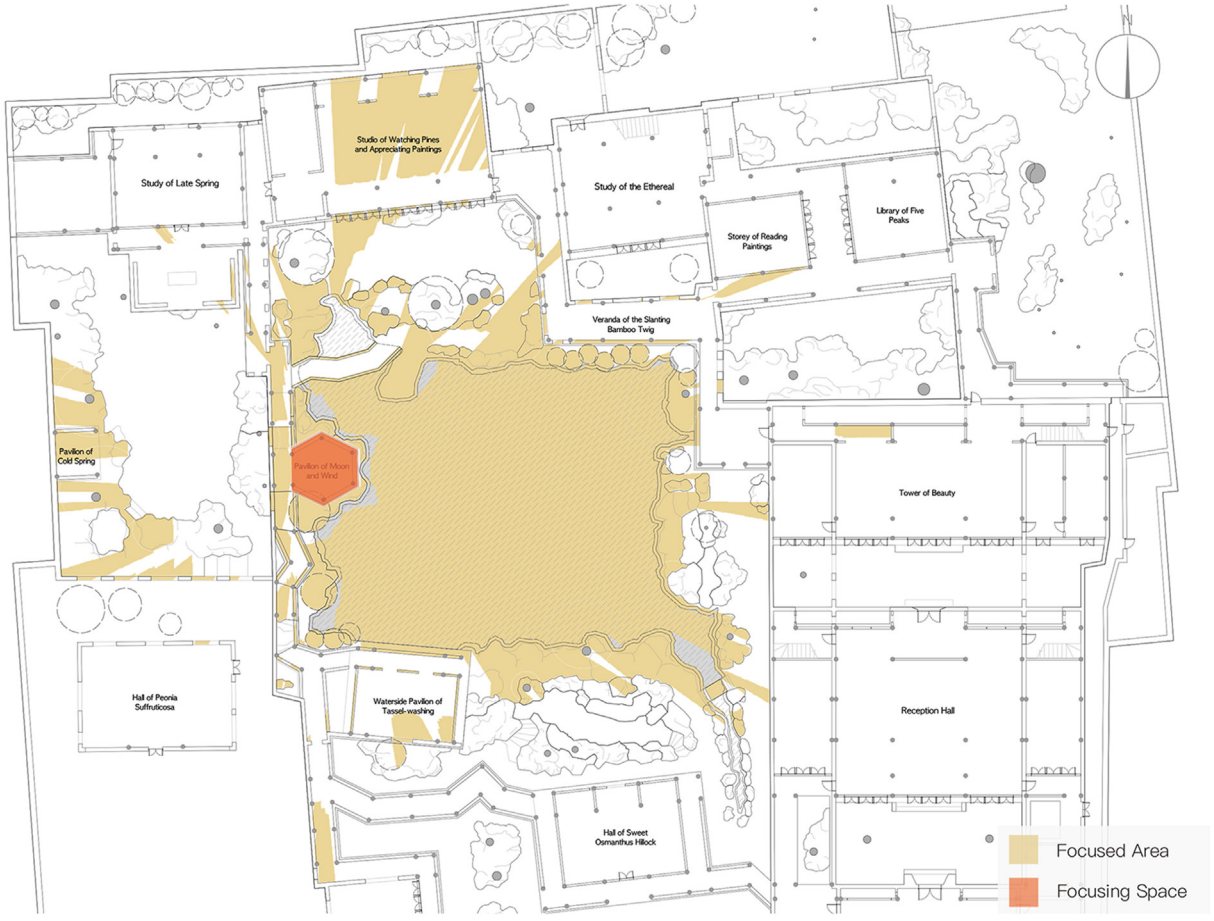

Fig. 6 Focused area analysis. Source: Authors.

However, as we will see in Section 4, underlying these techniques is a deep, dynamic, and complex capture-and-release mechanism that serves to attract, guide, and manipulate one's attention without them being necessarily aware of it. Understanding them as purely spatial techniques to achieve visual or geometric effects would be an oversimplified or misleading interpretation.

- Focused Boundary

Based on the focused area, our analysis identifies focused boundary as another essential aspect of the focused world. A focused boundary, in short, is the physical boundary that marks where a focused world starts and ends (Fig. 7). It is distinct from the focused area, which indicates the horizontal zone that one's vision can cover. Focused boundary, in principle, includes all entities involved in one's perception from within a focusing space. Again, visual accessibility is the dominant factor in the formation of a focused boundary. In other words, the boundary indicates how far one's sights can reach. As demonstrated in Fig. 7, the continuous focused boundary (highlighted by dark purple lines around the focused area) is formed by a series of entities—walls, rockeries, shrubs, and trees—that disrupt vision from the perspective of the pavilion. Despite the relatively small size of the pavilion, its focused boundary contains a wide range of landscape elements, including a water area (1), two crafted rockery areas (2–3), and numerous carefully arranged plants (4–11); architectural elements, including two halls (12–13), a veranda (12), two bridges (13–14), a covered corridor connecting the surrounding buildings (15), a waterside kiosk (16), and a small pavilion (smaller than the Pavilion for the Advent of Moon and Wind) that can be glimpsed through the lattice opening in the corridor's wall (17); cultural elements, including a plaque inscribed with the pavilion's name and a pair of couplets hanging from the pavilion's columns; as well as natural elements that do not belong to the garden, including the moon and the wind. All of these elements belonging to different categories are carefully designed and arranged in relation to the pavilion.

- Focused Layers

Within the general focused boundary identified above, there are numerous subordinate boundaries. These subordinate boundaries represent the visual disruptions stemming from spatial-experiential settings within the focused world. Any visual disruption caused by a physical entity constitutes a subordinate boundary. Consequently, these visual disruptions create a series of spatial-visual layers, which we refer to as "focused layers". In this sense, a focused layer is an area that can be focused—i.e., mindfully percieved—without visual disruption (Fig. 8). As demonstrated in Fig. 8, in our case study, the start and the end of each focused layer is highlighted with red and blue

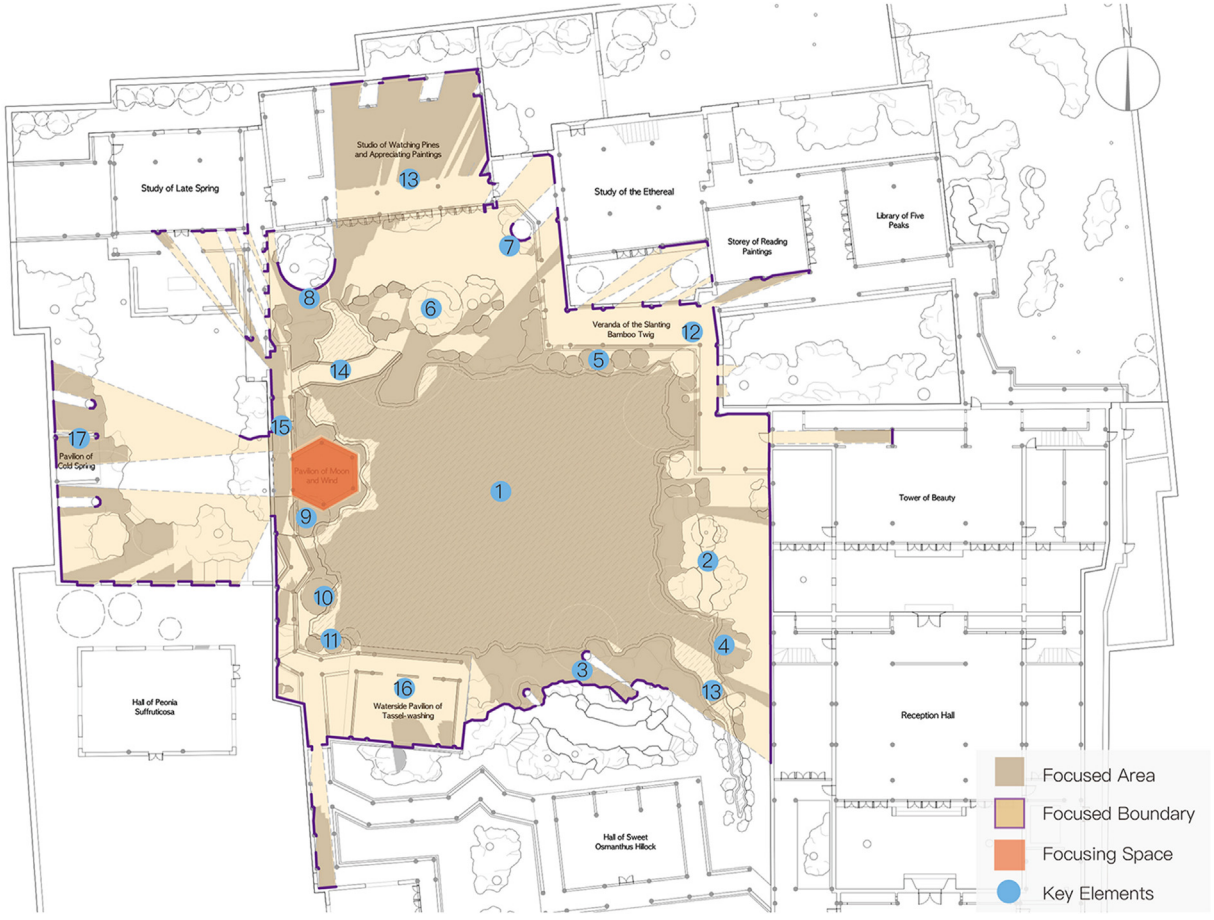

Fig. 7 Focused boundary analysis. Source: Authors.

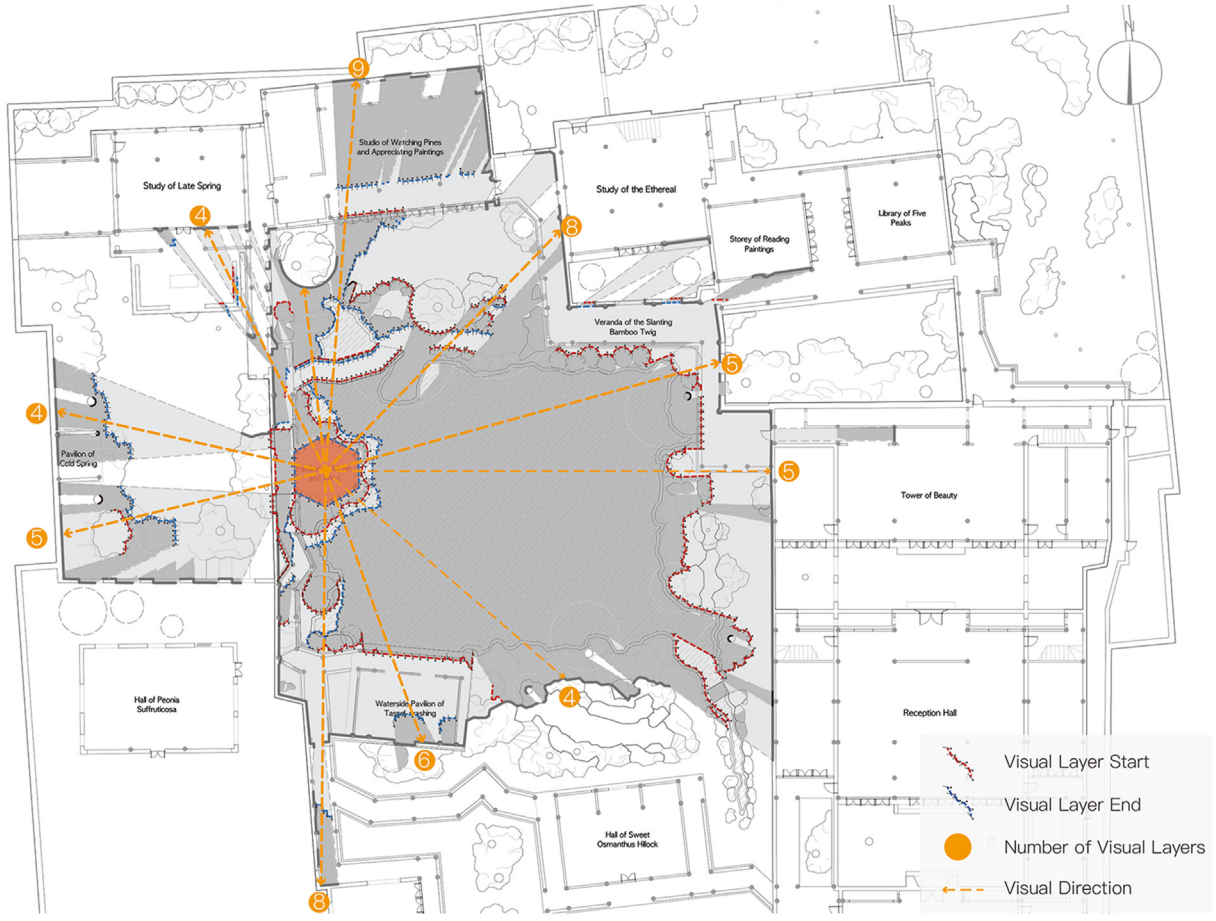

Fig. 8 Focused layers analysis. Source: Authors.

lines, respectively, with micro arrows on these lines indicating visual direction. The numbers at the end of each orange line indicate how many focused layers are generated within a focused world once a specific visual direction is set. It is clear from our analysis that more focused layers are generated when a visitor's sight penetrates architectural spaces. In fact, most literati gardens feature a series of architectural and landscape settings (e.g., openings, screen windows, lattice partition doors) to generate rich, flexible, and distinct focused layers, highlighting the shared aesthetic principles between literati gardens and landscape paintings (Dong, 2016; Xiao and Xue, 2015).[8]

- Focused Distribution

Besides these three characteristics, a fourth one, the focused distribution, can be precisely analysed through GIS. The result shows how many analytical viewpoints the pavilion contains to cover four quantile areas (i.e., coloured areas of the same size that equally possess one quarter of the entire focused area), revealing the spatial distribution of one's mindful perception (Fig. 9).[9] In Fig. 9, green areas are marked with the numbers 0—28, meaning that these areas can be covered by no more than 28 visual points within the pavilion. Likewise, the yellow areas can be covered by 29—53 visual points, the orange areas can be covered by 54—55 visual points, and the red areas 56—64 visual points. Meanwhile, as represented by grey circle areas, many key landscape elements within these high-frequency visual areas (i.e. those areas with a visual frequency higher than 53, shown in orange and red) are carefully designed and arranged to form various visual foci with aesthetic and symbolic meaning. For instance, the rocky area in front of the Hall of Sweet Osmanthus Hillock on the south side of the central landscape area is a significant visual focus

[8] For instance, the ancient painting theorist Guo Xi proposed that a painter should be capable of depicting three distinct senses of distance—the high distance, the level distance, and the deep distance—in a landscape painting. This principle strongly resonates with those layered and intricate landscapes created by literati when making gardens, which also give rise to these senses of distance. For a more comprehensive exploration of this topic, see: Xi Guo, The Lofty Message of Forest and Streams [林泉高致]; Yugan Dong, Nine Chapters on Gardening [玖章造园], Luminocity, Tongji Univerisity Press, Shanghai, 2016; Jing Xiao and Charlie Q. L. Xue, Architecture in Ji Cheng's the Craft of Gardens: A Vsual Study of the Role of Representation in Counteracting the Influence of the Pictorial Idea in Chinese Scholar Gardens of the Ming Period, Studies in the History of Gardens & Designed Landscapes, 35, 2015.

[9] By utilising different settings in GIS, the analysis of focused distribution can yield diverse results, each with distinct statistical implications.

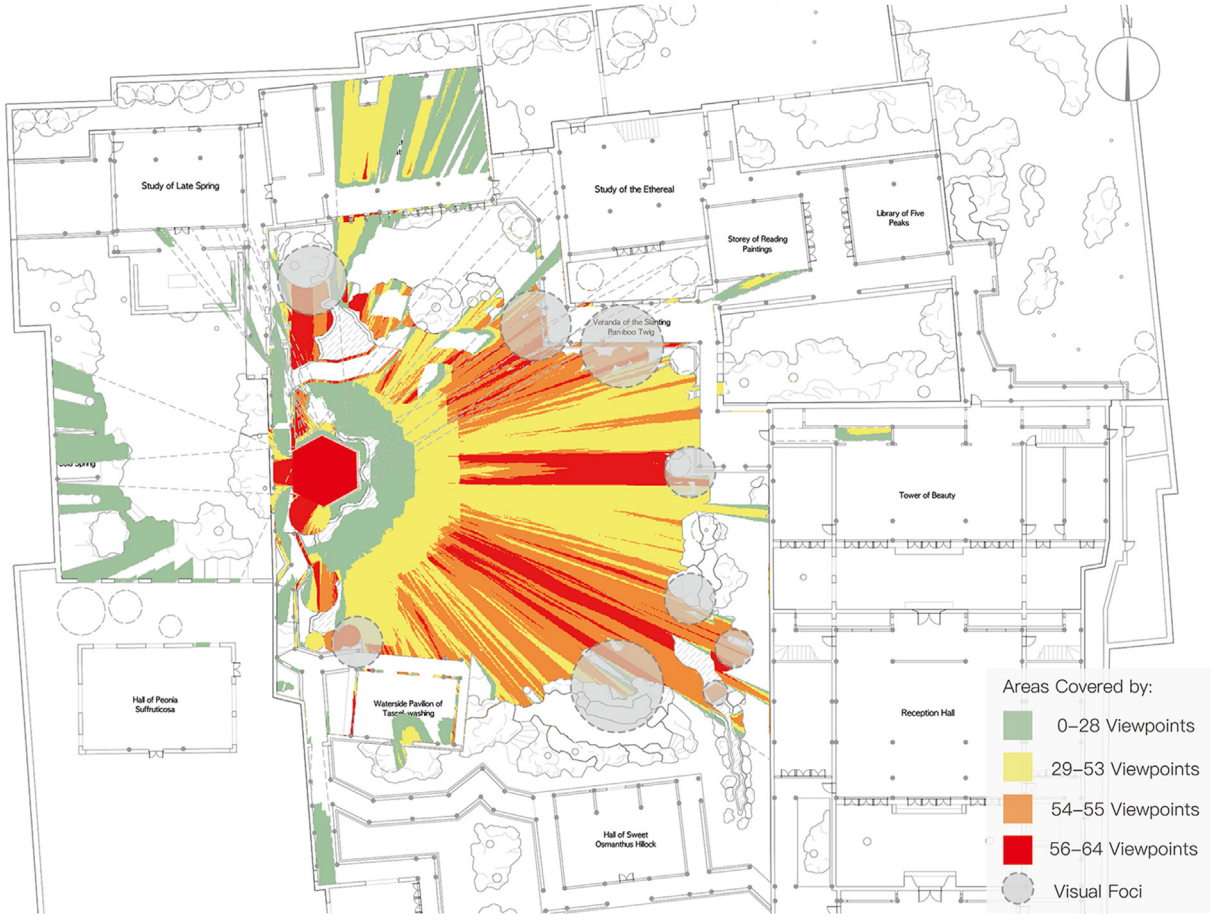

Fig. 9 Focused distribution and frequency analysis. Source: Authors.

that is thoughtfully designed to symbolically represent natural mountains. At the same time, this rocky area obstructs the view from the pavilion, making the Hall of Sweet Osmanthus Hillock only vaguely visible to someone looking from within the pavilion. As a result of the garden's high-quality aesthetic composition, these foci are more likely to stimulate aesthetic pleasure in one's experience.

- Summary

To summarise, we employ GIS-based spatial-visual analysis as a method to precisely analyse and visually represent how one's experience extends and spreads within lingering spaces. The result encompasses four essential aspects of a focused world (i.e., the focused area, the focused boundary, the focused layers, and the focused distribution), with each revealing specific characteristics embedded within the focused world formed by the Pavilion. Many of these characteristics are commonly seen in Chinese literati gardens and can thus be examined in relation to various more specific spatial-experiential techniques. These results demonstrate the unique quality embedded within the FS-FW structure of the Master of the Nets Garden.

4. A further analysis: Spatial-experiential mechanisms within the FS-FW structure

So far, we have explored one single unit of the FS-FW structure within the Master of the Nets Garden to address the first research question. This section delves deeper into several essential phenomenological mechanisms related to the FS-FW to examine how it specifically shapes one's experience within the literati garden. Specifically, this section explores three intricate mechanisms: 1) intertextuality between the "focusing" and the "focused" that shapes a clear FS-FW structure in one's experience; 2) the narrative pattern of five acts in one's experience of a single focused world; and 3) the mechanism enabling one's experience to flow across different focused worlds within the garden. By examining the interplay of these factors, we will provide a more comprehensive understanding of the FS-FW structure and its implications for the visitor's experience within the Chinese literati garden.

4.1. Intertextuality between the "focusing" and the "focused"

Intertextuality between the "focusing" and the "focused" is a significant mechanism involved in shaping a clear FS-FW

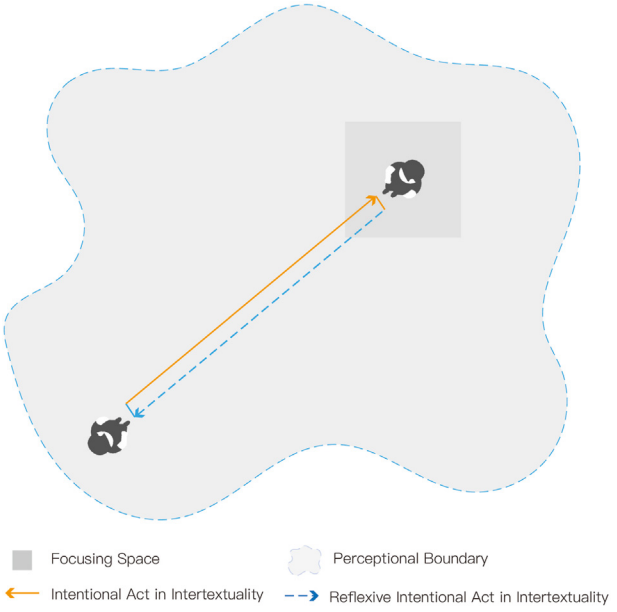

Fig. 10 The concept of intertextuality. Source: Authors.

structure within the Master of the Nets Garden. The concept "intertextuality", according to Julia Kristeva, describes a common linguistic phenomenon of "the shaping of a text's meaning by another text" (Kristeva, 1980). When it occurs as a linguistic phenomenon, utterances from different texts "intersect and neutralise one another" (Kristeva, 1980). Based on Kristeva's definition, we use it in an architectural context to describe how one's experience occurs across two or more spatial texts (i.e., built spaces, spatial sequences, or any clearly formulated spatial segments) that inform, suggest, and inspire one another. Empathy plays a critical role in forming intertextuality within the FS-FW structure of the literati garden.

To better understand the role of empathy in this context, we turn to the foundational work of Husserl. According to Christian Beyer's interpretation, Husserl referred to "empathy" as the belief that a being that "displays traits more or less familiar from my own case [...] will generally perceive things from an egocentric viewpoint similar to my own ('here', 'over there', 'to my left', 'in front of me', etc.)" (Beyer, 2018). Beyer then states that "this belief allows me to ascribe intentional acts to others immediately [...] i.e., without having to draw an inference, say, by analogy with my own case" (Beyer, 2018).

Within the scope of this paper, intertextuality between the focusing space (the Pavilion for the Advent of Moon and Wind) and its focused world (the area around it) is a crucial mechanism that fundamentally shapes one's experience of the garden. Driven by various spatial-experiential settings, intertextuality occurs either consciously or unconsciously, subtly describing, implying, and suggesting the possibility of "being there" while one is actually "being here" (Fig. 10). While the pavilion provides a place for one to mindfully perceive the essential landscape of the garden, those focused areas, in turn, allow one to be aware of the possibility of enjoying a pleasant time within the pavilion, generating expectations of such an experience even when one is far from it.

Thus, one who is within the focused world formed by the pavilion is continually attracted by and drawn towards it;

Fig. 11 Intertextuality between the "focusing" and the "focused". This image vividly demonstrates that views from the pavilion and its focused areas interactively inform one another. Source: Authors.

likewise, one who is physically within the pavilion recalls or imagines their experience within its focused world in the same way. As a result of intertextuality, utterances from the different spatial segments "intersect and neutralise one another"—one's experience of "here" and "now" continuously fuses with "there" and "then" through human's intuitive empathy (Fig. 11).

4.2. The pattern of five acts in one's experience within a single focused world

How does one's experience occur within the FS-FW structure? This is a challenging question, as one's experience always flows randomly and continuously within a literati garden and does not appear to follow a particular pattern. However, we argue that, considering the dominant role a focusing space plays in shaping one's experience within a literati garden (as previously discussed), visitors' experiences clearly follow a narrative pattern of five components within the FS-FW structure. Interestingly, this pattern can be aptly described by Gustav Freytag's model of dramatic structure in terms of how these components shape one's spatial experience within a focused world.[10] In *Die Technik*

[10] Under an FS-FW structure, a visitor can establish two distinct relationships with a focusing space:1) the visitor passes through the focusing space, physically visiting and traversing through it; 2) the visitor passes by the focusing space without entering or engaging with it directly. The pattern we are discussing here is identified based on the first relationship, where the visitor physically visits the focusing space by passing through it, rather than simply passing by it. For a more comprehensive understanding of these two relationships, see: Li Lu, Towards A Poetics of Dwelling: Exploring Nearness Within the Chinese Literati Garden, PhD Diss., 2022, (24).

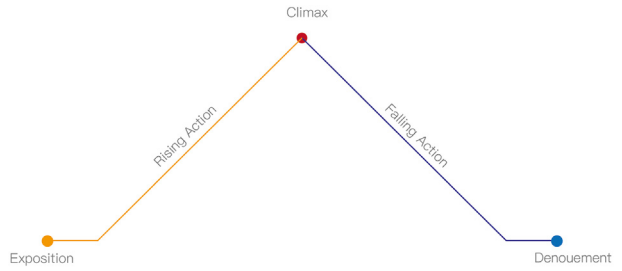

Fig. 12 Freytag's Pyramid model of five acts. Source: Authors.

des Dramas (The Technique of Drama), Freytag lays out what has come to be known as "Freytag's Pyramid", articulating five structural components that he views as significant in driving the narrative plot: exposition, rising action, climax, falling action, and denouement (Fig. 12) (Freytag and MacEwan, 1904).

Although one's experience flows randomly within a literati garden, as Lu points out, it always involves a kind of experience "subordinated to narrative organisation and to a goal-monitoring cognition of its overall pattern" (Lu, 2011, p. 502). Thus, it is no coincidence that the narrative pattern of five acts described by Freytag's Pyramid precisely reveals how one's experience occurs within a FS-FW structure unit of a literati garden (Fig. 13). In our case study, for instance, Freytag's Pyramid enables us to recognise five similar phases in one's experience of the focused world formed by the Pavilion for the Advent of Moon and Wind. In our on-site investigation, we were able to clearly identify three critical moments before even conducting a rigorous GIS-based spatial-visual analysis: exposition (the moment one encounters the focused world and becomes aware of being in a world dominated by the pavilion), climax (from the moment one steps into the pavilion to the moment one leaves it), and denouement (the moment that one leaves the focused world while retaining its impression in their consciousness for a while before it fades away). Meanwhile, we could also easily identify the two courses between the critical moments. Rising action is the process that begins when one encounters the focused world and ends when one steps into the pavilion. Falling action, inversely, is the process that begins when one steps out of the pavilion and ends when one leaves the focused world.

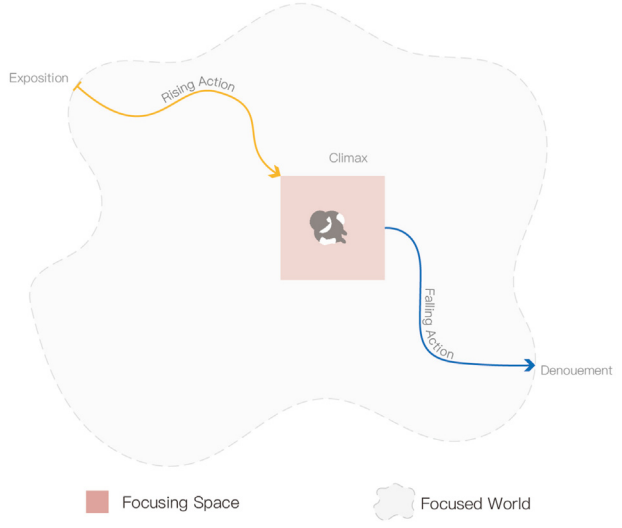

Fig. 13 Five acts within an FS-FW structure unit. Source: Authors.

Based on the results of GIS analysis, the areas where each of these five acts occurs can be explicitly identified (Figs. 14–17). As demonstrated in Figs. 14 and 17, both exposition and denouement occur on the boundary of the focused world. Meanwhile, Figs. 15 and 16 suggest that rising action and falling action occur mainly in those focused areas that allow visitors to wander through. These results suggest that a variety of spatial-experiential settings are thoughtfully incorporated between the pavilion and entities around it, enabling these five acts to occur smoothly and dynamically. Due to intertextuality, there is tension throughout this entire process between the pavilion and the visitors within its focused boundary, like a string in their consciousness with them on one side and an intriguing, desirable, and satisfactory highlight of experience within the pavilion on the other.

Deeply rooted in the FS-FW structure, this narrative pattern is both spatial and experiential: on the one hand, it stems from a series of spatial conditions that must be embedded within the garden before one can experience it; on the other hand, it describes an experiential framework that shapes one's experience within the focused world. In brief, it reveals not only the structure of one's experience but also the structure of space facilitating that experience. As we will see in the following part, what makes one's experience within a literati garden so unique is the fact that this pattern is embedded not only in a single FS-FW unit but in a system that consists of multiple FS-FW units intertwining with each other.

4.3. Beyond a single focused world

How does the FS-FW structure influence one's overall experience within a garden? Expanding our focus from one's experience within a single FS-FW unit to that among multiple units, this section continues to investigate the spatial-experiential mechanism that occur across different focused worlds.

4.3.1. Multi-focused areas: Links in-between focused worlds

Applying the GIS-based focused area analysis on each of the sixteen architectural focusing spaces in the Master of the Nets Garden, a system of focused worlds can be clearly identified (Fig. 18). The focused areas formed by these lingering spaces overlap with one another in Chinese literati gardens, generating a series of zones covered by multiple focused worlds. We refer to these zones as "multi-focused areas". In essence, a multi-focused area is a zone that can be mindfully perceived from more than one focusing spaces (Fig. 19). Multi-focused areas represent the intersection of multiple focused worlds and play a vital role in orienting visitors across different focused worlds within Chinese literati gardens. It is through such spatial-experiential settings that experiences are inspired to flow across multiple focused worlds within a garden.

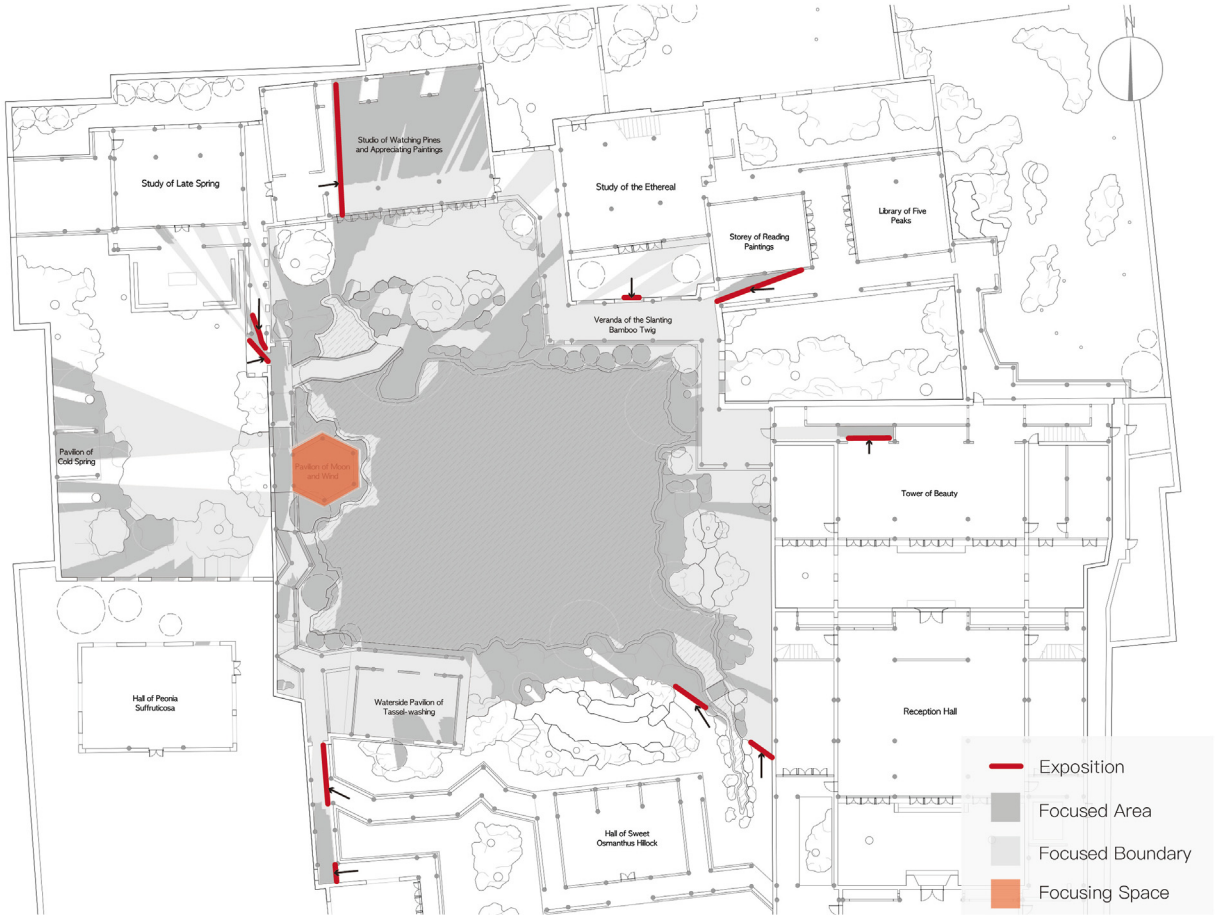

Fig. 14 The area of exposition. Source: Authors.

Multi-focused areas constitute links in-between focused worlds. They enable one to encounter another focused world(s) while already within one. Through these areas, one's experience flows across multiple focused worlds in a garden. Within the focused world formed by the Pavilion for the Advent of the Moon and Wind, for instance, the focused area of the Pavilion (Pa) overlaps with those of seven other focusing spaces: the Studio of Watching Pines and Appreciating Paintings (a), the Study of the Ethereal (b), the Hall of Sweet Osmanthus Hillock (c), the Waterside Pavilion of Tassel-washing (d), the platform outside of the Study of Later Spring (g), the Veranda of the Slanting Bamboo Twig (j), the Pavilion of Cold Spring (k) (Fig. 20). The overlap between these focused areas means that someone in the focused area of the Pavilion for the Advent of Moon and Wind is bound to naturally encounter other focused worlds.

Multi-focused areas can comprise different numbers of overlapping focused worlds, leading to different focused frequencies. The focused frequency suggests the degree to which this area is focusable. In general, as the number of overlapping focused worlds increases, so too does their degree of spatial-experiential interrelatedness. In the Master of the Nets Garden, as shown in Fig. 18, the distribution of focus frequencies is determined by how the focusing spaces are spatially and experientially related to one another (Fig. 18). Moreover, in multi-focused areas, intertextuality between a single focusing space and its focused world may also be accumulated, forming a multi-intertextuality. Multi-intertextuality, put briefly, is overlapped intertextuality between a multi-focused area and its related focused worlds (Fig. 21). One's experience within multi-focused areas is unavoidably involved with multi-intertextuality, simultaneously imagining the situations of being within all of the involved focusing spaces when within these areas (Fig. 22). Such a mechanism continuously functions in one's experience of a literati garden, attracting one's attention, inspiring one's intentional act, and, as a result, orienting and re-orienting one among different focused worlds. A dynamically flowing experience is generated.

4.3.2. A sequence of seven components

The understanding of the multi-focused area helps shift our scope again, from the experience that occurs within a single focused world to that which occurs before and after it. Upon closely examining how one's experience unfolds before entering a focused world and after departing from it, we observe that some meaningful entities must engage in the visitor's experience prior to entering the focused world, while some others are reserved for recollection even after the visitor departs from the focused world. Thus, in order to describe how one's experience occurs

Fig. 15 The area of rising action. Source: Authors.

among different focused worlds, we expand the pattern of five components to seven. Specifically, two more components, which occur respectively before the exposition and after the denouement, are supplemented to the five acts' pattern.

Let us examine this mechanism closely within the context of our case study, the FS-FW structure of the Pavilion for the Advent of the Moon and Wind. Before encountering the focused world shaped by the Pavilion for the Advent of Moon and Wind, for example, one must first capture a meaningful entity within its focused boundaries from afar, such as the narrow, winding corner of the pond, the small slate bridge across the water, or the stairs of the rocky area in front of the Hall of Sweet Osmanthus Hillock (Fig. 23). Typically, one is within a different focused world when they capture this initial meaningful entity. If this triggering entity is sufficiently attractive, one is continuously inspired to approach it. In turn, one captures more and more attractive entities from the pavilion's focused world until they eventually encounter it from a multi-focused area, where they first become aware of the pavilion's presence—exposition. This stage, from the moment one captures in their consciousness the first meaningful entity within the pavilion's focused world to the moment they capture the pavilion, is the "prequel".

Within the focused world shaped by the Pavilion for the Advent of Moon and Wind, one's experience follows the five-act narrative structure (as discussed in Section 4.2). However, while one is physically within this focused world, they can be attracted to meaningful entities within the focused boundaries of another focused world—such as the Pavilion of Cold Spring dominating the adjacent courtyard or a corner of the Studio of Five Peaks—at any moment. Evidently, one is still within the pavilion's focused world when they capture that initial meaningful entity from a different focused world. If this triggering entity is sufficiently attractive, one feels oriented towards it, capturing more and more attractive entities until eventually encountering another focused world from a multi-focused area, where one releases the awareness of the pavilion—denouement. Despite departing the focused world, one can still recall or recapture some of its entities, as they remain a spatial-experiential relatedness to them for a while (Fig. 23). This stage is the "sequel", and it lasts until one releases in their consciousness the last meaningful entity within the focused world that they have just departed.

These two additional components, prequel and sequel, describe how one's experience lasts beyond a single focused world. With them, an expanded spatial-experiential sequence of seven segments that occur beyond a single focused world can be identified as a complement to the five acts' narrative pattern. The

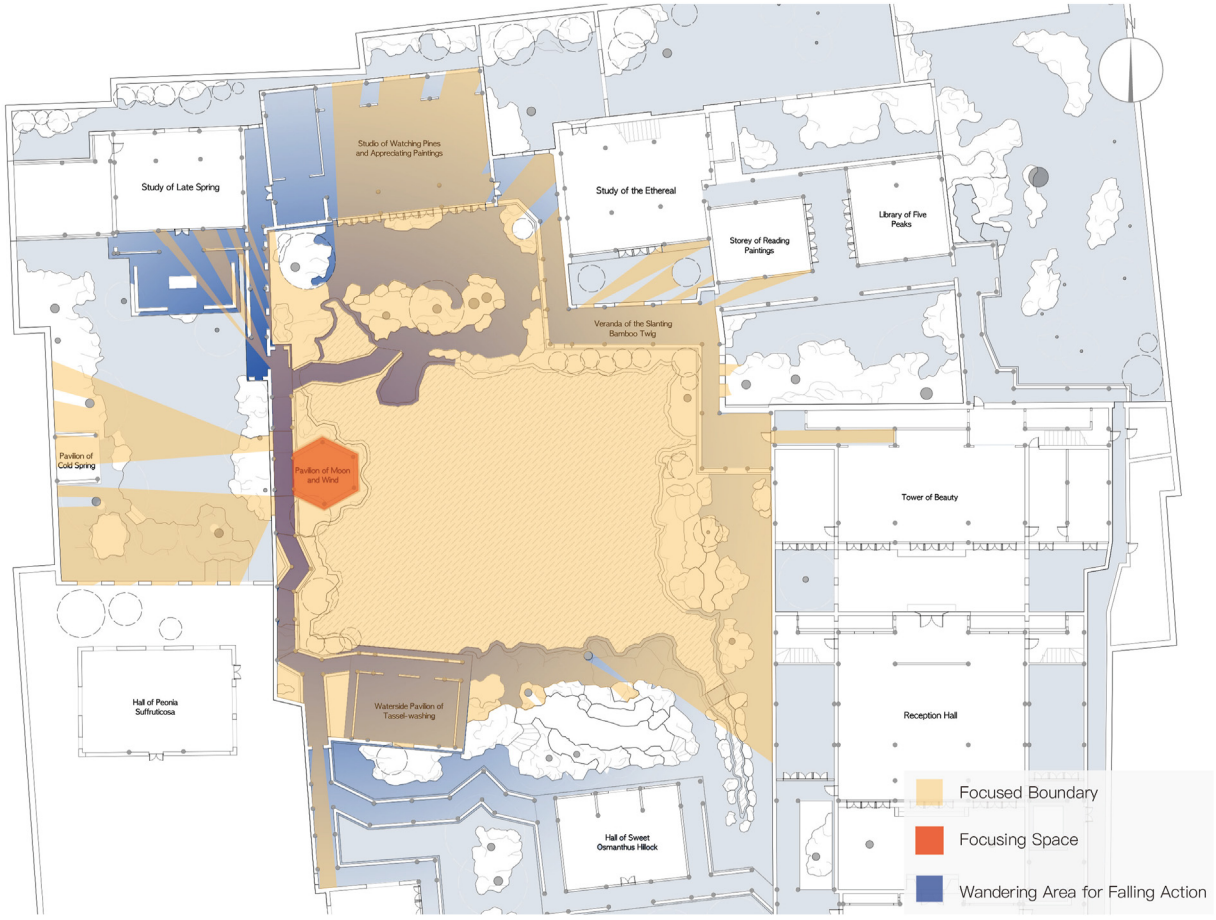

Fig. 16 The area of falling action. Source: Authors.

resultant seven-component spatial-experiential sequence is temporally consistent, always consisting of three major parts in the same order: a prequel, a five-act narrative structure, and a sequel (Fig. 24). By carefully examining these two additional components, it becomes clear that one's experience within a current focused world inevitably involves two other focused worlds—the previous one and the next one. The sequence begins when the visitor captures the first meaningful entity within this focused world (meaning that the entity gets into one's experience) from the previous focused world and ends when the visitor releases the last meaningful entity within this focused world (meaning that the entity fades away from one's experience) from the next focused world.[11]

The seven components' spatial-experiential sequence is a complement of the five acts' structure. This expanded structure comprises complex mechanisms entailing dynamic alternation between attracting and distracting, triggering and disrupting, capturing and releasing under the FS-FW structure. These mechanisms continually flirt with one's curiosity and expectations, seduce them into in-between areas, invite them to revisit a place, and orient them towards different focused worlds. As a result, it continuously generates a spatial-experiential flow among different focused worlds and leads to what Liu Dunzhen called a "chain effect" in one's experience of a literati garden (Lu, 2011, p. 501).

5. Discussion

This paper has investigated a spatial-experiential structure (i.e., the FS-FW structure) embedded within the Chinese literati garden and explored a number of significant mechanisms within this structure responsible for shaping a continuous, rich, and clearly formulated experience. In this section, we will discuss three key issues: 1) the uniqueness of the FS-FW structure within Chinese literati gardens; 2) its implications for contemporary design processes; and 3) the limitations and significance of this study.

One may notice that the FS-FW structure and most mechanisms this paper explores—such as intertextuality, the five acts' pattern, and the seven components' sequence—are not mutually exclusive. On the contrary, they are fundamental and can be widely observed within numerous other human-built environments. However, we

[11] Note that we have adapted Freytag's Pyramid model and developed a five-act wave structure in a softer form. Using curves instead of corners, this model provides a more precise visualization of a seamlessly flowing experience across multiple FS-FW structural units. It also addresses those units that do not traverse the focusing space, while delineating the typical spatial-experiential units that pass through the focusing space.

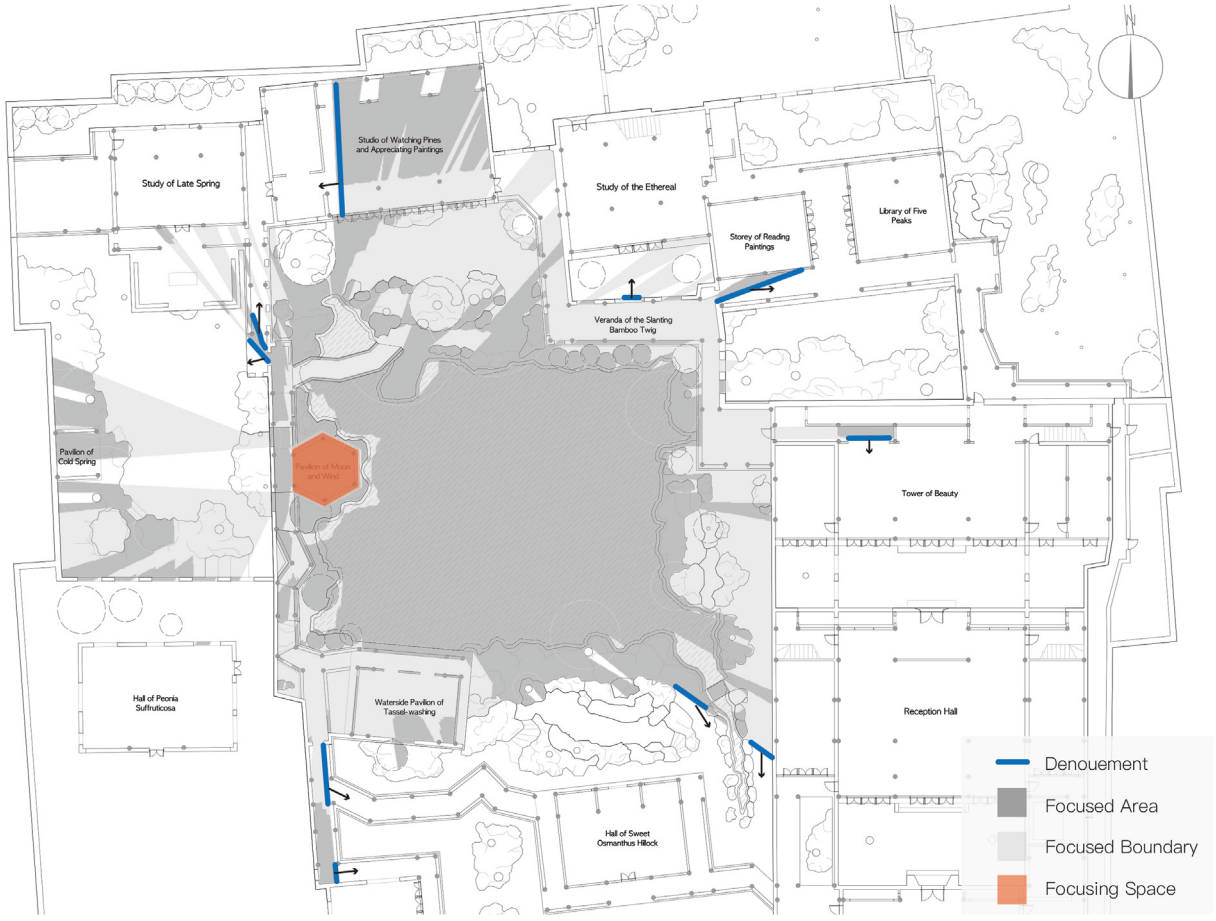

Fig. 17 The area of denouement. Source: Authors.

argue that they manifest in an extraordinarily strong form in Chinese literati gardens. Applying the same method to investigate, for instance, the FS-FW structure of the Barcelona Pavilion designed by Mies van der Rohe, it is difficult to imagine any similar outcomes in terms of how various architectural and landscape elements are organised, interrelated, and distributed in its focused world. Due to Mies' attention to create a continuous flowing experience across the open spaces, it is questionable if the Barcelona Pavilion qualifies as a focusing space. Even if considered a focusing space, compared with the Pavilion for the Advent of Moon and Wind, its focused boundary might be more complex and ambiguous, its focused layers might be fewer, looser, and less defined, and its visual foci might be more evenly distributed within its focused world.

Another comparable example is Parc de La Villette in Paris, designed by the French architect Bernard Tschumi. While this park undoubtedly contains multiple systematically organised focusing spaces (such as the red structural follies built on the nodes of the hidden grid), the system seems looser and weaker in comparison to the sixteen focusing spaces densely arranged and connected in a far smaller area of the Master of the Nets Garden, with their focused worlds closely intertwined. While those red follies in the park seem to contain spatial conditions that facilitate similar five-act patterns, they rarely result in such a clear narrative structure as formulated by the Pavilion for the Advent of Moon and Wind and its focused world in the Master of the Nets Garden. This is due to the lack of indispensable and sufficient spatial-experiential relatedness established with entities within their focused worlds. As a result, in the spatial-experiential narratives formed by these red follies, the expositions and denouements seem irrelevant, the rising and falling actions feel weak, and the climaxes are less attractive than those formed by the Pavilion for the Advent of Moon and Wind within the Master of the Nets Garden.

It is intriguing to compare focused worlds generated by different built environments. While encouraging further in-depth studies to compare the FS-FW structure of Chinese literati gardens explored in this paper with that of other built environments, we argue that Chinese literati gardens feature these mechanisms more prominently than other built environments. Due to its uniqueness, a thorough understanding of how the FS-FW structure in the literati garden shapes one's experience may help contemporary spatial practitioners improve the spatial-experiential qualities of their works. As demonstrated by the previous example, visitors' experiences with those red follies in Parc de La Villette can be enriched, strengthened, and better

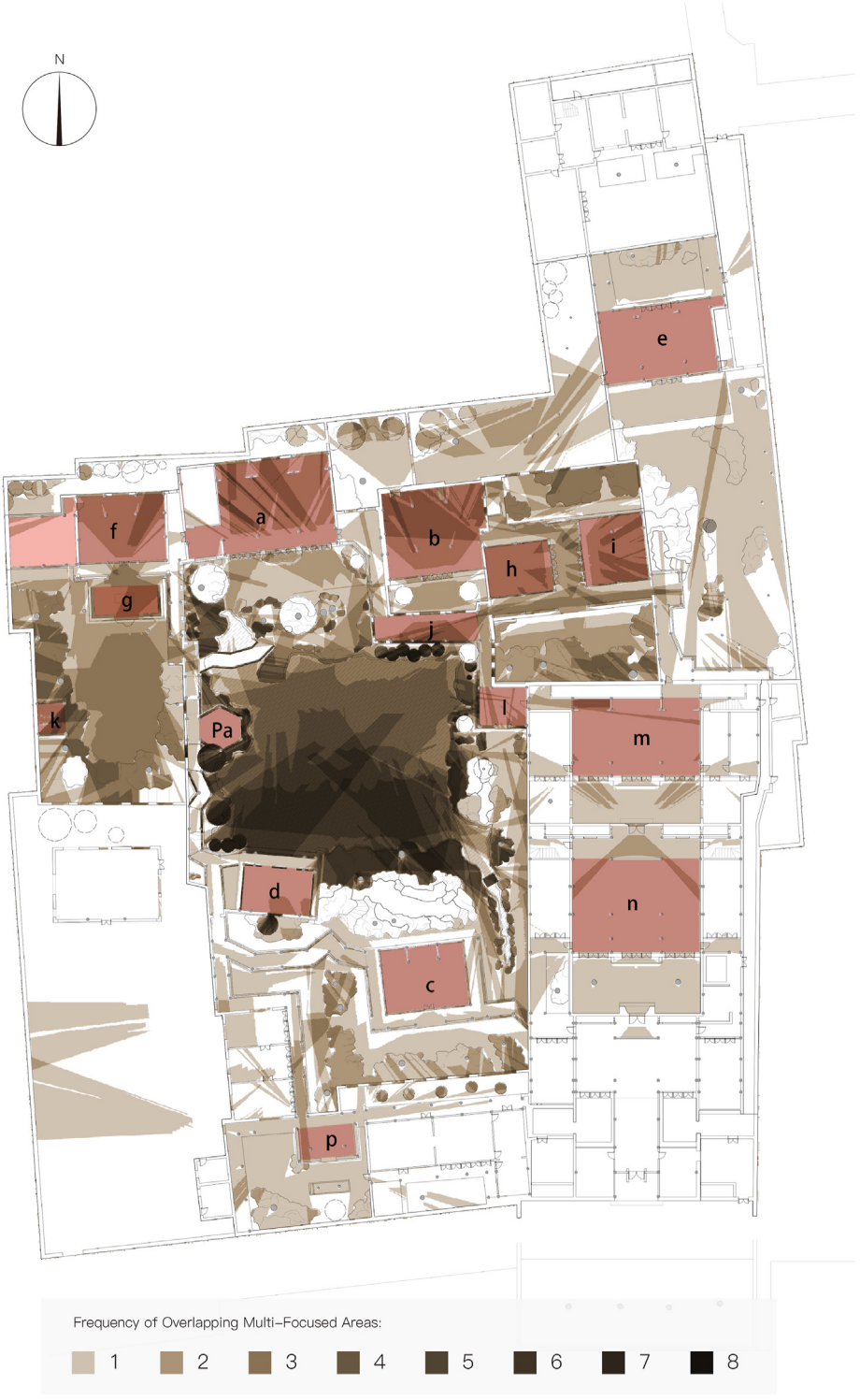

Fig. 18 The system of focused worlds and frequency of overlapping multi-focused areas in the Master of the Nets Garden. Source: Authors.

formulated by learning from the way the FS-FW structure is arranged in Chinese literati gardens. Moreover, as exemplified by many Chinese architects (including Wang Shu, Dong Yugan, and Zhao Yang), considering and incorporating the mechanisms discussed in this paper during contemporary design processes can lead to built environments that foster a higher degree of intimacy to surroundings and better-formulated narrative structures (Lu, 2022). Ultimately, this approach results in more meaningful, intriguing, and intense spatial experiences.

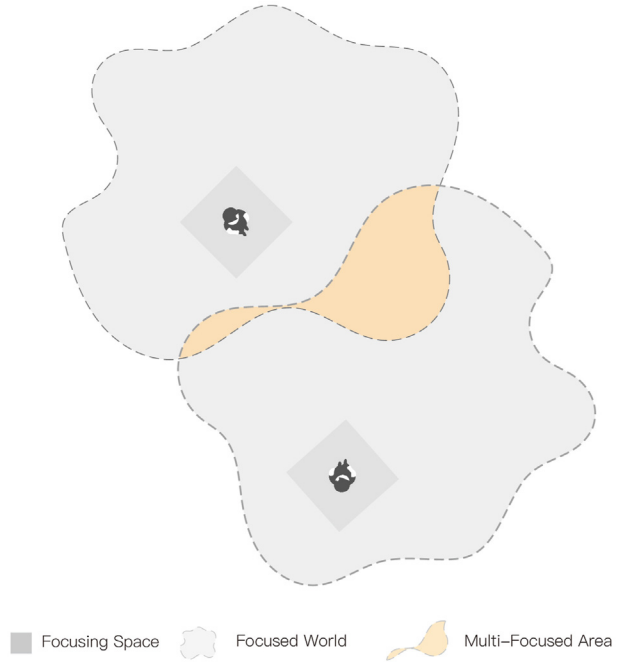

Fig. 19 The concept of multi-focused area. Source: Authors.

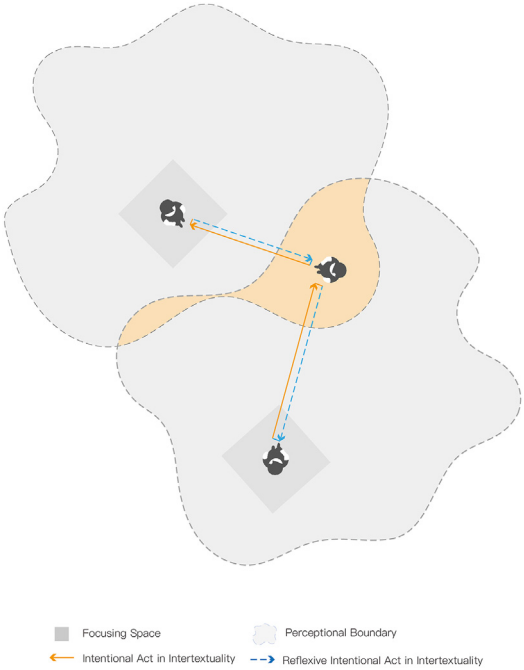

Fig. 21 The concept of multi-intertextuality. Source: Authors.

Fig. 20 Analysis of multi-focused areas. Yellow-coloured areas represent overlaps between the Focused World of the Pavilion for the Advent of Moon and Wind and other focused worlds. Source: Authors.

Fig. 22 View from the Pavilion for the Advent of Moon and Wind. This picture reveals how the Pavilion is involved with the focused worlds of the Veranda of the Slanting Bamboo Twig and the Duck-Shooting Veranda. Source: Authors.

One of the main limitations of this research is that, due to technical constraints, the spatial-visual aspect has inevitably dominated our analysis. However, one's spatial experience within any literati garden usually involves various forms of perception, such as audition and olfaction, behind which there may be a number of meaningful mechanisms calling for further exploration. Despite this limitation, as the above analysis has demonstrated, the methodology proposed in this research has a certain fundamentality rooted in what Heidegger calls the spatiality of Dasein.[10] In a Heideggerian sense, the embedded FS-FW structure in Chinese literati gardens, including those carefully arranged landscape and architectural elements related to this structure revealed by our GIS-based analysis, provides the key "ontic condition" that enables one to discover, encounter, and interact with various "inner-worldly beings" (Heidegger, 1996).

Owing to this fundamentality, this paper offers a valuable tool for exploring not only the spatial-experiential mechanisms embedded within Chinese literati gardens but also those within numerous other built environments. In this regard, this research has provided a phenomenological perspective that enables one to rethink architectural and landscape space based on an ontological understanding of human experience. It is perhaps only at this ontological level that contemporary spatial practitioners may find the "proper relation of present to past" and transcend the debate on "whether architecture should be anchored in tradition or should look solely toward the future" (The Pritzker Architecture Prize Jury, 2012).

Fig. 23 Intriguing entities involved in a prequel and a sequel. Source: Authors.

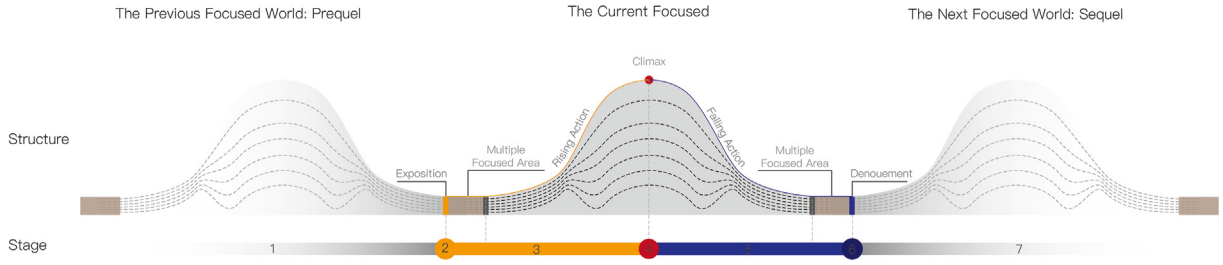

Fig. 24 The seven components' sequence. Adapted from Freytag's Pyramid model, we use curves instead of corners to provide a more precise depiction of the visitor's smoothly flowing experience within the FS-FW structure. Source: Authors.

6. Conclusion

This paper has thoroughly explored a fundamental spatial-experiential structure, known as the FS-FW structure, within Chinese literati gardens. By employing a phenomenological approach, it successfully integrates spatial and experiential aspects in understanding this historically and culturally significant architectural form. Through a comprehensive case study on the Master of the Nets Garden, employing a combination of multiple methods, this study has presented original and compelling results, including significant mechanisms, that provide insight into how Chinese literati gardens shape visitors' experiences. Based on these investigations, the following conclusions can be drawn.

First, our GIS-based spatial-visual analysis of the four aspects of the focused world formed by the Pavilion has revealed a series of spatial-experiential settings embedded in and around the lingering spaces of a Chinese literati garden. These settings determine, to a great extent, the kind of focused worlds formed and how they are formed. Notably, the focused world created in a literati garden is distinctively different from that formed in other kinds of built environments in many aspects. The richness of focused layers generated within the FS-FW structure of a literati garden is particularly impressive.

Second, the mechanism of intertextuality between the "focusing" and the "focused", as a result of human psychological empathy, plays a crucial role in shaping one's experience within an FS-FW unit. Intertextuality allows the essential experience that occurs within the lingering spaces of a garden to be extended to other areas within the focused boundary. Through intertextuality, one can apprehend the pleasant experience that potentially occurs within a lingering space even from afar.

Third, the narrative pattern of five acts reveals perhaps the most typical narrative pattern of one's experience within the FS-FW structure of a literati garden. From a perspective of spatial narration, a Chinese literati garden is designed and built to endlessly generate this narrative pattern in one's experience. The prequel and the sequel are two meaningful complements to the five-act pattern, which describe more comprehensively how one's experience occurs across different focused worlds. Particularly, the multi-focused area, which is analysed by applying our GIS-based analysis to multiple FS-FW units, is a critical factor that generates a dynamic "chain effect" in one's experience among different focused worlds within a literati garden.

Overall, this research reveals that the FS-FW structure is a key spatial-experiential factor responsible for shaping one's experience within a literati garden. Within this structure, several important mechanisms contribute to generating a complex, continuous, meaningful, and clearly formulated experience for garden visitors. A thorough understanding of the mechanisms explored in this research will provide theorists and researchers with a powerful tool to comprehend how Chinese literati gardens shape visitors' experiences. Applying these insights in contemporary design processes will help spatial practitioners create more meaningful, relevant, and poetic built environments in the modern world.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgments

We would like to express our gratitude to Prof. Carola Hein and Dr. Gregory Bracken for their invaluable help in the process of completing this work. We also thank the anonymous reviewers for their insightful comments, which greatly improved the quality of this paper. This work was supported by CSC (China Scholarship Council) under No. 201607720049 and the Young Scientists Fund of the National Natural Science Foundation of China (Grant No. 52208054).

References

Abrams, J., Hall, P. (Eds.), 2006. Else/Where: Mapping—New Cartographies of Networks and Territories. University of Minnesota Design Institute, Minneapolis.

Bedingfeld, K., 1997. Wang Shi Yuan: a study of space in a Chinese garden. J. Archit. 2 (1), 11—41.

Beyer, C., 2018. Edmund Husserl. In: Stanford Encyclopedia of Philosophy (Summer 2018 Edition). Available at the website of Stanford Encyclopedia of Philosophy.

Cao, X., 2004. The history of the Master of the Nets Garden [网师园的历史变迁]. The Architect [建筑师] (12), 104—112.

Chen, C., 2004. The Chinese Garden [中国园林]. Guangdong Tour Press, Guangzhou.

Dong, Y., 2016. Nine Chapters on Gardening [玖章造园]. Luminocity of Tongji University Press, Shanghai.

Esri, 2016. Viewshed. In: ArcGIS Pro Documentation. Available at the website of ArcGIS Pro 3.1.

"Focus" in Cambridge Dictionary, 2020. Cambridge University Press, Cambridge.

Freytag, G., MacEwan, E.J., 1904. Freytag's Technique of the Drama: an Exposition of Dramatic Composition and Art. University of Chicago, Chicago.

Fung, S., 2015. Here and There in Yuan Ye. Des. Phil. Pap. 1 (6), 305—319.

Hall, D., Ames, R., 1998. The cosmological setting of Chinese gardens. Stud. Hist. Gard. Des. Landsc. 18 (3), 175—186.

Heidegger, M., 1996. Being and Time: A Translation of Sein und Zeit. State University of New York Press, Albany.

Ji, C., Chen, Z., 2009. Notes on Yuan Ye [园冶注释]. China Architecture and Building Press, Beijing.

Jones, P.B., Woudstra, J., 2014. Social Order Versus 'Natural' Disorder in the Chinese Garden. Stud. Hist. Gard. Des. Landsc. 34 (2), 151—175.

Kee, Y.H., Chatzisarantis, N.N.L.D., Kong, P.W., Chow, J.Y., Chen, L.H., 2012. Mindfulness, movement control, and attentional focus strategies: effects of mindfulness on a postural balance task. J. Sport Exerc. Psychol. 34 (5), 561—579.

Keswick, M., Jencks, C., Hardie, A., 2003. The Chinese Garden: History, Art and Architecture, third ed. Harvard University Press, Cambridge.

Kristeva, J., 1980. Desire in Language: A Semiotic Approach to Language and Art. Columbia University Press, New York.
Li, Z., 2011. Visual perception of traditional garden space in Suzhou, China: a case study with space syntax techniques. In: Proceedings of the 19th International Conference on Geoinformatics. IEEE, Shanghai, pp. 1—4.
Li, S., 2017. The Study of the Historical Evolution and Pattern Characteristics of the Master of the Nets Garden in Suzhou [苏州网师园的历史演变与格局特征研究]. Master's Thesis. Xi'an University of Architecture and Technology, Xi' an.
Li, T., 1992. Meaning in the Traditional Chinese House and Garden. Master's Thesis. Massachusetts Institute of Technology, Massachusetts.
Liu, M., Nijhuis, S., 2020. Mapping landscape spaces: methods for understanding spatial-visual characteristics. Environ. Impact Assess. Rev. 82, 106376.
Lu, A., 2011. Lost in translation: modernist interpretation of the Chinese garden as experiential space and its assumptions. J. Archit. 16 (4), 499—527.
Lu, L., 2022. Towards A Poetics of Dwelling: Exploring Nearness Within the Chinese Literati Garden. PhD Thesis.. Delft University of Technology, Delft.
Makeham, J., 1998. The Confucian Role of Names in Traditional Chinese Gardens. Stud. Hist. Gard. Des. Landsc. 18 (3), 187—210.
Nijhuis, S., Lammeren, R.v., Antrop, M., 2011. Exploring the visual landscapes: an introduction. Res. Urbanism Ser. 2 (1), 15—39.
Office of Environmental Policy, 1981. Visual Impact Assessment for Highway Projects. Washington, D.C.
Peng, Y., 1988. Analysis of the Chinese Classical Garden [中国古典园林分析]. China Architecture & Building Press, Beijing.
Qian, D., 1796. A Record of the Master of the Nets Garden[网师园记], Originaly Inscribed on a Stone Tablet in the Master of the Nets Garden.
Rapoport, A., 1977. Human Aspects of Urban Form: Towards A Man—Environment Approach to Urban Form and Design. Pergamon Press, New York.
Seamon, D., 2000. A Way of Seeing People and Place. In: Wapner, S., Demick, J., Yamamoto, T., Minami, H. (Eds.), Theoretical Perspectives in Environment-Behavior Research. Springer, Boston, MA.
Stojanovski, T., Axelsson, Ö., 2018. Typo-Morphology and Environmental Perception of Urban Space Urban Form and Social Context: From Traditions to Newest Demands. Krasnoyarsk.
The Pritzker Architecture Prize Jury. Jury Citation, 2012. Available at: the website of the Pritzker Architecture Prize.
Tong, J., 1963. A Record of the Gardens of Jiangnan Region [江南园林志]. China Architecture and Building Press, Beijing.
Tong, M., 2016. Towards A View with Vista: Tectonics of Visual Culture in the Gardens of Eastern China [眼前有景：江南园林的视景营造]. Time+Architecture (5), 56—66.
Wei, X., 2017. Zhao Ye Bai [照夜白：山水、折叠、循环、拼贴、时空的诗学]. Taihai Publishing House, Beijing.
Xiao, J., Xue, C.Q.L., 2015. Architecture in Ji Cheng's *the Craft of Gardens*: a visual study of the role of representation in counteracting the influence of the pictorial idea in Chinese scholar gardens of the Ming period. Stud. Hist. Gard. Des. Landsc. 35 (3), 218—234.
Yu, R., Ostwald, M.J., Gu, N., 2014. A Parametric Approach to Connectivity Relations in the Planning of Traditional Chinese Private Gardens Across: Architectural Research Through to Practice: 48th International Conference of the Architectural Science Association 2014.
Zhang, T., Hua, W., Xu, Y., 2019. 'Seeing' or 'Being Seen': Research on the Sight Line Design in the Lion Grove Based on Visitor Temporal—Spatial Distribution and Space Syntax. Sustainability 11.
Zhou, W., 1999. 中国古典园林史 [The History of Classical Chinese Gardens], 2nd ed. Tsinghua University Press, Beijing.