

A Study on the Application of Narrative Design Techniques in Environmental Spaces

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Abstract: The article focuses on the application of narrative design in environmental spaces, reviewing and summarizing design practice projects in educational campus spaces, traditional tea culture spaces, and distinctive residential-themed spaces through narrative techniques. By analyzing from perspectives such as "site reading and insight," user identity and site functions, narrative scripts and spatial correspondence, it examines the motivations and patterns behind the design process. This demonstrates how applying narrative theory in design helps manifest spatial sequences and hierarchies. Through a point-to-area approach, it provides detailed analysis of spatial narrative and design techniques in "campus education," "traditional culture," and "residential recreation," exploring narrative as a fundamental method for environmental space design strategies. It employs thematic expression and spatial flow organization to construct narrative scenes, creating environmental spaces with distinctive site characteristics, traditional cultural heritage, and historical significance. This study holds guiding significance for future design of similar spaces.

Keywords: Environmental Art; Narrative Design; Natural Education; Cultural Space

1. Introduction

Narratology emerged as an independent discipline in the 1960s, initially finding its application in literature. In literary narrative, the author conveys thoughts and emotions to the reader through words. In the 1980s, narratology transcended the single boundary of literature, moving towards interdisciplinary research with fields such as film, music, painting, and architecture. The study of its application in spatial design also began at this time[1]. In spatial narrative, the designer uses space as the

narrative text, integrating spatial elements through a series of spatial creation techniques and design languages to imbue the space with a specific place meaning. Through moving through the space, the experiencer can perceive the designer's intention, thereby establishing a sense of place within the space and creating an emotional connection between the space and the user. This is the purpose of spatial narrative[2]. In his book *The Image of the City*, Kevin Lynch defined a sense of place as the "identity" of a place—that is, the characteristic that distinguishes one space from another[3].

Unlike popular narrative, the narrative techniques of environmental space require research on three levels: function, behavior, and text. Spatial narrative, in short, is about letting the elements of the environmental space tell a story. The process involves the designer (the information sender), the user (both intended and unintended), and the visitor (the information receiver). Relying on narrative texts such as oral histories, historical events, or myths and legends, the designer enables the space to tell historical stories and awaken collective memories, creating added value beyond the site's aesthetic appeal. Based on relevant narratology theories and methods, this approach is used to analyze, understand, and evaluate the attribute elements, spatial structure, cultural semantics, and construction strategies of a landscape, thereby effectively constructing thematic or regional landscapes and their cultural identity.

"Narrative," in simple terms, means "storytelling." In essence, it is a medium and process for conveying information and a fundamental form of human communication. Meanwhile, spatial design is increasingly shifting from a past focus on the functionality of physical space towards a greater inclination to explore deeper issues such as a space's connotation, meaning, and semantic communication. The narrative design born from the fusion of these two fields uses narratology

theory to analyze design, aims to satisfy the audience's emotional needs, and employs the method of "storytelling" to convey the design's connotation and story content to the audience[4].

2. Natural Education and Narrative Design

With the development of society, people can obtain various information and goods without leaving their homes, leading to less and less time spent in contact with and close to nature. The concept of natural education is an educational method that uses the natural environment as the primary learning venue, allowing children to understand, experience, and integrate with nature through listening, touching, and observing, thereby enhancing their ability to adapt to the natural environment. At the same time, it encourages independent thinking through autonomous exploration, improving logical thinking skills.

Functional narrative refers to narrating through the function of a certain space, setting the storyline at the functional points of the space, and realizing the correlation between people and space through narrative plots. Users unconsciously participate in the narrative during use, expressing the connotation of the narrative theme through spatial functions, and gaining emotional resonance with cultural orientation and value connotation [5]. Taking the environmental space of the Pinghe Kindergarten project, designed in a workshop, as an example, the philosophy of natural education aims for the healthy physical and mental development of individuals. It encourages closeness to and contact with nature, allowing people to experience and learn within it, thereby strengthening the emotional connection between the two[6]. In the spatial design of natural education, the key to creating an environment and building characteristic scenes that integrate the theme of natural education lies in utilizing local resource characteristics and continuing the local context, as well as designing meaningful spatial themes. As carriers of local material culture, architecture and landscape should, during the design process, uphold the local historical context and natural characteristics, integrate humanistic resources, fully leverage the site's attributes, and use local traditional materials and construction techniques to shape a landscape space that reflects local history and culture, embodies local cultural heritage, and mirrors the spirit and characteristics of the place

itself[7]. This requires effective research methods and theoretical support. "Narrative," in simple terms, means "storytelling." Essentially, it is a medium and process for conveying information and a fundamental form of human communication. Meanwhile, spatial design is increasingly shifting from a past focus on the functionality of physical space towards a greater inclination to explore deeper issues such as site meaning and semantic communication (Figure 1). The narrative design born from the fusion of these two fields uses narratology theory to analyze design, aims to satisfy the audience's emotional needs, and employs the method of "storytelling" to convey the design's connotation and story content to the audience. The natural education at Pinghe campus is child-centered[8]. In the process of human growth, pictures and stories play a crucial role in children's cognitive development. Combining the site's functions and the goals of natural education, the "Courtyard Garden" was proposed as the theme for the spatial narrative.



Figure 1. Research on Spatial Function and the Setting of a Spatial Story Theme

(Reference image selected from the internet)

Children are innately sensitive to pictures and stories. The campus space uses a picture book theme to organize the spatial design theme in the form of listening to stories, allowing for a preliminary understanding of the world and acquiring the logic for language, behavior, character, and thought development. This guides the segmented logical planning and design of the site's spatial functions. There is a close connection between the primary audience of natural education, the content of natural education, and the spatial narrative. In the outdoor space design of the Pinghe campus, the application of narrative design techniques, combined with the handling of story plots, reveals the mysteries of nature. Establishing a narrative protagonist for young children not only helps vividly convey knowledge and concepts

related to natural education but also contributes to creating a place with unique spatial characteristics.

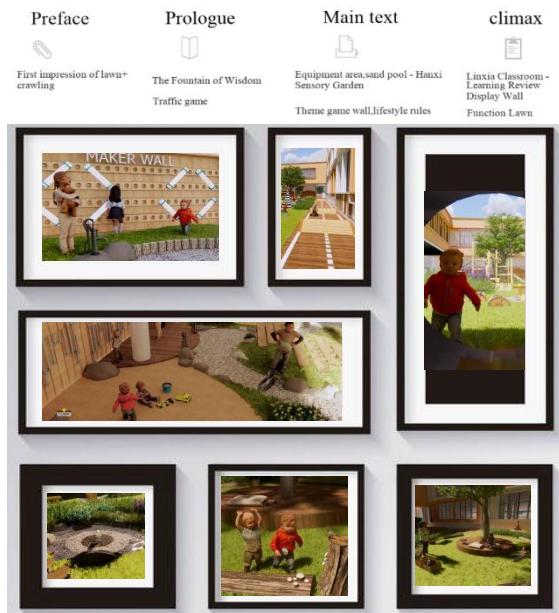


Figure 2. Narrative Theme, Narrative Space, and “Protagonist” Establishment in the Design of Shanghai’s “Pinghe” Campus & Narrative Introduction to the Natural Education Space

The campus landscape space carries more educational content and recreational functions. Traditional campus spaces, through simple cultural walls between buildings or text and images on bulletin boards, showcase campus culture and values to students. However, the communication effect is inevitably rigid and stereotypical, making it difficult to generate genuine emotional resonance with students. In this context, open-air spaces on campus play an extremely important role, and the plants within them naturally become the first medium for students to experience nature outdoors. The natural education function of the environmental space is relatively complex for preschool children. To better introduce and explain the space's functions and help teachers and students understand it, using a narrative approach makes it easier for children to understand the site space and develop a sense of familiarity, facilitating teachers' daily teaching applications (Figure 2).

3. Research on Traditional Garden Culture and Contemporary Narrative Design

By observing the growth environment and state of plants, the ancients compared and corresponded them to human character and

behavior, ultimately endowing plants with noble personalities and sentiments. They expressed their sighs and praise for beautiful things around them through the celebration of plants. For example, bamboo holds an extremely important position in China's traditional plant culture. Pine, bamboo, and plum are praised as the “Three Friends of Winter,” while plum, orchid, bamboo, and chrysanthemum are known as the “Four Gentlemen.” In the minds of ancient Chinese literati, although bamboo lacks the grandeur of pine and cypress or the wealth and nobility of peony, and also lacks the delicate beauty of peach and plum, its upright yet hollow stem possesses a quality of modesty and elegance and a spirit of noble integrity, admired by countless scholars and artists. The ancients used the myriad changes of plants in the natural world to entrust their own thoughts and feelings. Therefore, depictions of plant culture by literati and artists throughout history were always tinged with strong subjective colors. Plants in traditional Chinese culture contain rich spiritual and cultural connotations, which are a reflection of human character.

Cultural narrative is a narrative method based on a specific cultural context, which sorts out the life experiences and the formation and evolution of concepts of a specific social community or cultural group, and is created based on the special regional cultural traditions and its specific context [9]. In numerous ancient and modern documents, poems, and paintings, many have summarized and studied the cultural connotations of plants. For example, Confucius' words in The Analects (Zihan), “Only when the year turns cold do we see that the pine and cypress are the last to fade,” reflect the tenacious and unyielding character of pine and cypress in Confucius' mind. During the Wei and Jin dynasties, the “Seven Sages of the Bamboo Grove” chose to “live in seclusion among the bustling city” within a bamboo forest. In addition to the numerous ancient records of plant culture, modern scholars have also conducted in-depth research on it, such as Ideas and Artistry in Plant Landscapes by Xu Dejia and Zhou Wuzhong, and The Cultural Connotation of Plants in Chinese Classical Gardens by Liu Kediao. These research materials can help us quickly understand the knowledge and connotations of traditional Chinese plant culture. The author has listed commonly used plants in design and their symbolic meanings (Table 1).

Table 1. Corresponding Traditional Environmental Symbolism of Garden Plants

Name	Symbolic Meaning	Narrative Expression
Osmanthus	Friendship, auspiciousness, honor, success in examinations	Arranged in accordance with local wind direction to effectively distribute fragrance in user areas, creating a positive effect.
Dawn Redwood	Auspiciousness, family prosperity	In some places, dawn redwoods are planted to pray for family prosperity and well-being.
White Magnolia	Gratitude, loyalty, wealth and honor (“Jade Hall Riches”), holiness	Used for symbolic comparison in sites such as temples and campuses.
Small-leaved Fig	Shelter and nostalgia	With its broad, dense canopy providing shade, it is a place for gathering, cooling off, and communication, carrying a strong sense of nostalgia and community memory, giving rise to the saying, “No village without a fig tree.”
Ilex rotunda	Warding off evil, ensuring safety and protection	Often planted in front of doors or on balconies to block malevolent energy and bring prosperity to the home.
Lotus	Regarded as a sacred flower, symbolizing liberation from afflictions to attain purity	In feng shui, the lotus can purify the energy field, attract wealth and fortune, and enhance prosperity. Suitable for placement in living rooms, studies, or courtyards.
Peony	Graceful and magnificent, rich and colorful, a symbol of peace	One of the most symbolically rich flowers in Chinese culture, with almost no spatial limitations as long as growing conditions are suitable.
Zelkova	Due to its homophone with “to pass the exam,” it was seen as an auspicious symbol of success in ancient imperial examinations.	Therefore, it is widely used in spaces for blessings and on campuses.

Taking the Bamboo Teahouse project from a workshop as an example, the rural courtyard where the project is located was nearly hollowed out due to population outflow, with only a few elderly residents remaining. However, through the joint efforts of the villagers and government support, the courtyard was upgraded and renovated, with the main focus on improving the village's infrastructure. This teahouse serves as one of the cultural spaces of the rural revitalization initiative.

Cultural regeneration employs contextualized narrative techniques to recode and innovatively interpret these cultural symbols, thereby constructing a unique narrative situational space [10]. In addition to bamboo, peach, and pine, the project's environmental design selected orchid and chrysanthemum as the thematic cultural symbols for the outdoor stage courtyard and the restaurant leisure courtyard, respectively. After analyzing the current state and spatial functions of the teahouse courtyard, an overall analysis was conducted to expand the courtyard's cultural attributes and its connection to the narrative theme. In addition to extracting the corresponding plant's cultural symbols as a

decorative theme for each courtyard, the planting design also echoed this. For example, the entrance courtyard space is planted with a large number of bamboos, the sports area with dawn redwoods, and the outdoor theater with spider lilies, creating cultural focal points (Figure 3).

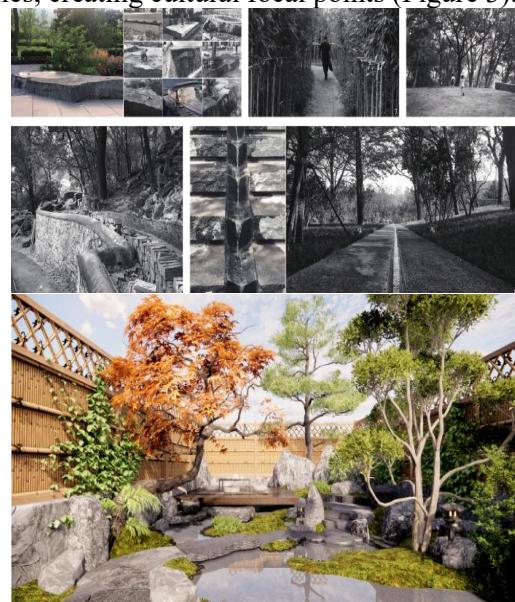


Figure 3. Current State of the Renovated Bamboo Teahouse & Narrative Results of the Natural Tea Garden Space

4. Narrative Themes and Spatial Design Techniques

Matthew Pottenger and Jamie Purinton explored narrative elements in culture and nature, proposing the conclusion of “cultural narration of landscape.” They believe that the foundation of landscape narrative lies in local historical events, myths, legends, and other content. Different narrative strategies can be adopted, such as renaming, sequential design, and suggestion, to evoke the subjective agency of the site, allowing the site to actively tell its story and achieve the goal of “revitalization”. This article uses the Jinding project in Shanghai’s Jinjiao area as a case study to analyze the application of thematic techniques in narrative design, as well as its spatial functions and practical effects (Figure 4).



Figure 4. Deliberation on the Function and Practical Effects of the Narrative-Themed Space

4.1 Analysis of Narrative Techniques

When designing the circulation of a space, it is necessary to design the flow according to the space's positioning, functional classification, etc. The purpose of circulation design is to guide the space experienter to follow a predetermined route. When designing circulation, corresponding design should be carried out according to the characteristics of the narrative. The visual expansion of space is one part of this. This involves enlarging the design of scene nodes along the circulation. Based on the

characteristics of the spatial experience and referencing the principles of visual design, the scene nodes along the circulation are optimized according to effectiveness principles, allowing local scene nodes to present the optimal narrative effect. Spatial circulation and spatial narrative serve as two bases for spatial functional zoning, each playing its own role for different forms. Spatial circulation focuses on the division of dynamic and static lines, while spatial narrative mainly analyzes and divides the space from the visitor's perspective. The scenarization of spatial narrative can reshape the atmosphere of scene nodes by optimizing the narrative scenes, ultimately forming the interaction of scene nodes and bringing different experiences to the consumer.

4.2 Scenarization of Narrative and Narrativization of Scenes

The term "scene" was first used in stage performance within the field of drama. In 1959, Erving Goffman introduced this concept into social life through his dramaturgical theory. In scene narration, the narrator is the subject that creates the narrative context. In industrial heritage, scene narration involves the reproduction of scenes imbued with memory, aiming to awaken the memory of inactivated spaces, create an industrial themed atmosphere, and reinforce regional cultural memory [11].

The goal is to re-analyze and summarize the material and event elements within a residential space to form a multi-layered narrative space. Drawing on a narrative design study of the theme park “Alice in Wonderland,” this section combines narrative techniques with the design theme. Narrative design includes different narrative techniques, and “expansion of the narrative event” is one of the more effective methods. “Expansion of the narrative event” involves analyzing, refining, and summarizing the entire scene’s story, blending fragmented knowledge points from the story to form a unique scene element. This scene element contains the entire story’s content and is a highly condensed version of the scene story. This high condensation of the scene is ultimately reflected in the spatial narrative, containing more ideas and feelings, capable of evoking more memories. The goal of spatial narrative is to create an event-centered, fully immersive spatial scene, thereby eliciting a strong spatial emotional experience. Scene narratives are usually divided

into several parts according to the narrative structure: beginning, development, climax, and ending (referencing the design concept of the “Pinghe” project in the first section).

4.3 The “Winding and Secluded Path” Nature of Plot Design

The narrativization and dramatization of the spatial design plot help the space experiencer understand the spatial narrative nodes. When experiencing the spatial design plot, the experiencer will visit and experience according to the scene's specific script, which in turn triggers their own emotional experiences. Using the “winding and secluded path” design of the narrative plot can add a touch of exaggerated narrative to the spatial design effect, making the experiencer have an aesthetic narrative experience that is both familiar and strange. The “winding and secluded path” nature of spatial narrative design can be applied in three-dimensional spatial design, in the aesthetic design of scene spaces, and even in the cognitive design of the space. The main purpose of these designs is to attract the attention of the space experiencer, thereby enhancing their emotional identification, leading from the concrete spatial design to an abstract psychological space.

5. Conclusion

The scenarization of narrative and the narrativization of scenes primarily aim to design resonant scenes for the design object's space. In the process of narrativization, various techniques of spatial combination (e.g., interleaving, intersection) and formal languages are needed to form specific artistic images, providing a brand-new spatial design for the work. Through the redesign of scene elements and expressive symbols, the spatial atmosphere required for exhibition and creativity is created for the scene. The scenarization of narrative provides a better foundation for spatial expression. The scenarization of narrative can start from the historical background, target audience, emotional positioning, and scene memories to find fragmented points that can align with the scene design and stimulate the inner emotions of the audience. The scenarization of narrative will express the audience's inner scenes through design techniques, fully demonstrating the charm of design narrativization.

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