MINISTRY OF CULTURE OF UKRAINE

KHARKIV STATE ACADEMY OF DESIGN AND ARTS

Faculty of « DESIGN AND ARCHITEKTURE»

Department of «Environmental Design»

YANGCHEN

CONSERVATION AND REGENERATION OF HISTORIC DISTRICT BASED ON SPATIAL NARRATIVE THEORY (TAKING THE BEIDAJIE AREA, JIANGYIN CITY, JIANGSU PROVINCE AS AN EXAMPLE)

Qualification work for obtaining the SVO «Master»

in the specialty B2 Design

OPP «Design of the architectural and landscape environment»

The qualification work contains the results of one's own research.
The use of ideas, results and texts of other authors must be referenced to the appropriate source.

Signed by: Yang Chen B4315601A34E4B6...

_____Name Surname

(sign)

Scientific advisor: **Nataliia Tregub,** Ph.D. of architecture, Associate Professor of the Environment Design department Kharkiv State Academy of Design and Arts (Kharkiv, Ukraine)

Kharkiv-2026

CONTENT

INTRODUCTION 1

SECTION I. HISTORIOGRAPHY OF THE ISSUE.STATUS OF RESEARCH ON THE TOPIC 2

1.1State of research on the topic 2

1.2Research methods 9

1.3Conclusions to the first chapter 16

SECTION II. THE DESIGN REOUIREMENTS FOR BLOCK RENOVATIONBASED ON SPATIAL NARRATIVE THEORY 19

2.1 The characteristics of districts under the theory of spatial narrative 19

2.2. The adaptability of spatial narrative theory to districts 23

2.3. District design methods under spatial narrative theory 35

2.4Conclusions to the second chapter 39

CHAPTER III. DEVELOPMENT OF DISTRICT RENOVATION PROJECTSBASED ON SPATIAL NARRATIVE THEORY 41

3.1. CONCEPT 44

3.2GENERAL CONCLUSIONS 50

REFERENCES 55

APPENDIX A 57

APPENDIX B 60

APPENDIX C 61

INTRODUCTION

With the acceleration of urbanization, urban blocks have gradually evolved into core carriers of urban culture. They witness the context of urban development and collective memory, and the texture and architectural form of blocks serve as the core elements shaping urban cultural identity. Nevertheless, in the process of urban renewal and construction, the recognizability and identity of urban culture are often overlooked. On the one hand, simplified replication of other successful cases is pursued to achieve short-term improvement effects, which leads to the homogenization of urban renewal and the loss of urban cultural expression. On the other hand, renovation strategies usually focus merely on superficial decoration of physical space, while ignoring cultural translation and narrative expression. As a result, public awareness of place culture and sense of belonging keep declining. Starting from the perspective of spatial narrative, deeply exploring the intrinsic value of each city precisely meets the urgent demand for perception and emotional resonance in the current era. Therefore, the renovation of urban blocks today requires multi-dimensional thinking on how to effectively highlight urban characteristics and cultural values, strengthen place memory, and thus promote a virtuous cycle of sustainable block development.

Against this backdrop, this paper introduces spatial narrative theory and takes the Beidajie Historic District in Jiangyin as the research object. It aims to explore urban block renovation design methods based on spatial narrative theory and put forward strategies to sustain the vitality of urban blocks. Firstly, relevant literature is reviewed to fully understand associated design concepts and methods, and to examine the feasibility of applying spatial narrative theory to urban renewal. Secondly, theoretical research, questionnaire surveys, case studies and other methods are

adopted to summarize existing spatial problems and construct a spatial narrative system. Finally, specific renovation strategies and design proposals are presented. Spatial narrative theory connects human perception with spatial environment, facilitating positive communication between designers and users, and providing references for urban block renovation practices.

SECTION I. HISTORIOGRAPHY OF THE ISSUE.STATUS OF RESEARCH ON THE TOPIC

1.1State of research on the topic

In the past few years, the design concept of historical block transformation has undergone a fundamental change: from simple material space repair and commercial function revival to a more diverse narrative environment design, which integrates design elements such as cultural memory, event experience and emotional identity. At the same time, spatial narrative - that is, the application of the "storytelling" thinking in narrative to the field of spatial design - is also increasingly used to improve the cultural readability and spatial participation of such blocks. The integration of these two trends has prompted people to deeply explore how spatial narrative strategies affect the transformation and design of historical and urban blocks.

Early research on historical blocks focused more on the protection of material and spatial forms and the revival of commercial vitality. In the mid-20th century, Western countries began to pay attention to the protection of traditional street space during post-war urban reconstruction. In 1967, Britain introduced the Urban Leisure Act, advocating the systematic protection and reuse of historical commercial streets. From a

theoretical point of view, Jane Jacobs put forward the concepts of "street diversity" and "community vitality" in The Death and Life of American Big Cities, focusing on the importance of small-scale street space layout, functional complex and frequent socialization to maintaining urban vitality. The renovation of traditional historical blocks usually optimizes the image of the street through the improvement of the facade of the building, the transformation of the street landscape and the adjustment of the business model. However, this update model with material space as the core gradually exposes outstanding problems such as the loss of cultural connotation, insufficient spatial narrative expression, and the lack of residents' emotional experience.

At present, the research field that has attracted much attention is the systematic application of spatial narrative theory in block transformation. The spatial narrative theory originated from the inquiry and reflection on the meaning of the built space in the 1960s. Its research is mainly based on spatial text, which conveys spatial semantics through narrative means, making the spatial environment easier to perceive and identify. The theory transcends the limitations of the two-dimensional perspective in literature and art, and extends to the perceptible three-dimensional space. By constructing a spatial system based on the three levels of "thing-field-thing", it effectively explains the space-time attributes of historical blocks. Scholars such as Long Diyong and Cheng Xilin in China have carried out theoretical research on spatial narrative earlier, which has laid the foundation for the application of spatial narrative theory in the field of domestic spatial design. Zhang Nan's team put forward the theory of urban narrative space and developed the map superposition method, combining spatial transformation with the evolution of events, incorporating it into the time dimension, and making an in-depth analysis

of the dynamic evolution and structural changes of urban narrative space. Taking Chaozong Street in Changsha as an example, the researchers introduced the concept of "ontological narrative ability" and built a three-dimensional framework integrating physical space, functional karma and historical events. They used spatial syntax, nuclear density estimation and hierarchical analysis for quantitative diagnosis, and found that the narrative intensity presented a spatial pattern of "main axis aggregation and deep lane attenuation". High-value nodes are concentrated in main streets with high reachability, while branch alleys and areas with weak functions are reduced in narrative efficiency. This research provides an accurate analysis tool based on node diagnosis, which provides methodological support for resisting homogeneous urban renewal and cultivating differentiated cultural expression.

Another trend worthy of attention is the quantification and diversification of spatial narrative research methods. Relevant research shows that spatial syntax provides a quantitative basis for the study of narrative space. The GIS analysis law can intuitively present the distribution and aggregation of different spatial environments and element types in historical blocks, making up for the shortcomings of qualitative analysis and spatial syntax axis model analysis. The narrative environment research of the historical block of Jingyu Street, Harbin, adopts the method of combining spatial syntax and GIS, and puts forward activation strategies from the four dimensions of semantic integration, semantic generation, grammar weaving and context reshaping. In terms of narrative space arrangement, the researchers propose that we should follow the systematic arrangement logic, organically integrate narrative nodes and spatial sequences, and build a composite model of the coexistence of linear narrative and collage narrative - linear narrative

connects historical events with clear time clues and establishes a sense of rhythm of narrative; collage narrative is juxtaposition. Empty cultural symbols form a multi-clue dialogue. In terms of spatial morphological design, it is especially important to build a networked narrative carrier beyond the traditional linear path. Take Guangzhou Changhua Street as an example, the cross-shaped street pattern can be retained on the macro scale as a spatial metaphor for historical continuation, the narrative pocket square can be established as the narrative node on the medium scale, and the waterfront space and street facilities can be activated on the micro scale, making it a dynamic narrative medium.

At the same time, the spatial narrative design framework across multiple disciplines has also made remarkable progress. Researchers generally adopt the progressive framework of "extracting narrative elements - establishing narrative themes - constructing narrative plots - choreating narrative paths". Spatial narrative elements are usually divided into material elements (street textures, historical buildings, environmental facilities) and non-material elements (historical events, folk activities, traditional skills). At the level of narrative theme, the systematic literature review of Guangzhou Xiguan Historical District shows that existing research emphasizes spatial description and morphological analysis of historical evolution, focusing on spatial patterns, architectural features and functional layouts, but significantly lacks attention to non-material cultural elements such as emotions and memory. In terms of narrative node creation, the researchers proposed that nodes do not exist in isolation, but should form a node system with narrative association through the path structure - the entrance node indicates the beginning of the narrative, the middle node deepens the cultural connotation, the core node shapes the emotional climax, and the exit node ends the narrative.

At the level of narrative media, public art involvement is regarded as a key means of transforming abstract historical and cultural information into perceptible spatial language. Liu Fei's research summarizes the public art intervention mode into three categories: landmark intervention, situational intervention and participatory intervention, and emphasizes that public art plays the triple role of spatially connecting tradition and modernity, culturally translating collective memory, and socially promoting public participation in the renewal of historical commercial streets.

Integrating spatial narrative into the practice of block transformation has become a research field that is receiving increasing attention but is still in the development stage. At present, research has begun to apply the narrative mechanism to the real environment. For example, in the Macau Lychee Bowl Shipyard Revitalization Project, researchers combine the historical value of industrial heritage with innovative reuse strategies through spatial narrative methods to ensure that the essence and value of cultural heritage are transmitted while promoting sustainable development. The spatial narrative research of Shougang Garden adopts the "author-text-reader" framework, which provides practical strategies for experiential tourism design and adaptive reuse planning. However, most of these cases are still at the level of scheme design, rather than based on systematic and multi-stage design methods. The multi-stage narrative paradigm - that is, allowing the experience to gradually unfold in multiple stages such as exploration, challenge and continuation - provides a systematic path for block design, but the relevant research in this application scenario is still relatively limited.

The current challenge is to successfully apply abstract narrative theory to spatial experience design. Concepts such as narrative themes,

plot sequences and node systems need to be transformed into concrete spatial experiences through a series of spatial organization strategies, specific environmental designs or community interaction activities. More importantly, how to design user participation in a pluralistic experience is essentially closely related to understanding how users can gradually deepen from the initial spatial exploration interest to the recognition of the cultural connotation of the block - since this key link has not been systematically integrated into the overall design theory system, it has become an urgent need to attack in the current design field. The problem of gram.

Another area worth exploring is community participation and inclusive design. Existing research literature on digital and participatory narrative shows that spatial narrative design can and should provide inclusive support for different groups. The research of Chatzitryfonos explores the participatory method of speculative narrative as a digital place. It combines creative workshops with augmented reality (AR) and cross-media design to invite residents to express their life experiences and visions through fictional stories, making the narrative a low-threshold and culturally resonant citizen. And the medium. The block space equipped with a variety of sensory feedback options and dynamic narrative settings can enhance social inclusiveness and enrich users' emotional experience.

Despite the above-mentioned progress, there are still a number of challenges in this area. The first challenge is that there is still a lack of research on how to systematically integrate narrative themes, plot sequences and spatial media; secondly, the long-term empirical data on the user behavior of spatial narrative blocks is still very limited; thirdly, the relevant design and evaluation are mostly based on short-term

research, and there is a lack of post-use evaluation and quantity. Verification; Fourth, the interdisciplinary collaboration between the design community, the urban planning community and the cultural research community is still insufficient.

In general, the field of block transformation design is gradually shifting to more narrative and experiential methods, and spatial narrative theory provides important support for the construction of these design processes. Although the integration of these two methods is still in the early stage at this stage - especially in multi-stage narrative promotion - more research is still needed to build a structured framework, so as to systematically explain the operation mechanism of the process itself, such as narrative element extraction, theme establishment and path arrangement. If more interdisciplinary research can be carried out in the field of spatial narrative theory, it is expected to further explore its potential value in cultural inheritance, spatial experience and social participation.

In general, the contemporary research trend not only shows a broad prospect, but also has an urgent gap to be filled. The study of historical blocks and urban renewal provides important insights for environmental behavior and cultural inheritance, while spatial narrative theory provides an effective path for improving spatial readability and stimulating cultural identity. However, there is still a lack of systematic research that integrates these two research directions into the same design paradigm. Building this kind of design paradigm can transform the historical block from a static material space to a dynamic environment with experience as the core, so as to continue to attract, stimulate and connect relevant stakeholders. In the future, if the design orientation is turned to a more

participatory, narrative and sustainable spatial narrative process, this goal may be achieved.

In summary, the current research situation not only shows opportunities, but also exposes shortcomings. The study of block transformation provides important insights for environmental behavior and cultural inheritance, while spatial narrative theory provides an effective way to improve the quality of spatial experience and cultural identity. However, attempts to systematically integrate these two areas into a unified design strategy are still rare. Building such an integrated framework is expected to transform the historical block from a static physical space to a dynamic and experience-oriented environmental space, so as to continuously attract, stimulate and connect users. By focusing on multi-stage spatial narrative design, future block planning can develop in the direction of deeper participation experience, richer cultural interaction and stronger long-term sustainability.

1.2Research methods

In the past few years, the design concept of historical block transformation has undergone a fundamental change: from simple material space repair and commercial function revival to a more diverse narrative environment design, which integrates design elements such as cultural memory, event experience and emotional identity. At the same time, spatial narrative - that is, the application of the "storytelling" thinking in narrative to the field of spatial design - is also increasingly used to improve the cultural readability and spatial participation of such blocks. The integration of these two trends has prompted people to deeply explore how spatial narrative strategies affect the transformation and design of historical and urban blocks.

Early research on historical blocks focused more on the protection of material and spatial forms and the revival of commercial vitality. In the mid-20th century, Western countries began to pay attention to the protection of traditional street space during post-war urban reconstruction. In 1967, Britain introduced the Urban Leisure Act, advocating the systematic protection and reuse of historical commercial streets. From a theoretical point of view, Jane Jacobs put forward the concepts of "street diversity" and "community vitality" in The Death and Life of American Big Cities, focusing on the importance of small-scale street space layout, functional complex and frequent socialization to maintaining urban vitality. The renovation of traditional historical blocks usually optimizes the image of the street through the improvement of the facade of the building, the transformation of the street landscape and the adjustment of the business model. However, this update model with material space as the core gradually exposes outstanding problems such as the loss of cultural connotation, insufficient spatial narrative expression, and the lack of residents' emotional experience.

At present, the research field that has attracted much attention is the systematic application of spatial narrative theory in block transformation. The spatial narrative theory originated from the inquiry and reflection on the meaning of the built space in the 1960s. Its research is mainly based on spatial text, which conveys spatial semantics through narrative means, making the spatial environment easier to perceive and identify. The theory transcends the limitations of the two-dimensional perspective in literature and art, and extends to the perceptible three-dimensional space. By constructing a spatial system based on the three levels of "thing-field-thing", it effectively explains the space-time attributes of historical blocks. Scholars such as Long Diyong and Cheng Xilin in China have carried out

theoretical research on spatial narrative earlier, which has laid the foundation for the application of spatial narrative theory in the field of domestic spatial design. Zhang Nan's team put forward the theory of urban narrative space and developed the map superposition method, combining spatial transformation with the evolution of events, incorporating it into the time dimension, and making an in-depth analysis of the dynamic evolution and structural changes of urban narrative space. Taking Chaozong Street in Changsha as an example, the researchers introduced the concept of "ontological narrative ability" and built a three-dimensional framework integrating physical space, functional karma and historical events. They used spatial syntax, nuclear density estimation and hierarchical analysis for quantitative diagnosis, and found that the narrative intensity presented a spatial pattern of "main axis aggregation and deep lane attenuation". High-value nodes are concentrated in main streets with high reachability, while branch alleys and areas with weak functions are reduced in narrative efficiency. This research provides an accurate analysis tool based on node diagnosis, which provides methodological support for resisting homogeneous urban renewal and cultivating differentiated cultural expression.

Another trend worthy of attention is the quantification and diversification of spatial narrative research methods. Relevant research shows that spatial syntax provides a quantitative basis for the study of narrative space. The GIS analysis law can intuitively present the distribution and aggregation of different spatial environments and element types in historical blocks, making up for the shortcomings of qualitative analysis and spatial syntax axis model analysis. The narrative environment research of the historical block of Jingyu Street, Harbin, adopts the method of combining spatial syntax and GIS, and puts forward

activation strategies from the four dimensions of semantic integration, semantic generation, grammar weaving and context reshaping. In terms of narrative space arrangement, the researchers propose that we should follow the systematic arrangement logic, organically integrate narrative nodes and spatial sequences, and build a composite model of the coexistence of linear narrative and collage narrative - linear narrative connects historical events with clear time clues and establishes a sense of rhythm of narrative; collage narrative is juxtaposition. Empty cultural symbols form a multi-clue dialogue. In terms of spatial morphological design, it is especially important to build a networked narrative carrier beyond the traditional linear path. Take Guangzhou Changhua Street as an example, the cross-shaped street pattern can be retained on the macro scale as a spatial metaphor for historical continuation, the narrative pocket square can be established as the narrative node on the medium scale, and the waterfront space and street facilities can be activated on the micro scale, making it a dynamic narrative medium.

At the same time, the spatial narrative design framework across multiple disciplines has also made remarkable progress. Researchers generally adopt the progressive framework of "extracting narrative elements - establishing narrative themes - constructing narrative plots - choreating narrative paths". Spatial narrative elements are usually divided into material elements (street textures, historical buildings, environmental facilities) and non-material elements (historical events, folk activities, traditional skills). At the level of narrative theme, the systematic literature review of Guangzhou Xiguan Historical District shows that existing research emphasizes spatial description and morphological analysis of historical evolution, focusing on spatial patterns, architectural features and functional layouts, but significantly lacks attention to non-material

cultural elements such as emotions and memory. In terms of narrative node creation, the researchers proposed that nodes do not exist in isolation, but should form a node system with narrative association through the path structure - the entrance node indicates the beginning of the narrative, the middle node deepens the cultural connotation, the core node shapes the emotional climax, and the exit node ends the narrative. At the level of narrative media, public art involvement is regarded as a key means of transforming abstract historical and cultural information into perceptible spatial language. Liu Fei's research summarizes the public art intervention mode into three categories: landmark intervention, situational intervention and participatory intervention, and emphasizes that public art plays the triple role of spatially connecting tradition and modernity, culturally translating collective memory, and socially promoting public participation in the renewal of historical commercial streets.

Integrating spatial narrative into the practice of block transformation has become a research field that is receiving increasing attention but is still in the development stage. At present, research has begun to apply the narrative mechanism to the real environment. For example, in the Macau Lychee Bowl Shipyard Revitalization Project, researchers combine the historical value of industrial heritage with innovative reuse strategies through spatial narrative methods to ensure that the essence and value of cultural heritage are transmitted while promoting sustainable development. The spatial narrative research of Shougang Garden adopts the "author-text-reader" framework, which provides practical strategies for experiential tourism design and adaptive reuse planning. However, most of these cases are still at the level of scheme design, rather than based on systematic and multi-stage design methods. The multi-stage

narrative paradigm - that is, allowing the experience to gradually unfold in multiple stages such as exploration, challenge and continuation - provides a systematic path for block design, but the relevant research in this application scenario is still relatively limited.

The current challenge is to successfully apply abstract narrative theory to spatial experience design. Concepts such as narrative themes, plot sequences and node systems need to be transformed into concrete spatial experiences through a series of spatial organization strategies, specific environmental designs or community interaction activities. More importantly, how to design user participation in a pluralistic experience is essentially closely related to understanding how users can gradually deepen from the initial spatial exploration interest to the recognition of the cultural connotation of the block - since this key link has not been systematically integrated into the overall design theory system, it has become an urgent need to attack in the current design field. The problem of gram.

Another area worth exploring is community participation and inclusive design. Existing research literature on digital and participatory narrative shows that spatial narrative design can and should provide inclusive support for different groups. The research of Chatzitryfonos explores the participatory method of speculative narrative as a digital place. It combines creative workshops with augmented reality (AR) and cross-media design to invite residents to express their life experiences and visions through fictional stories, making the narrative a low-threshold and culturally resonant citizen. And the medium. The block space equipped with a variety of sensory feedback options and dynamic narrative settings can enhance social inclusiveness and enrich users' emotional experience.

Despite the above-mentioned progress, there are still a number of challenges in this area. The first challenge is that there is still a lack of research on how to systematically integrate narrative themes, plot sequences and spatial media; secondly, the long-term empirical data on the user behavior of spatial narrative blocks is still very limited; thirdly, the relevant design and evaluation are mostly based on short-term research, and there is a lack of post-use evaluation and quantity. Verification; Fourth, the interdisciplinary collaboration between the design community, the urban planning community and the cultural research community is still insufficient.

In general, the field of block transformation design is gradually shifting to more narrative and experiential methods, and spatial narrative theory provides important support for the construction of these design processes. Although the integration of these two methods is still in the early stage at this stage - especially in multi-stage narrative promotion - more research is still needed to build a structured framework, so as to systematically explain the operation mechanism of the process itself, such as narrative element extraction, theme establishment and path arrangement. If more interdisciplinary research can be carried out in the field of spatial narrative theory, it is expected to further explore its potential value in cultural inheritance, spatial experience and social participation.

In general, the contemporary research trend not only shows a broad prospect, but also has an urgent gap to be filled. The study of historical blocks and urban renewal provides important insights for environmental behavior and cultural inheritance, while spatial narrative theory provides an effective path for improving spatial readability and stimulating cultural identity. However, there is still a lack of systematic research that

integrates these two research directions into the same design paradigm. Building this kind of design paradigm can transform the historical block from a static material space to a dynamic environment with experience as the core, so as to continue to attract, stimulate and connect relevant stakeholders. In the future, if the design orientation is turned to a more participatory, narrative and sustainable spatial narrative process, this goal may be achieved.

In summary, the current research situation not only shows opportunities, but also exposes shortcomings. The study of block transformation provides important insights for environmental behavior and cultural inheritance, while spatial narrative theory provides an effective way to improve the quality of spatial experience and cultural identity. However, attempts to systematically integrate these two areas into a unified design strategy are still rare. Building such an integrated framework is expected to transform the historical block from a static physical space to a dynamic and experience-oriented environmental space, so as to continuously attract, stimulate and connect users. By focusing on multi-stage spatial narrative design, future block planning can develop in the direction of deeper participation experience, richer cultural interaction and stronger long-term sustainability.

1.3Conclusions to the first chapter

In summary, the research on the transformation and design of blocks under the theory of spatial narrative has now shown an integration trend that is gradually advancing but still in the development stage. The traditional research on the transformation of historical blocks mainly focuses on the repair of material space, the revival of commercial functions, the protection of architectural style and public safety, while the newer research has begun to introduce an open understanding of

"narrative space", "cultural memory", "event space" and "experience orientation". This change stems from the evolution of the design concept - from facility- and material-oriented to narrative and experience-oriented. At the same time, the technological development related to "intelligent block design" is also accelerating. Among them, the application of technologies such as GIS, spatial syntax, heat map, augmented reality and virtual reality has realized the spatial location and interactive participation of narrative elements. Although this brings new opportunities, it still faces challenges in terms of historical authenticity, sustainability, operation and maintenance, and quantitative verification.

Theoretically speaking, spatial narrative is a highly effective tool that can effectively stimulate users' cultural identity and spatial participation. Spatial narrative has been successfully implemented in the fields of landscape design, architectural design, urban space design, historical blocks and industrial heritage protection. In these scenarios, narrative elements such as themes, paths, nodes, media, plots and collaborative activities have been proven to effectively maintain the participation of users and help them focus on specific cultural purposes. Standard. However, the application of the concept of spatial narrative developed specifically for the literary field and implemented in the physical block environment is still a relatively unexplored field. The so-called concept of "multi-stage spatial narrative" - that is, the gradual division of the experience process into stages such as "exploration", "challenge" and "continuation" - although it has great potential, it is still an untapped field in the field of design experience. This study proposes a solution to this challenge.

Therefore, this holistic research method not only helps to explore the feasible path of spatial narrative in the block environment, but also

reveals the key factors that are crucial to the success of spatial narrative. The research results show that spatial narrative not only integrates culture into spatial activities, but also makes users feel that they have become an integral part of the cultural narrative of the block through narrative paths, node creation and public art intervention. Feedback data further confirms that setting up multiple narrative stages can make the spatial experience more rhythmic and goal-oriented, and at the same time bring users a sense of cultural identity and place belonging. It can be seen that spatial narrative is by no means a simple means of display - it is a design tool that can shape behavior patterns, promote community collaboration, and stimulate cultural innovative thinking.

From a macro perspective, this research helps to make progress at the theoretical basis and methodological levels of existing relevant research. At the theoretical level, this study clarifies the relationship between the cultural motivation mechanism behind the spatial narrative and the spatial experience, thus establishing a unique theoretical path between the narrative theme, event space and feedback design. At the methodological level, this study is not limited to conducting research only on spatial forms or analyzing behavior only by verifying prototypes, but combines literature review, narrative element extraction, spatial syntax, GIS analysis, questionnaire survey, prototype design and field verification to build a reproducible model, which can It is conveniently applied to optimize follow-up research.

In general, this study expands the theoretical framework and methodological dimensions of existing research. At the theoretical level, this study connects the cultural logic of spatial narrative with the experience characteristics of spatial design, so as to establish a clear evolution path from historical information recognition to spatial

experience feedback; at the methodological level, this study combines user-centered data collection with prototype verification to construct a possible The process of reapplain. This combination of theory and practice ensures that the proposed framework is not only rooted in conceptual understanding, but also has practical application value, and provides a highly valuable reference basis for designers and planners of historical blocks and urban blocks.

In summary, the integration of block transformation design and spatial narrative elements represents a very promising interdisciplinary development direction. This multi-stage spatial narrative strategy provides a structured model for transforming the block into an environment that can continuously stimulate the desire to explore, promote the spirit of collaboration, and strengthen the ability of community interaction. Future research should continue to promote the exploration of this method through larger-scale field research, long-term behavioral observation and interdisciplinary collaboration. By establishing a systematic evaluation model and a flexible and adaptable design process, block design is expected to develop towards a higher degree of interactivity, inclusiveness and sustainability - thus creating a comprehensive space that can not only provide cultural experience, but also realize educational enlightenment, interpersonal connection and spiritual inspiration.

SECTION II. THE DESIGN REOUIREMENTS FOR BLOCK RENOVATIONBASED ON SPATIAL NARRATIVE THEORY

2.1 The characteristics of districts under the theory of spatial narrative

The core goal of spatial narrative implementation is to optimize the cultural experience of the block through spatial layout. The concept of spatial narrative design is based on the functional zoning common in traditional historical blocks, covering the historical authenticity and spatial diversity in the physical spatial area. However, such blocks usually lack narrative and interactivity. The concept of spatial narrative implementation is to transform such blocks into "narrative blocks": users are no longer just users of space, but transform into active participants, looking for event associations in a series of narrative clues to be completed to overcome hidden nodes, and then promote the narrative process. This transformation will inject time-dimensional characteristics into the block, thus creating a continuous fluid experience - the block tour will be transformed into a rhythmic journey oriented by cultural cognition.

Another key element in the spatial narrative environment is the creation of narrative nodes. Narrative nodes are usually functional components in the environment, providing specific interactive tasks or activities, and are deployed in the environment as the core architecture that carries the entire narrative experience. These nodes aim to achieve their specific goals and challenges, such as historical event reproduction, teamwork puzzle solving, information retrieval, cultural experience, physical fitness test and environmental exploration. After completing these node tasks, users can get rewards such as cultural clues, virtual props or hidden stories, thus unlocking the next narrative stage in the environment. After introducing these nodes into the environment, they can be given a directional and structural framework, so that users can experience new elements in the environment and get instant feedback.

In terms of design methodology, nodes participating in narrative tasks can set different difficulty levels according to age and skill level, so

as to build a gradual experience path. For example, entry nodes can be set up near the main entrance to attract new visitors to the venue; and nodes involving physical operation or collaboration challenges can help improve the interface experience and teamwork ability. The final node is usually designed as the "ultimate narrative level", which carries symbolic meaning and a sense of accomplishment, thus giving users a complete psychological experience.

The path-based spatial design connects these nodes to each other, which constitutes another important supplementary element of the system. The narrative block is not laid out according to independent functional areas such as "children's area", "rest area" and "sports area", but adopts a narrative path design - users can complete the corresponding tasks in the exploration environment. The starting point of this path is the opening link of the story, assigning the initial task to the users who participate in the narrative activities; the middle section consists of the core task area composed of branch, intersection and ring design paths, giving users free movement space; the end point marks the final stage of this activity, representing the user to achieve the goal of victory. Route design not only acts as an entity guidance system, but also helps to coordinate the psychological rhythm. The route can build a "spatial guidance language" through ground markings, lights, sounds, color gradients and interactive art installations, so as to help users seamlessly switch between different activities without interrupting the immersive experience. This route structure helps users to independently build cognitive maps in the process of exploration, thus improving their psychological understanding of the route layout and narrative context.

The node allocation and design related to the narrative should also conform to the principle of situational adaptation. The design method

should be adapted based on natural conditions, terrain characteristics, available infrastructure and population characteristics, rather than using fixed templates. For example, in hilly terrain, you can use the difference in altitude to develop "climbing tasks" and design narrative nodes based on altitude; while in vegetation-covered areas, you can design "clue collection" or "hidden objects" tasks with the help of changes in light and shadow; in other areas, you can design "balanced time travel" around waterscape elements. Or "water puzzle" tasks. This design paradigm - "the place is the narrative" - can not only reduce the construction cost, but also improve the authenticity of the place and the interactivity with nature. Natural elements are endowed with narrative, thus transforming them into narrative elements, thus enhancing the uniqueness and recognition of the place. In this way, the landscape can become a part of the narrative, not just the background. In the multi-stage spatial narrative design, space can also be used as a medium for cultural transmission. The core of cultural integration is to integrate local history, folklore and symbolic images into the narrative structure: the narrative node can represent a fragment in the story, and the path reflects how these fragments are woven into a complete narrative. For example, in a venue with many legendary stories, developers can design narratives around tasks such as discovering mythological totems, restoring ancient crafts, and participating in festivals. The final level can guide users to culturally significant landmarks - such as ancient stone bridges, ancient trees, temples or sculptures - which not only mark the end of the narrative journey, but also symbolize the ultimate destination of the journey of exploration. Cultural integration not only deepens the connotation of the block theme, but also gives this experience education and social value. For children, this is a game-based way of learning that helps to enhance their understanding of other cultures; while at the community level, such

experiences can activate collective memory and promote social cohesion. The cultural theme integrated into this narrative experience helps to integrate community identity and social identity into all aspects of daily life.

In summary, from the perspective of spatial narrative theory, block design has four core spatial characteristics: defining narrative events with the systematic layout of nodes, building experience processes through path maps, expanding spatial diversity with the help of situational adaptability, and enhancing narrative experience through cultural integration. These four characteristics jointly build a multi-dimensional and multi-level experience structure, while integrating physical movement, psychological exploration and cultural cognition. The node is used to build a meaningful and goal-oriented experience framework. The path diagram ensures the consistency and fluency of the experience, the situational adaptability improves the realism of the experience, and the cultural integration deepens the connotation of the experience from the emotional and symbolic levels. This spatial organization model not only improves the readability and educational value of the block, but also marks a paradigm shift in the field of public space design - its core focus has shifted from functionality to experience, and from space itself to narrative. This model can transform "narrative" into a comprehensive activity in space - integrating exploration, socialization and cultural knowledge acquisition into a single activity. This concept ultimately laid a solid foundation for the implementation of spatial narrative strategies in blocks.

2.2. The adaptability of spatial narrative theory to districts

The fundamental reason why spatial narrative theory can be effectively applied to block transformation design is that there is a deep

structural fit between its theoretical core and the spatial attributes, cultural attributes and social attributes of the block. Events, history, memory and other non-material elements are originally fragmented, but logical narratives can combine these elements with the material environment to promote people's grasp and understanding of the overall environment. This theoretical mechanism just responds to the core dilemmas of fragmented cultural expression, single spatial experience, and spiritual weakening of the place in block transformation.

As an important carrier of urban culture, the block contains precious collective memories and urban characteristics. The spatial environment of the historical block includes not only the visible material environment such as architectural heritage, but also non-material elements such as culture and society, which together form the shaping of the space of the historical block and the construction of the urban image. Spatial narrative theory is widely applied to design practices related to representation, which helps to interpret and present the multi-level information and meaning contained in space.

First, the spatial narrative theory is highly adaptable to the material space carrier of the block. Blocks are composed of streets, buildings, squares, courtyards and other physical elements, which are not only functional spatial containers, but also narrative media that carry historical information and cultural significance. Spatial narrative theory can regard material space as a readable text. Through path organization, node setting and interface integration, material elements such as building elevation, paving materials, street scales, etc. can be transformed into narrative information transmission channels. Research shows that with the help of quantitative analysis tools such as spatial syntax and GIS, point pattern quantitative analysis of artificial narrative elements and event narrative

elements in blocks can be carried out to reveal the structural units of narrative space and its dynamic development, functional diversity and historical inheritance. The spatial narrative theory gives the material space of the block a dimension of cultural expression beyond the functional level.

Second, spatial narrative theory has a natural ability to interpret the time accumulation characteristics of blocks. In the long-term development process, the block has experienced the superposition and precipitation of different historical stages, forming a rich "time-space" intertwining relationship. Spatial narrative theory emphasizes the integration and interaction between time elements and spatial elements. It can connect historical events through linear narrative and establish a sense of rhythm of narrative. At the same time, cultural symbols of different time and space can be junctioned by collaged narratives to form multi-clue dialogues. This composite narrative model enables the architectural styles, spatial textures and cultural symbols of different historical periods in the block to be organized and presented in an orderly and coherent manner within the same spatial framework, so that the time depth of the block can be transformed into a rich level of spatial experience.

Third, the spatial narrative theory is highly compatible with the relevance of the events of the block. The block contains a large number of historical events, celebrity anecdotes, commercial memories and folk activities, which are often ignored or only symbolic in the traditional update model. Spatial narrative theory advocates taking event elements as the core content of the narrative, defining the event space through the systematic layout of narrative nodes, so that historical events and specific places can establish a clear spatial correspondence. Taking Changsha

Chaozong Street as an example, the researchers built a three-dimensional coupling evaluation framework that integrates physical space, functional business and historical events. It was found that the narrative intensity presented a spatial mode of "main axis aggregation and deep alley decay". The high-value nodes were concentrated in the main streets with high reachability, while branch lanes and functional areas were narrative effects. Can go down. This finding shows that spatial narrative theory can not only identify the cultural value of event space, but also reveal the deep law that historical assets need to be functionally activated to become effective narrative through quantitative diagnosis.

Fourth, spatial narrative theory has unique advantages in the emotional experience of the block and the spiritual construction of the place. The block is not only a physical space, but also an important field for residents and tourists to develop emotional identity and a sense of belonging to the place. Spatial narrative theory emphasizes the core position of "people" in space. Through the establishment of narrative themes, the arrangement of narrative paths and the creation of narrative scenes, abstract historical and cultural information is transformed into perceptible and experienced spatial language. The restoration research of the Chinese Baroque historical and cultural block in Harbin relies on the theory of spatial narrative to explore the inheritance path of the traditional style and cultural connotation of the block in the contemporary context. In the renewal of the waterfront historical landscape area, the researchers carried out practical method research from the three levels of narrative clue mining, spatial theme intention, and cultural expression translation, and organized event activities from the aspects of cultural space, economic space, environmental space and living space with Caoyun culture as the core. Spatial narrative theory provides a systematic design

path for blocks to move from material space renewal to cultural narrative regeneration.

Fifth, the spatial narrative theory is inherently consistent with the social participation and community identity of the neighborhood. The renewal of the block not only involves the improvement of the physical environment, but also the restructuring of the cultural identity and social relations of the community residents. Spatial narrative theory emphasizes the systematic integration of narrative media, allowing residents to perceive and participate in the construction of block narratives in daily life through the cultural translation of environmental elements such as public art, landscape facilities, visual guidance systems and paving interfaces. In the field of industrial heritage renewal, the updated design method from the perspective of narrative explores the main spirit, value inheritance and place atmosphere of industrial heritage from the three aspects of scene narrative, functional narrative and cultural narrative, and arouses the emotional resonance and cultural identity of participants with the unique value and characteristics of the heritage. The spatial narrative theory takes the scene translation of the cultural resources of the block as the basis for the symbiosis of culture and business, so that cultural expression, business vitality and community life form a virtuous cycle.

Sixth, the technical support system of spatial narrative theory and block transformation is becoming more and more mature. At present, spatial syntax, GIS geospatial analysis, POI nuclear density estimation, AHP-entropy value method and other methods have been widely used in the quantitative diagnosis of block narrative space. Based on the AHP-entropy value method and the spatial narrative suitability evaluation system of GIS suitability evaluation, the narrative elements are divided into criterion layer indicators and factor layer indicators, and the spatial

narrative suitability distribution characteristics are obtained through multi -factor superposition analysis. These technical means make up for the shortcomings of traditional qualitative analysis and map superposition, and provide stronger scientificity and accuracy for the application of spatial narrative theory in block transformation.

In summary, the applicability of spatial narrative theory to block transformation design is reflected in six core levels: material space carriers provide expression media for narrative, time layer characteristics provide content depth for narrative, event relevance provides structural framework for narrative, emotional experience needs provide value orientation for narrative, social The participation mechanism provides a practical basis for the narrative, and the quantitative analysis technology provides scientific support for the narrative. These six levels together constitute the adaptation system between spatial narrative theory and block transformation. The applicability of this theory is not only reflected in its ability to integrate the historical and cultural resources of the block, but also in its systematic method of transforming abstract cultural values into perceptible, experiential and participatory spatial experiences. The spatial narrative theory provides a new paradigm for transforming cultural connotations into spatial forms for the renewal of historical blocks. It organizes spatial sequences with cultural narrative as a clue, and relies on the redesign of spatial media to help shape the unique and unrepeatable cultural identity of the block.

Of course, the application of spatial narrative theory in block transformation still faces several challenges: the systematic integration method of narrative themes and spatial media still needs to be deepened; empirical cases of multi-stage narrative promotion are still relatively limited; post-use evaluation and long-term quantitative verification are

still insufficient; between the design community, urban planning and cultural research circles Interdisciplinary collaboration still needs to be strengthened. Future research should continue to promote the application exploration of spatial narrative theory in block transformation through larger-scale field research, long-term spatial behavior observation and interdisciplinary collaboration. By establishing a systematic evaluation model and a flexible and adaptable design process, block design is expected to develop towards a higher degree of cultural readability, experience and sustainability. This spatial organization model marks a paradigm shift in the field of public space design - its core focus shifts from functionality to experience, from space itself to narrative, transforms "narrative" into comprehensive activities in space, and integrates exploration, socialization and cultural knowledge acquisition into a single experience.

The fundamental reason why spatial narrative theory can be effectively applied to block transformation design is that there is a deep structural fit between its theoretical core and the spatial attributes, cultural attributes and social attributes of the block. Events, history, memory and other non-material elements are originally fragmented, but logical narratives can combine these elements with the material environment to promote people's grasp and understanding of the overall environment. This theoretical mechanism just responds to the core dilemmas of fragmented cultural expression, single spatial experience, and spiritual weakening of the place in block transformation.

As an important carrier of urban culture, the block contains precious collective memories and urban characteristics. The spatial environment of the historical block includes not only the visible material environment such as architectural heritage, but also non-material elements such as

culture and society, which together form the shaping of the space of the historical block and the construction of the urban image. Spatial narrative theory is widely applied to design practices related to representation, which helps to interpret and present the multi-level information and meaning contained in space.

First, the spatial narrative theory is highly adaptable to the material space carrier of the block. Blocks are composed of streets, buildings, squares, courtyards and other physical elements, which are not only functional spatial containers, but also narrative media that carry historical information and cultural significance. Spatial narrative theory can regard material space as a readable text. Through path organization, node setting and interface integration, material elements such as building elevation, paving materials, street scales, etc. can be transformed into narrative information transmission channels. Research shows that with the help of quantitative analysis tools such as spatial syntax and GIS, point pattern quantitative analysis of artificial narrative elements and event narrative elements in blocks can be carried out to reveal the structural units of narrative space and its dynamic development, functional diversity and historical inheritance. The spatial narrative theory gives the material space of the block a dimension of cultural expression beyond the functional level.

Second, spatial narrative theory has a natural ability to interpret the time accumulation characteristics of blocks. In the long-term development process, the block has experienced the superposition and precipitation of different historical stages, forming a rich "time-space" intertwining relationship. Spatial narrative theory emphasizes the integration and interaction between time elements and spatial elements. It can connect historical events through linear narrative and establish a

sense of rhythm of narrative. At the same time, cultural symbols of different time and space can be junctioned by collaged narratives to form multi-clue dialogues. This composite narrative model enables the architectural styles, spatial textures and cultural symbols of different historical periods in the block to be organized and presented in an orderly and coherent manner within the same spatial framework, so that the time depth of the block can be transformed into a rich level of spatial experience.

Third, the spatial narrative theory is highly compatible with the relevance of the events of the block. The block contains a large number of historical events, celebrity anecdotes, commercial memories and folk activities, which are often ignored or only symbolic in the traditional update model. Spatial narrative theory advocates taking event elements as the core content of the narrative, defining the event space through the systematic layout of narrative nodes, so that historical events and specific places can establish a clear spatial correspondence. Taking Changsha Chaozong Street as an example, the researchers built a three-dimensional coupling evaluation framework that integrates physical space, functional business and historical events. It was found that the narrative intensity presented a spatial mode of "main axis aggregation and deep alley decay". The high-value nodes were concentrated in the main streets with high reachability, while branch lanes and functional areas were narrative effects. Can go down. This finding shows that spatial narrative theory can not only identify the cultural value of event space, but also reveal the deep law that historical assets need to be functionally activated to become effective narrative through quantitative diagnosis.

Fourth, spatial narrative theory has unique advantages in the emotional experience of the block and the spiritual construction of the

place. The block is not only a physical space, but also an important field for residents and tourists to develop emotional identity and a sense of belonging to the place. Spatial narrative theory emphasizes the core position of "people" in space. Through the establishment of narrative themes, the arrangement of narrative paths and the creation of narrative scenes, abstract historical and cultural information is transformed into perceptible and experienced spatial language. The restoration research of the Chinese Baroque historical and cultural block in Harbin relies on the theory of spatial narrative to explore the inheritance path of the traditional style and cultural connotation of the block in the contemporary context. In the renewal of the waterfront historical landscape area, the researchers carried out practical method research from the three levels of narrative clue mining, spatial theme intention, and cultural expression translation, and organized event activities from the aspects of cultural space, economic space, environmental space and living space with Caoyun culture as the core. Spatial narrative theory provides a systematic design path for blocks to move from material space renewal to cultural narrative regeneration.

Fifth, the spatial narrative theory is inherently consistent with the social participation and community identity of the neighborhood. The renewal of the block not only involves the improvement of the physical environment, but also the restructuring of the cultural identity and social relations of the community residents. Spatial narrative theory emphasizes the systematic integration of narrative media, allowing residents to perceive and participate in the construction of block narratives in daily life through the cultural translation of environmental elements such as public art, landscape facilities, visual guidance systems and paving interfaces. In the field of industrial heritage renewal, the updated design

method from the perspective of narrative explores the main spirit, value inheritance and place atmosphere of industrial heritage from the three aspects of scene narrative, functional narrative and cultural narrative, and arouses the emotional resonance and cultural identity of participants with the unique value and characteristics of the heritage. The spatial narrative theory takes the scene translation of the cultural resources of the block as the basis for the symbiosis of culture and business, so that cultural expression, business vitality and community life form a virtuous cycle.

Sixth, the technical support system of spatial narrative theory and block transformation is becoming more and more mature. At present, spatial syntax, GIS geospatial analysis, POI nuclear density estimation, AHP-entropy value method and other methods have been widely used in the quantitative diagnosis of block narrative space. Based on the AHP-entropy value method and the spatial narrative suitability evaluation system of GIS suitability evaluation, the narrative elements are divided into criterion layer indicators and factor layer indicators, and the spatial narrative suitability distribution characteristics are obtained through multi -factor superposition analysis. These technical means make up for the shortcomings of traditional qualitative analysis and map superposition, and provide stronger scientificity and accuracy for the application of spatial narrative theory in block transformation.

In summary, the applicability of spatial narrative theory to block transformation design is reflected in six core levels: material space carriers provide expression media for narrative, time layer characteristics provide content depth for narrative, event relevance provides structural framework for narrative, emotional experience needs provide value orientation for narrative, social The participation mechanism provides a practical basis for the narrative, and the quantitative analysis technology

provides scientific support for the narrative. These six levels together constitute the adaptation system between spatial narrative theory and block transformation. The applicability of this theory is not only reflected in its ability to integrate the historical and cultural resources of the block, but also in its systematic method of transforming abstract cultural values into perceptible, experiential and participatory spatial experiences. The spatial narrative theory provides a new paradigm for transforming cultural connotations into spatial forms for the renewal of historical blocks. It organizes spatial sequences with cultural narrative as a clue, and relies on the redesign of spatial media to help shape the unique and unrepeatable cultural identity of the block.

Of course, the application of spatial narrative theory in block transformation still faces several challenges: the systematic integration method of narrative themes and spatial media still needs to be deepened; empirical cases of multi-stage narrative promotion are still relatively limited; post-use evaluation and long-term quantitative verification are still insufficient; between the design community, urban planning and cultural research circles Interdisciplinary collaboration still needs to be strengthened. Future research should continue to promote the application exploration of spatial narrative theory in block transformation through larger-scale field research, long-term spatial behavior observation and interdisciplinary collaboration. By establishing a systematic evaluation model and a flexible and adaptable design process, block design is expected to develop towards a higher degree of cultural readability, experience and sustainability. This spatial organization model marks a paradigm shift in the field of public space design - its core focus shifts from functionality to experience, from space itself to narrative, transforms "narrative" into comprehensive activities in space, and

integrates exploration, socialization and cultural knowledge acquisition into a single experience.

2.3. District design methods under spatial narrative theory

As a key element of urban life, blocks carry multiple functions, including historical inheritance, cultural experience, social interaction, leisure consumption and urban identity shaping. Traditionally, the design method of this kind of space is mainly based on the dimensions of functional partitioning and visual order. Its core goal has always been to create an urban space with reasonable layout, clear lines, clear boundaries and coherent style. However, this traditional design model often ignores the narrative and interactive dimensions, resulting in a spatial form that lacks cultural vitality in the city with a sense of order. With the changes in social structure and lifestyle over the years, the inherent defects of traditional design methods have become more and more prominent. The challenge facing contemporary design is to reactivate these urban spaces - not limited to the physical environment, but also to transform them into shared narrative experience spaces.

So far, block design has followed the functionalist philosophy, that is, each space corresponds to a specific function. Commercial streets, squares, walkways and historical buildings are equipped with standardized facilities - benches for rest, walkways for viewing, sculptures for viewing, and facades for taking photos. Although these facilities meet the functional needs, they are less likely to stimulate a deep cultural experience. Spatial experience is still at the passive level: although people use these spaces, they may not have narrative interactions with them. The end result is that many blocks have evolved into "visual landscapes" and/or "passing areas" in long-term practice, and their value comes more from commercial attractiveness than cultural

influence. The current challenge is that the design should not only meet the functional requirements, but also guide the spatial experience.

The concept of spatial narrative design has injected new vitality into block design. Spatial narrative is essentially a mechanism that integrates elements such as stories, plots, characters and scenes in narrative into non -narrative spatial scenes, aiming to improve the cultural readability and participation of space. Applying the concept of spatial narrative design to blocks can transform these spaces from simple functional areas to narrative platforms. Spatial narrative design introduces the concept of "story" in these environments, prompting users to play specific roles and have narrative experiences in the block, so as to explore, share and overcome challenges. This process essentially reshapes the interaction between human beings and block space.

Another key change brought about by spatial narrative in the field of block design is closely related to interactivity. In traditional design, interaction is usually limited to the observation level - for example, visual elements such as sculptures, fountains, viewing platforms, etc. allow users to observe, but do not necessarily involve actual behavioral participation. In contrast, spatial narrative realizes two-way interaction between space and users: space can respond to the user's behavior by introducing feedback mechanisms - such as adjusting the brightness of lighting during crowd activities, changing the sound effect according to the dynamics of the flow of people, or using augmented reality technology to let the viewer discover hidden historical information. This design gives space vitality and transforms it into a narrative interface, in which each action can generate a unique experience.

Spatial narrative design has also promoted the transformation of block design to a paradigm with experience as the core. At present, the

mainstream method of block design focuses on visual aesthetics and commercial efficiency, while the scheme of spatial narrative design focuses more on user experience. By building a multi-level spatial interactive experience, this kind of design encourages users to experience the space many times in a variety of ways according to time and occasion. For example, a square can have both leisure and reading functions during the day, and at night it can be transformed into a cultural theater through light narrative. This design concept ensures that the block is transformed from a single-purpose to a continuous activity system.

In addition, spatial narrative design can extend cultural expression to the block space. In traditional design, cultural representation is usually transmitted through static symbols such as sculptures and monuments; while in the spatial narrative environment, culture becomes the core component of the task system - cultural history and cultural heritage can be transformed into spatial tasks. For example, participants can participate in "cultural heritage exploration" activities by collecting digital seals on historical landmarks, experience festival theme tasks, or participate in group games to reconstruct traditional handicrafts. The ultimate goal of such activities is to guide participants to places of cultural significance - such as ancient bridges, ancient temples and ancient squares - so as to gain a sense of perfection in the experience and highlight the regional cultural characteristics. As a result, knowledge acquisition is transformed into an exploratory experience, and the interaction with culture is sublimated into a profound life experience.

The spatial narrative strategy can also enhance the social connection characteristics of neighborhoods. Although blocks provide opportunities for shared use of space, social interactions often occur naturally by chance, rather than deliberately. The spatial narrative method provides

the functional characteristics of promoting purposeful social interaction. Most narrative games deployed in the block contain elements of teamwork and joint problem solving, which allows strangers to meet by chance. Typical examples include puzzle challenges completed together in the square, step counting challenges in the park, or treasure hunts in social scenes. This kind of application can be called "social narrative".

In summary, the block design method from the perspective of spatial narrative theory can be summarized into five core links: first, the narrative theme is established - through the coupling of "geographical and cultural characteristics - specific events", the main clues, secondary clues and branch clues are distilled to form a cultural main line that dominates the whole situation; second, the narrative path Arrangement - take the main streets and alleys as the narrative axis, and adopt the composite model of linear narrative and collage narrative coexistence, and connect the theme subdivisions and key nodes in series; Third, narrative node creation - through the systematic layout of the entrance node, middle node, core node and exit node, it forms the spatial rhythm of "inherition and transfer"; the first Fourth, narrative media translation - transform abstract cultural information into perceptible and experienceable spatial language with the help of public art, paving, visual guidance, lighting, digital technology and other environmental elements; Fifth, empirical feedback optimization - adopt the "theoretical review - element extraction - spatial diagnosis - design translation - empirical feedback" The ring method, combined with spatial syntax, GIS analysis, POI nuclear density estimation and post-use evaluation, continuously optimizes the design strategy. The ultimate goal is to transform the block from a static physical space to a dynamic and experience-oriented narrative space, so as to continue to attract, stimulate and connect users, and realize the

coordinated development of cultural inheritance, spatial experience and social participation.

2.4Conclusions to the second chapter

The aforementioned analysis in this chapter shows that the design of narrative blocks has become an important shift in the discourse system of contemporary urban renewal. Its core meaning is that there is an essential difference between spatial narrative design and the traditional block design method - the latter only regards the block as a static container that carries historical relics, commercial activities and daily traffic; while spatial narrative design transforms the block into a dynamic and readable experience, which integrates time accumulation and events. Elements such as association, cultural memory and emotional identity. Traditional design methods focus on material space repair and commercial function revival, often creating places with historical appearance but lacking cultural resonance; spatial narrative design emphasizes narrative theme, path arrangement, node creation and media translation, transforming the block from "viewed object" to "readable, experienceable and participable" The narrative field.

In addition, the discussion on the path of creating historical blocks and public spaces shows that spatial narrative design has become an effective solution to many shortcomings of traditional updating methods. The previous functionalistic understanding of design - that is, prioritizing order, efficiency and aesthetics while ignoring narrative and interactivity - could easily lead to fragmentation of cultural expression, single spatial experience and weakening of the spirit of the place. Spatial narrative design subverts this perception, emphasizing the cultural main line, spatial rhythm, node feedback and experience. The function of block space has changed from a simple viewing platform and consumption

place to a narrative place that attracts users to explore, collaborate and participate. This change not only improves the quality of life of residents, but also provides a new dimension of community participation, cultural inheritance and local identity.

From the perspective of methodology, the achievement of spatial narrative is to provide a circular and adaptive design method: element extraction, theme establishment, plot construction, path arrangement, media translation and empirical feedback. This design method enables designers to test, adjust and optimize narrative interactions based on actual behavior and spatial experience, so as to ensure that these interactions always maintain dynamic characteristics. This behavior-based design and experience paradigm is the strategy urgently needed in the field of modern block renewal - it can more directly fit the human perception mechanism and organically combine material space design with cultural memory and psychological principles.

Conceptually speaking, this integration of space and narrative marks a more profound change in people's perception of block space. Spatial narrative replaces historical blocks and public spaces with interactive stories - in which nodes, paths and cultural symbols are combined to tell a story practiced by user activities. This is not only a more attractive space, but also a more meaningful space - it has the ability to stimulate curiosity, promote social interaction and enhance a sense of belonging.

In general, spatial narrative theory provides a systematic path from "material space renewal" to "cultural narrative regeneration" for block transformation design. Its value lies not only in improving the cultural readability and experience quality of the space, but also in integrating historical memory, community life and business vitality into a continuous meaning system. In the future, block design should further strengthen the

systematic integration of narrative themes and spatial media, deepen the empirical research of multi-stage narrative promotion, introduce post-use evaluation and long-term behavioral observation, and promote interdisciplinary collaboration between design, urban planning, cultural research and public management. By establishing a systematic evaluation model and a flexible and adaptable design process, block design is expected to develop towards a higher degree of cultural readability, interactivity, inclusiveness and sustainability, thus creating a comprehensive space that can not only carry historical memory but also stimulate social participation, cultural identity and spiritual belonging.

CHAPTER III. DEVELOPMENT OF DISTRICT RENOVATION PROJECTSBASED ON SPATIAL NARRATIVE THEORY

This chapter will discuss in depth how to apply spatial narrative theory to design blocks. For a long time, the design of the block has always taken into account functionality, aesthetic value and historical authenticity. The reason why blocks have long-term practical functions is that they provide space for residents, tourists and merchants to live, consume and pass. However, these designs still lack depth in how to establish emotional connections with users and influence their behavior. With the acceleration of the pace of modern life and the diversification of cultural consumption forms, people are increasingly aware of the urgent need to create more narrative and interactive block spaces, rather than just passive functions. In response to this challenge, the block transformation scheme designed based on the theory of spatial narrative effectively responds to this demand by transforming the block into a more hierarchical system.

The core conceptual paradigm of spatial narrative theory is to integrate narrative mechanism, participation and feedback loop into the non-narrative space environment, so as to improve participation and long-term active participation. Based on this perspective, the introduction of spatial narrative elements into the block design can transform the environment from a simple place equipped with commercial facilities and historical buildings to an experiential space with story experience and task completion as the core. With this narrative experience, users - especially residents, tourists and community merchants - are no longer just bystanders in this environment, but more like story participants and urban explorers. By completing narrative tasks, unlocking spatial nodes, and discovering hidden historical clues, they can enter this environment and experience the multi-level narrative process.

The design mode of this project is based on a narrative planning scheme that includes multiple stages, and the user experience is divided into three independent areas: exploration area, challenge area and continuation area. The exploration area aims to present the block environment to users and stimulate their interest; the challenge area significantly improves user participation through task-driven and collaborative gameplay; the continuation area relies on the reward mechanism and feedback mechanism to help users achieve long-term participation and promote their return and share experiences. The design follows the psychological theory of increasing participation and fits the core concept of experiencing rhythm in spatial design. This means that the block no longer presents a static environment, but transforms into a dynamic environment that can respond to user participation.

From the perspective of spatial design, this project takes the nodes representing "narrative events and tasks" as the core layout, which

constitute the main units in the narrative space structure. These nodes represent interactive tasks, physical activities and story fragments, respectively, and are distributed throughout the environment. The nodes are connected through paths and clues to jointly build a complete narrative environment and guide users to embark on an exploration journey. This node-oriented spatial structure improves the readability of the block and provides more experience opportunities by attracting participants of different ages and levels of ability. In addition, this design also integrates natural environmental elements, folklore and geographical identity of specific regions into the project content, so that this narrative environment is both complete and comprehensive - it not only provides cultural experience, but also conveys a complete geographical perception that fits the memory of the environment.

The development process of this project includes three core directions: spatial design, behavioral research and narrative design. The design dimension establishes spatial rationality through topographic research and dynamic line planning; the behavior dimension explores the user's interest points, behavioral characteristics and activity patterns through user behavior analysis and research; the narrative dimension improves user participation with the help of cultural symbols, plot sequences, node advanced systems and collaborative tasks. In addition, the introduction of digital media technologies such as augmented reality (AR) recognition, sensor-driven interaction and visualization can transform user operations into real-time feedback in the environment, thus enhancing immersion.

From the perspective of research, building blocks based on spatial narrative theory is not only a breakthrough in methodology, but also a cultural transformation in the field of block design. Taking "narrative"

and "readability" as the core platform is actually a reconstruction of the relationship between individuals and space, community and culture. By integrating activities, interactions and narrative clues into this kind of design, a new type of social space can be created - such a space can not only promote the exploration and growth of residents and tourists, but also enhance the emotional connection between families and communities. At its root, spatial narrative is not only a means of participation and promotion, but also a holistic design concept rooted in behavioral psychology, cultural memory and participatory culture.

The following chapters of this chapter will discuss the theoretical framework, spatial structure, node distribution and experience path of this project respectively. This work aims to combine theoretical cognition with design practice, and prove how the concept of spatial narrative fits with spatial terms and mechanisms, so as to finally build the basic framework for the realization of this project.

3.1. CONCEPT

The project design and implementation of building blocks based on spatial narrative theory not only needs to understand the working principle of the narrative mechanism, but also needs to grasp the interaction between space, behavior and experience. An effective narrative block cannot be achieved with just a creative insight or a technical concept, but comes from the results of interdisciplinary systematic thinking and collaborative design. Every step from design to implementation, no matter how small the details are, may have an important impact on the consistency, educational effectiveness and emotional resonance of such experiences.

In addition, it should be pointed out that one of the core values of spatial narrative design lies not only in its interest, innovation and cultural characteristics, but more importantly, it has the ability of continuous evolution and enrichment. In other words, every node, every device and every narrative unit in this space should play the role of a similar medium within itself, so as to provide the possibility for personal development - whether this development occurs in the individual resident, the family environment or the community cultural context. It provides important inspiration for block designers who want to carry out similar explorations in their own communities. The following will systematically sort out the practical experience of key spatial narrative design developed in this project.

1. Clarify the target audience and experience goals

The design of the spatial narrative environment needs to clarify the target audience and the experience goals to be achieved in the environment. Different audience groups (such as residents, tourists, merchants, retired workers, teenagers and children) have unique physiological characteristics and target demands. In order to deeply understand their participation habits and interest preferences, and then optimize the narrative experience, it is necessary to carry out observation, questionnaire survey and prototype testing. Take the "entrance area" scene as an example, the narrative activity "block narrative registration task" requires participants to scan the QR code, form a team, and choose personal exploration themes (regaively "industrial memory", "market life" and "cultural exploration" respectively). In this way, users can immediately achieve role immersion after entering the scene, so as to formulate personal goals and participation strategies. Role immersion can effectively help design activities that fit the specific psychological and

behavioral characteristics of the audience, rather than just including them in the category of ordinary sightseeing activities.

2. Establish a multidisciplinary collaboration mechanism

Building a narrative block requires teamwork in many fields such as landscape gardening, urban planning, architecture, cultural research, narrative, public art, interactive design and community governance. The early formation of an interdisciplinary team can ensure the scientificity and practicality of the project. Take the design of the "central square area" as an example, in which the "collaborative memory puzzle" is designed by behavioral psychologists, who provide professional advice for this collaborative project, aiming to promote communication and trust between parents and children and neighbors.

3. Ensure safety and accessibility standards

Safety is the primary consideration in all narrative environments. All nodes of participating tasks and interactive equipment should comply with global public space safety standards and use waterproof and non-slip materials. The area also needs to have a barrier-free design to facilitate the use of the elderly, children, the disabled and those with strollers. For example, in the waterscape area, the "Historical Trail Mission" is specially designed with low-slope anti-slip ground and audio and light signal prompts to ensure that the visually impaired can safely complete the crossing.

4. Combine the narrative mechanism with the spatial function

The functional and aesthetic value of space should not be disturbed by narrative elements, but should be helped by it. Seek a balance between narrative and practicality, so as to provide visitors with a comfortable experience and a pleasant feeling at the same time. Take the tea garden

area as an example, which has a "tea fragrance exploration" activity: visitors need to identify the varieties and aromas of different teas before resting in the shade, and then have an actual tea tasting experience. The activity organically combines knowledge acquisition with rest time, and transforms daily social habits into narrative experiences. The core goal of spatial narrative is to expand the dimension of experience, not to introduce competitive elements. Therefore, relevant activities should naturally fit in with the environment, so that visitors can have fun while acquiring knowledge.

5. Pay attention to local background and cultural integration

A successful narrative project should be relevant at both cultural and environmental levels. Integrating cultural elements into the space design of narrative activities can guide visitors to explore and understand their own cultural identity through experience. For example, there is a "cultural exploration task" in the entrance area, which requires visitors to search for hidden symbols related to regional stories in the murals; similarly, there is also a "tea ceremony inheritance task" in the tea garden area, which requires visitors to simulate the ancient tea-making process. In the historical block, you can set up "textile memory task", "old name tracking task" or "industrial heritage exploration task" to integrate local history, folklore and symbolic images into the narrative structure.

6..Implement interactive feedback and behavior tracking

Immediate and meaningful feedback is also crucial to maintaining participation. This can be achieved by introducing interactive elements, such as light sensors, sound and digital displays, to show visitors how their behavior affects them. Among them, the "Community Memory Corner" is a typical example: the "Memory Guard Mission" set up in this

area allows visitors to interact with old objects and virtual characters, including listening to stories, repairing memory fragments, and participating in small games to get cultural points. The giant screen shows the "cultural warmth index" of each team, and the comprehensive data is projected on the outdoor ranking list. In addition, the integrated feedback mechanism can provide relevant behavioral data (task completion rate, duration and return visit rate) for more accurate evaluation in the subsequent stage.

7. Design a multi-stage experiential space structure

The multi-stage experience design model provides a structural basis for the spatial narrative mechanism. This project is divided into three progressive stages: exploration, challenge and continuation. The project opens with the "exploration stage", and takes the "entrance area" as the carrier to introduce the task content and story background to the participants; while the "textile culture experience area and community memory area" constitute the "challenge stage", focusing on teamwork and knowledge acquisition, and finally reaching a climax through the "celebration ceremony" in the "central square" area. ——This ceremony symbolizes the control of one's own cultural emotions. A perfect guidance system is crucial to ensure a smooth visiting experience.

8. Build a clear guidance system and narrative path

The guide path can guide visitors between exhibition areas and build a logical and clear narrative vein. Visual guidance measures such as color -marked guidance routes set on the ground can further improve the practicality of the system. For example, visitors can visit along the route between the "Tea Garden and the Central Square", which passes through the "Road to Growth" - a colorful guide route that allows visitors to step

on a prompt mark every ten meters, thus turning the walking process into an exploration task. In the historical block, this path can be transformed into the "block memory road", connecting narrative nodes such as old factories, old brands, cultural walls and community gardens.

9. Maintenance and sustainable operation planning

The narrative space may be equipped with interactive devices that need to be maintained and updated regularly. The design stage should fully consider the maintainability of the equipment and the convenience of updating the content. There is a "sensory spray task" in the waterscape area, which will be updated according to the season to maintain freshness; while the cultural knowledge questions and answers in the "tea garden" and "community memory corner" are updated through the digital management platform. In addition, communities and schools can also participate in the renewal work, thus playing a role in building a "narrative ecology" - allowing residents to actively participate in the task contribution.

10. Carry out post-end evaluation and community feedback research

Post-evaluation after the project is put into use is crucial for assessing the social, educational and emotional impact of the project. To achieve this goal, methods such as questionnaires, interviews and behavioral studies can be used to assess the extent to which the block can promote the dissemination of relevant knowledge. For example, a questionnaire survey can be conducted to explore the degree of influence of the "Central Square Closing Ceremony" on the parent-child relationship, or the effect of the "Tea Garden Cultural Project" on the improvement of visitors' local cultural awareness, and other relevant

indicators. In addition, an opinion wall can also be set up to collect feedback on the block.

3.2GENERAL CONCLUSIONS

This study explores how to apply spatial narrative theory to block transformation design to create a cultural, interactive and experiential space. By building a complete theoretical framework and carrying out practical design projects, this study establishes a set of integrated methodologies to create multi-stage and experience-oriented narrative blocks, so as to stimulate users' sense of participation at the emotional, cognitive and social levels. Starting from conceptual theory, this paper gradually advances to applied design practice. It argues that spatial narrative is not only a form of cultural display, but also a design philosophy - a medium that can transform space into a medium to promote learning, narrative and social development.

The first part of this study reviews the current situation of block design and points out its main limitations. Traditional block design often focuses on material safety, visual attractiveness and basic functionality, but often ignores the narrative, educational and emotional dimensions of spatial experience. This kind of design lacks narrative coherence and depth of interaction, resulting in fragmented experience and difficult to stimulate long-term participation. With the rise of experiential economy and participatory design methods, spatial narrative has become an emerging design paradigm. By integrating narrative themes, path systems, node feedback and incentive mechanisms, spatial narratives can transform public and leisure spaces into dynamic interactive systems. This theoretical review lays the theoretical foundation for the practical framework built later in this paper.

The second part of this study focuses on methodological design, and comprehensively uses methods such as literature analysis, field observation, behavioral research and model prototype construction. The core of this methodology lies in the concept of "spatial behavior mapping" - that is, observing the user's movement trajectory, interactive behavior and emotional response in a specific environment, and transforming these behavior patterns into spatial logic. The research adopts a combination of quantitative and qualitative research path: on the one hand, it collects quantifiable data (such as traffic density, task completion rate and node dwell time), and on the other hand, it analyzes qualitative experience (such as emotional resonance and user feedback). This hybrid research method lays the scientific foundation for the design of multi-stage narrative experiences based on the principles of behavior and psychology.

The following chapters will deeply analyze the spatial layout and design characteristics of the spatial narrative environment. Research results show that successful narrative space depends on three key structural elements: narrative nodes, path-based spatial layout, and cultural integration. Through the careful arrangement of narrative nodes and narrative paths, narrative space can evolve from a series of independent areas to a continuous spatial journey. In the process of completing a series of tasks and challenges, users gradually experience the story vein embedded in space; while the integration of culture and situation further deepens this narrative experience, linking geographical identity with community memory and spatial behavior. In this way, users are no longer passive bystanders, but active participants who actively build meaning through movement and interaction.

When discussing the principles of public space design, this paper emphasizes that spatial narrative not only reshapes the physical logic of the block, but also redefines its social role. The public space, which used to be characterized by passive viewing, has now been reimagined as an environment with both interaction and participation. Spatial narrative encourages users to participate, collaborate and learn, and transforms public space into an experiential platform for the intersection of behavior, education and emotions. This study points out that spatial narrative, behavior guidance and multi-sensory interaction are the three core dimensions of designing meaningful experiences. Therefore, the well-designed narrative block is not only a leisure facility, but also a carrier of social education, cultural communication and community cohesion.

The third important contribution of this research is the development of a practical spatial narrative block project. The project verifies the effectiveness of the theoretical framework through real-scenario application. The block adopts a multi-stage experience structure, dividing the user's journey into three stages: exploration, challenge and continuation: the entrance area is used to introduce the story background and goal setting; the core experience area, cultural experience area and community memory area constitute the core challenge area to carry out interactive and collaborative tasks; the central square is used as the final celebration. Space symbolizes emotional closed loop and collective achievement. Each stage not only reflects the transformation of spatial function, but also echoes the psychological rhythm of curiosity, participation and satisfaction. In addition, the project integrates cultural learning elements (such as textile traditions and old-fashioned memories), family ties construction (such as collaborative tasks) and ecological awareness cultivation (such as water flow exploration tasks), making the

project go beyond simple entertainment functions and become a model for realizing social and cultural education through spatial narrative.

This study also summarizes ten key design and implementation principles distilled from practice: (1) clarify design goals and target user groups; (2) establish a multidisciplinary collaboration mechanism; (3) ensure safety and accessibility; (4) balance functionality and narrative; (5) integrate local cultural elements ; (6) Implement feedback mechanism and data tracking system; (7) Design multi-stage experiential space structure; (8) Optimize spatial dynamic line layout and visual guidance system; (9) Plan sustainable operation and maintenance programs; (10) Carry out post-evaluation and community participation activities.

These principles transform spatial narrative from a theoretical concept to a workable design methodology, providing a replicable framework for future projects. The emphasis on behavioral analysis, cultural background and iterative feedback reflects the macro trend of data-driven and people-oriented spatial design development.

In summary, this study builds a coherent design framework that integrates spatial narrative, behavioral motivation and cultural embedding. At the methodological level, this study proposes the cycle process of "research-design-testing-optimization", which is in line with contemporary experiential design practices. At the conceptual level, this study confirms that spatial narrative design can not only improve the quality of spatial experience, but also enhance its educational and social value.

Finally, this study concludes that the future block design should further expand the relationship between spatial narrative and social development. Narrative should not only be regarded as a means of

cultural display, but also as a medium to promote personal growth, cultural inheritance and community cohesion. By integrating interactive narrative, emotional participation and participatory learning, narrative blocks can become a bridge connecting human beings, nature and culture - a space where joy, creativity and learning coexist.

In this sense, the narrative block is not only a place to play, but also a dynamic narrative space, a public classroom, and a social catalyst to help achieve collective growth in the urban environment.

REFERENCES

[1]Junhao R ,Zhilong L .Research on the design strategy of natural museum exhibition space based on spatial narrative theory[J].Art and Performance Letters,2024

[2]Travis C .Imagined landscapes: geovisualizing Australian spatial narratives[J].Social & Cultural Geography,2017

[3]Yongli L .Construction and Evolutionary Analysis of the Knowledge Graph in the Theory of Architectural Space Narrative[J].Journal of Landscape Research,2025

[4]Sustainability Research; Reports from Tsinghua University Provide New Insights into Sustainability Research (Simulating Block-Level Urban Expansion for National Wide Cities)[J].Ecology Environment & Conservation,2017

[5]Xiaoqin D ,Xianbin S ,Jiangquan H , et al.A congestion bottleneck analysis model for tourist block street network[J].International Journal of Modeling, Simulation, and Scientific Computing,2020

[6]Nagorno-Karabakh residents can move into 25 rebuilt apartment blocks in coming days - Russian emergencies ministry[J].Interfax : Russia & CIS Military Newswire,2020

[7]Binghamton Man Sentenced to 20 Years in Eddie Block Gang Case[J].Department of Justice (DOJ) Documents / FIND,2017

[8]Di W ,Xing H ,Yangjun C , et al.An Investigation of the Quantitative Correlation between Urban Spatial Morphology Indicators and Block Wind Environment[J].Atmosphere,2021

[9]Fabiana S D T ,Costa N R ,Meri J S , et al.The impact of urban block typology on pollutant dispersion[J].Journal of Wind Engineering & Industrial Aerodynamics,2021

[10]CIS, BALTIC and international NEWS; Lundin, Gunvor JV relinquishes license to Lagansky block in Caspian[J].Interfax : Kazakhstan Oil & Gas Weekly,2018

[11]唐源琦.空间叙事理论及其视角下城市马拉松路径研究[D].华南理工大学,2023.DOI:10.27151/d.cnki.ghnlu.2023.000661.

[12]张露.基于空间叙事理论的南昌市洪都街区提质改造设计[D].湖南工业大学,2025

[13]李子涵.空间叙事理论下程阳八寨侗族民宿设计研究: 以侗月居民宿设计为例[D].广西科技大学,2025.

[14]孙怡婷.空间叙事理论下历史文化街区保护与更新策略研究——以太原南华门历史文化街区为例[D].大连理工大学,2025.

[15]赖慧莹.论基于空间叙事理论的松口古镇历史文化街区更新策略研究[D].广州美术学院,2024

[16]闫佳,丁军娜.基于空间叙事理论的城市历史街区更新设计研究——以济南商埠区为例[J].中外建筑,2023

[17]谷雨,鲁秋霜,张臣军,等.首尔商业街区空间叙事理论的应用研究——以弘大与圣水洞为例[J].建筑与文化,2025

[18]孙玮,赵欣,徐灵盈.空间叙事理论下的街区策展和场景营造路径研究——以上海市衡复风貌区为例[J].中国建筑装饰装修,2025

[19]魏寒宾,桑晓磊,朱莹.空间叙事与记忆重构——场所感理论视域下历史文化街区的保护与更新研究[J].房地产世界,2025

[20]申芮宁.基于空间叙事理论的豫南明港古镇中山街更新设计探研[D].郑州大学,2022

APPENDIX A





Yongqing Fang, Guangzhou





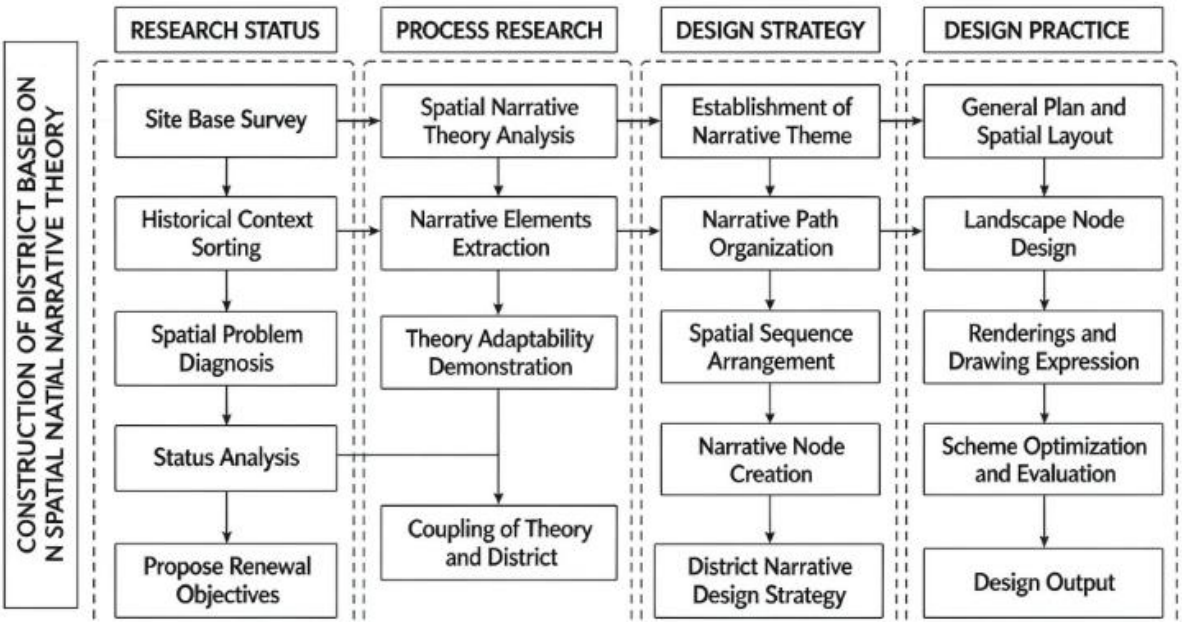
Xiaoxihu Historic District, Nanjing





Tianzifang Historic District, Shanghai

APPENDIX B



DECORATIVE PLANTS FOR HISTORIC DISTRICT

	Common name	*Latin name*	Photo	Height (m)	Diameter (m)
01	**Camphor Tree**	*Cinnamomum camphora*		20 – 30	2 – 3
Growth rate: medium-fast, annual growth of about 50–80 cm. Evergreen broadleaf canopy tree; prefers full sun but tolerates partial shade; adapts well to warm and humid climates of the Yangtze River Basin; flowering period is spring (April–May); maturity: 20–30 years to full size; strong drought and pollution tolerance once established; irrigation requirement: moderate, prefers deep, fertile, well-drained sandy loam.					
02	**Hackberry**	*Celtis sinensis*		15 – 20	1 – 2
Growth rate: medium, annual growth of about 40–60 cm. Deciduous shade tree; demands full sun, tolerates light side-shade; highly adaptable to cold, drought and poor soil; flowering period is March–April; maturity: 15–20 years; wind-resistant and pollution-tolerant; deep-rooted, low maintenance; irrigation requirement: low, suitable for street-side and courtyard planting in historic districts.					
03	**Sweet Osmanthus**	*Osmanthus fragrans*		3 – 8	0.5 – 1
Growth rate: slow, annual growth of about 20–30 cm. Evergreen small tree / large shrub; prefers full sun but tolerates semi-shade; likes warm and humid climate, not fully hardy in severe cold; flowering period is autumn (September–October), highly fragrant; maturity: 10–15 years; irrigation requirement: moderate, needs moist, fertile, well-drained slightly acidic soil; a classic courtyard fragrant tree in Jiangnan historic districts.					
04	**Heavenly Bamboo**	*Nandina domestica*		1 – 2	0.5 – 1
Growth rate: slow, annual growth of about 15–25 cm. Evergreen shrub; strongly shade-tolerant, avoids strong direct sun; likes warm and humid environment, fairly cold hardy; flowering period is May–July, with bright red persistent berries in winter; maturity: 3–5 years; irrigation requirement: moderate, prefers fertile, well-drained soil; ideal for courtyard corners and under-canopy planting in historic districts.					
05	**Bigleaf Hydrangea**	*Hydrangea macrophylla*		1 – 2	1 – 1.5
Growth rate: medium, annual growth of about 30–50 cm. Deciduous flowering shrub; prefers partial shade, dislikes strong summer sun; likes warm and humid climate, not drought tolerant; flowering period is June–August, flower color shifts with soil pH; maturity: 2–3 years; irrigation requirement: high, needs constantly moist, fertile, well-drained soil; suitable for pocket gardens and waterside node planting.					

APPENDIX C








京剧五旦
金生地寶


梅艺今辉


惠州李氏名师讲堂








琴清转瓦



