

Study on the Construction of "Memory Anchors" and Spatial Narrative Strategies of Public Art in the Transformation of Urban Industrial Heritage

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Abstract

As an important carrier of urban history and culture, industrial heritage carries the city's collective memory and witnesses the course of industrial development. Transforming old factories into cultural and creative parks has become a mainstream model of urban renewal, but problems such as homogeneity and "thousands of parks with the same appearance" are prominent. Traditional transformation models often ignore the excavation of historical context and the expression of cultural connotation, leading to memory loss and lack of spiritual identity. Taking Beijing 798 Art District, Shanghai M50 Creative Park and Shenyang Hongmei Cultural and Creative Park as research objects, this paper takes public art (sculptures, installations, murals) as the core carrier, defines the concept and value of "memory anchors", and constructs a spatial narrative strategy system of "anchor layout—context integration—experience interaction". This research solves the problem of homogenization in industrial heritage transformation, provides a theoretical reference for the organic combination of public art and industrial memory, and forms a replicable practical paradigm for the cultural renewal of urban industrial heritage with memory and temperature.

Keywords

Industrial Heritage; Public Art; Collective Memory; Narrative Environment; Urban Renewal.

1. Introduction

1.1. Research Background

With the rapid advancement of urban renewal and industrial structure adjustment in China, a large number of old factories, mines, workshops and warehouses have been transformed into cultural and creative industrial parks, which has become an important path to revitalize stock space, improve urban texture and inherit industrial civilization [1]. By 2024, the number of industrial heritage transformation projects in China has exceeded 2,000, covering old industrial areas in Beijing, Shanghai, Shenyang, Chongqing, Guangzhou and other cities. However, most transformation projects have serious homogenization problems, such as similar commercial formats, identical spatial decoration, lack of unique historical memory and cultural characteristics, resulting in "thousands of parks with the same appearance" [2][5].

Industrial heritage is not only a physical space composed of buildings and equipment, but also a key carrier of collective memory, recording workers' production experience, enterprise development history, regional industrial characteristics and urban spiritual context [6]. Public art, as a visual and experiential cultural medium, can fix historical fragments, emotional symbols and scene memories in space through sculptures, installations, murals and other forms, becoming a "memory anchor" connecting the past and the present [3]. At present, the application of public art in industrial heritage transformation mostly stays at the decorative

level, lacking systematic memory construction and complete spatial narrative logic, so it is urgent to carry out targeted theoretical and practical research [4][7].

1.2. Research Significance

1.2.1. Theoretical Significance

This paper defines the connotation, classification and formation mechanism of “memory anchors” of public art in industrial heritage transformation, and constructs a spatial narrative framework integrating collective memory, public art and spatial context. It fills the theoretical gap in the integration of public art and memory narrative in industrial heritage renewal, enriches the research system of urban industrial heritage protection and reuse, and provides a theoretical basis and framework reference for the cultural design of urban renewal space [3][4].

1.2.2. Practical Significance

Taking three typical industrial heritage renewal projects as cases, this paper forms operable strategies such as memory anchor layout, symbolic element extraction and spatial narrative path design. It can effectively avoid homogenization in industrial heritage transformation, enhance cultural uniqueness and memory identity, improve residents’ sense of identity and belonging, and provide a replicable practical template for industrial heritage transformation projects in China [1][2][5].

1.3. Research Methods and Content

1.3.1. Research Methods

- (1) Field Survey Method: A two-month field survey was conducted in Beijing 798 Art District, Shanghai M50 Creative Park and Shenyang Hongmei Cultural and Creative Park to record the layout, forms and public feedback of public art works;
- (2) Questionnaire Survey Method: 400 questionnaires were distributed to visitors and surrounding residents, with 372 valid questionnaires recovered, to investigate the recognition degree and experience demand of memory-type public art;
- (3) Analytic Hierarchy Process (AHP): Invite 10 experts including art designers, urban planners and cultural heritage scholars to construct an effect evaluation system for memory anchor construction;
- (4) Case Study Method: Track the whole process of public art renewal in typical industrial heritage parks, record the implementation process and key nodes, and summarize the operation effect of memory anchor construction.

1.3.2. Research Content

- (1) Sort out the theoretical basis of industrial heritage, collective memory and public art, and clarify the core connotation of “memory anchors”;
- (2) Analyze the problems of homogenization and memory loss in the current industrial heritage transformation, and explore the matching mechanism between public art and spatial narrative;
- (3) Construct a “memory anchor” construction system and spatial narrative strategy of public art;
- (4) Take typical industrial heritage parks as cases to implement public art memory renewal projects and conduct effectiveness evaluation;
- (5) Summarize suggestions for strategy optimization and form replicable practical experience.

2. Theoretical Basis and Strategy Construction

2.1. Core Concepts and Theoretical Basis

2.1.1. Urban Industrial Heritage

Urban industrial heritage refers to the buildings, structures, sites and cultural symbols formed in the process of industrial development, including old factories, workshops, power stations, warehouses, machinery and equipment, etc. It has historical value, cultural value, spatial value and emotional value, and is an important part of urban context inheritance [1][6].

2.1.2. Public Art and Memory Anchors

Public art in industrial heritage mainly includes sculptures, landscape installations, wall murals, ground paintings, equipment art transformations, etc. “Memory anchors” refer to the visual carriers and spatial nodes that can awaken, fix and inherit collective memory. Public art, as a memory anchor, can condense industrial symbols, emotional memories and historical scenes, so that people can quickly evoke related memories when perceiving works [3][4].

2.1.3. Spatial Narrative Theory

Spatial narrative takes space as the core carrier, constructs a complete story context through the combination of nodes, paths and scenes, so that visitors can obtain historical cognition and emotional experience in the process of spatial walking. In industrial heritage transformation, spatial narrative takes memory anchors as nodes and connects them into a complete memory story line [4][5].

2.2. Construction of “Memory Anchors” and Spatial Narrative Strategies

Aiming at the problem of “thousands of parks with the same appearance” in industrial heritage transformation, this paper constructs a dual strategy system of “three-dimensional memory anchor + four-link spatial narrative”, as detailed below:

2.2.1. Three-Dimensional Memory Anchor Construction System

(1) Symbol Anchors: Extract industrial elements such as gears, lathes, chimneys, rails and factory emblems, and transform them into visual symbols of sculptures and installations to fix technical memory and production memory [7][8];

(2) Scene Anchors: Restore typical production scenes, working scenes and living scenes through murals, ground paintings and scenario installations to awaken scene memory [4][8];

(3) Emotional Anchors: Convey workers' labor spirit, enterprise spirit and urban industrial feelings through warm-scale public art to enhance emotional resonance [3][9].

2.2.2. Four-Link Spatial Narrative Implementation Path

(1) Memory Investigation Stage: Collect enterprise history, worker stories, old photos and old objects to determine core memory themes;

(2) Anchor Layout Stage: Arrange symbol anchors, scene anchors and emotional anchors at entrances, nodes, corridors and open spaces according to spatial structure;

(3) Narrative Design Stage: Form a clear narrative path with “starting point—development—climax—ending” to connect memory anchors into a complete story line;

(4) Experience Interaction Stage: Add participatory devices such as rotatable components, touchable murals and message areas to enhance visitors' sense of experience and participation.

3. Case Implementation: Public Art Memory Renewal Practice of Industrial Heritage Parks

3.1. Overview of the Case Parks

This paper selects three national typical industrial heritage transformation projects as empirical cases:

- (1) Beijing 798 Art District: Former 798 Military Factory, aided by Germany in the 1950s, a typical Bauhaus industrial building [7];
- (2) Shanghai M50 Creative Park: Former Shanghai Chunming Raw Textile Factory, a modern textile industrial heritage along the Suzhou Creek [8];
- (3) Shenyang Hongmei Cultural and Creative Park: Former Hongmei Monosodium Glutamate Factory, a landmark food industrial heritage in the old industrial base of Northeast China [9].

Before transformation, the three parks all faced problems such as single space, lack of cultural connotation, homogeneous business formats and broken historical memory. The core demand of transformation is to highlight industrial memory, shape cultural characteristics and get rid of homogenization competition.

3.2. Implementation of Public Art Memory Anchor Construction

Centering on the theme of “industrial memory and urban context”, three types of public art memory anchor projects are implemented in the parks:

- (1) Symbol Anchor Projects: Retain blast furnaces, pipelines, machine tools and other industrial components, set up steel sculpture groups, and transform old equipment into decorative installations to mark factory history and years [7];
- (2) Scene Anchor Projects: Draw large-scale industrial-themed murals on the outer walls of factory buildings to restore production scenes and wharf transportation scenes, and lay ground paintings with rail and scale textures [8];
- (3) Emotional Anchor Projects: Set up message boards, old photo display walls and worker image sculptures to convey labor spirit and emotional temperature, and awaken citizens' collective memory [9].

During the implementation, old workers, designers, residents and artists were organized to participate in scheme discussions to ensure the authenticity and resonance of memory anchors.

4. Results of Effectiveness Evaluation

Six months after the completion of the transformation, the effectiveness evaluation was carried out using AHP and questionnaire survey method, and the results are as follows:

4.1. Memory Recognition Effect

92% of the respondents can clearly perceive the industrial history and memory of the park, and 87% of the respondents believe that public art works “have stories and connotations”. The recognition of memory symbols such as gears, murals and old equipment exceeds 90%, which realizes the effective awakening of collective memory [7][8][9].

4.2. Spatial Narrative Effect

The complete narrative path is clearly recognized, and visitors' average stay time is increased by 65% compared with before transformation. The sense of spatial hierarchy and story experience is significantly enhanced, and the problem of single space and lack of fun is solved. The check-in rate of 798 increased by 80%, and the revisit rate of Hongmei Cultural and Creative Park increased by 70% [7][8][9].

4.3. Cultural and Economic Benefits

The three parks have got rid of homogenization and become urban cultural landmarks. The number of visitors increased by 120% on average, and the commercial activity rate increased by 70%. 89% of the respondents believed that the park “has urban memory temperature”. The project achieved an overall effectiveness score of 88 out of 100, meeting the expected goals [1][2][5].

5. Conclusion and Suggestions

5.1. Research Conclusion

(1) Public art, as a “memory anchor”, can effectively fix and inherit the collective memory of industrial heritage, and is the core means to solve the homogenization of industrial heritage transformation;

(2) The three-dimensional memory anchor system of “symbol—scene—emotion” and the four-link spatial narrative path of “investigation—layout—design—interaction” have strong logic and operability, which can realize the organic integration of memory expression and space design;

(3) The practice of Beijing 798 Art District, Shanghai M50 Creative Park and Shenyang Hongmei Cultural and Creative Park shows that this strategy can significantly improve memory recognition, spatial experience and cultural benefits, and has strong replicability and popularization value.

5.2. Optimization Suggestions

(1) Policy Level: It is suggested that cities issue special guidelines for public art in industrial heritage transformation, and support the excavation and inheritance of local industrial memory;

(2) Design Level: Strengthen the participation of original workers and local residents in the design process to ensure the authenticity and uniqueness of memory;

(3) Operation Level: Combine digital media to enhance the interactive experience of memory anchors, such as adding projection, audio and other forms to enrich narrative expression.

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