

Research on Activation, Utilization and Construction of Celebrity Residences in Shenyang During the Republican Period

Naiqun Liu *

Liaoning Communication University, Shenyang, Liaoning 110000, China

* Corresponding author: Naiqun Liu

Abstract

As the political, military and cultural center of Northeast China during the Republican Period, Shenyang preserves a large number of celebrity residences of military and political figures of the Fengxi Clique. These buildings are important carriers of regional modern historical culture and architectural art. At present, the Republican Period celebrity residences in Shenyang generally suffer from insufficient protection, single spatial function, traditional exhibition methods, low digitalization level and lack of long-term operation mechanism. Guided by historical building protection, cultural inheritance and urban renewal, this paper systematically sorts out the resource distribution, architectural characteristics and multiple values of Republican Period celebrity residences in Shenyang. Focusing on innovative means such as VR immersive experience, digital restoration and scene construction, it constructs an activation and utilization system of “protection first, digital empowerment, function regeneration, cultural tourism integration and long-term operation”. It also puts forward construction strategies and implementation paths suitable for Shenyang’s regional climate and cultural characteristics. The research aims to promote the transformation of Republican Period buildings from “static protection” to “dynamic inheritance”, realize the coordinated development of historical heritage protection, cultural value communication and cultural industry cultivation, and provide theoretical reference and practical reference for the activation and utilization of historical and cultural resources in old industrial cities.

Keywords

Republican Period Architecture; VR Experience; Activation and Utilization; Cultural Inheritance; Historical District; Urban Renewal.

1. Introduction

1.1. Research Background

Against the background of high-quality urban development and sustainable urban organic renewal, the protection and activation of historical buildings have become important contents to enhance urban cultural connotation and strengthen cultural confidence[1]. As a national famous historical and cultural city, Shenyang preserves a number of celebrity residences from the Republican Period represented by Zhang’s Shuai Mansion, Tang Yulin Residence, Sun Lichen Residence, etc. These buildings have witnessed major historical events such as the rule of the Fengxi Clique and the Northeast Flag Replacement, and possess significant historical, artistic and social values[2].

With the rapid development of digital technology, VR, AR, digital restoration and other technologies have provided new paths for the activation of historical buildings[3]. However, at present, the Republican Period celebrity residences in Shenyang are still mainly used for traditional exhibition, office work or left idle, with problems such as insufficient experience,

shallow cultural excavation, inadequate scientific and technological empowerment and lack of long-term mechanism[4][5]. Under this background, it is of great practical significance to carry out research on the activation and utilization of Republican Period celebrity residences and promote the in-depth integration of VR experience, activation and utilization, and cultural inheritance.

1.2. Research Purpose and Significance

1.2.1. Research Purpose

Systematically sort out the resource characteristics and protection and utilization status of Republican Period celebrity residences in Shenyang; analyze the prominent dilemmas and restrictive factors of current activation and utilization; construct a digital activation and scene construction model based on VR experience; put forward implementable and popularizable activation strategies and long-term operation mechanisms; promote the coordinated development of historical building protection, cultural inheritance and urban renewal.

1.2.2. Research Significance

Theoretical significance: Enrich the theoretical system of digital protection of historical buildings, activation and utilization of cultural heritage, and integration of culture and tourism, and improve the theory of historical building construction in cold regions[6]. Practical significance: Provide technical paths and scheme references for the protection, renovation, renewal and operation of Republican Period celebrity residences in Shenyang, and assist in the construction of a famous historical and cultural city[7]. Cultural significance: Promote the dynamic inheritance of Republican Period history and culture, architectural art and regional characteristics, and enhance urban cultural identification and cohesion.

1.3. Research Content and Methods

1.3.1. Research Content

Analysis of resource characteristics and values of Republican Period celebrity residences in Shenyang; current situation and dilemmas of protection and activation; digital activation and construction methods based on VR experience; activation and utilization modes and spatial construction strategies; long-term operation and guarantee mechanism.

1.3.2. Research Methods

Literature research method, field investigation method, case analysis method, interdisciplinary research method, induction and deduction method.

1.3.3. Analysis of Resource Characteristics and Values of Republican Period Celebrity Residences in Shenyang

2. Resource Overview and Distribution

Republican Period celebrity residences in Shenyang are mainly concentrated in Heping District, Shenhe District and Dadong District, most of which are residences of warlords and military and political officials of the Fengxi Clique. Representative buildings include Zhang's Shuai Mansion, Tang Yulin Residence, Sun Lichen Residence, Wu Junsheng Residence, Zhang Shouyi Residence, etc.

2.1. Architectural Art Characteristics

1. Significant Chinese-Western integrated style, combining Chinese courtyards, brick carvings, wooden structures with European columns, arches, iron art and sloped roofs;
2. Courtyard layout with axis symmetry and rigorous spatial order, reflecting the noble residential form;
3. Thick walls, large lighting and closed courtyards to adapt to Shenyang's cold climate;

4. Exquisite decoration and exquisite craftsmanship, with stained glass, cement carvings and iron railings as typical characteristics of the times.

2.2. Core Values

2.2.1. Historical Value:

Witnessing the modern social changes and important historical events in Northeast China, it is a physical witness of the development history of modern Shenyang.

2.2.2. Artistic Value:

Representing the highest level of modern architectural art in Northeast China, it is a typical example of the integration of Chinese and Western architectural cultures.

2.2.3. Cultural Value:

Carrying urban memory and regional cultural identity, it is an important spatial carrier of cultural inheritance.

2.2.4. Social Value:

Transformable into public cultural spaces, cultural tourism experience venues and cultural and creative industry platforms to improve urban livability and attractiveness[8][9].

3. Current Situation and Dilemmas of Activation and Utilization of Republican Period Celebrity Residences in Shenyang

3.1. Existing Utilization Modes

3.1.1. Museum Exhibition Mode:

Represented by Zhang's Shuai Mansion, combining original display and exhibition;

3.1.2. Office Use Mode:

Some residences are used as offices for government organs and enterprises;

3.1.3. Cultural and Artistic Space:

A few buildings are transformed into exhibition halls and cultural and creative spaces;

3.1.4. Idle and to be Renewed:

Some buildings are in disrepair with lagging protection and utilization.

3.2. Main Dilemmas

3.2.1. Real Pressure on Protection and Renovation:

Building aging, wooden structure damage, wall weathering, weak waterproofing, insufficient professional renovation and funds;

3.2.2. Disconnection between Functions and Modern Needs:

Spatial pattern, fire protection, barrier-free and equipment supporting fail to meet modern use requirements;

3.2.3. Traditional Exhibition and Experience Methods:

Mainly graphic display panels with insufficient interaction and immersive experience;

3.2.4. Insufficient Digital Empowerment:

Few applications of VR/AR virtual restoration, immersive experience and digital archiving;

3.2.5. Weak Cultural Excavation and IP Development:

Fragmented interpretation of historical stories, personal deeds and architectural skills, insufficient cultivation of cultural and creative industries and business formats;

3.2.6. Lack of Long-term Operation Mechanism:

Over-reliance on financial investment, imperfect market-oriented operation and multi-participation mechanism.

4. Construction of Activation and Utilization System of Republican Period Celebrity Residences Based on VR Experience

4.1. Core Concept of Activation and Utilization

On the premise of protection first, restoration to the original state and minimum intervention, with the goals of digital empowerment, scene regeneration, function adaptation, cultural inheritance and long-term operation, realize the transformation from “static protection” to “dynamic inheritance”.

4.2. Core Role of VR Technology in Activation

Virtual restoration: High-precision restoration of the original appearance of buildings, indoor patterns and historical furnishings;

Immersive experience: Creating immersive scenes of time travel to the Republican Period, mansion life and historical events;

Cultural narration: Spreading history and culture through interactive explanations, virtual characters and plot interpretation;

Protective exhibition: Reducing human flow damage to cultural relics and balancing protection and utilization;

Global communication: Supporting online VR tours and breaking through time and space restrictions.

4.3. Four-Dimensional Integrated Activation System

Physical space activation: Repair and reinforcement, style restoration, landscape regeneration and function optimization;

Digital scene activation: VR restoration, immersive experience, AR navigation, digital cultural museums;

Cultural tourism industry activation: Cultural and creative development, study tours, thematic exhibitions, immersive performances;

Mechanism guarantee activation: Policy support, fund guarantee, technical support, long-term operation.

5. Activation and Construction Strategies of Republican Period Celebrity Residences

5.1. Protection, Renovation and Authenticity Construction

Adhere to restoration to the original state, retain building facades, structures, textures and characteristic components; repair with traditional materials and techniques, strictly control renovation intensity and maintain the integrity of historical styles.

5.2. Spatial Renewal and Landscape Environment Construction

Optimize courtyard spatial organization, repair courtyard greening, paving and sketches; add aging-friendly and barrier-free facilities; implant Republican Period characteristic landscape sketches to improve environmental quality and place sense of belonging.

5.3. VR Immersive Experience Scene Construction

VR virtual restoration: Restore the original appearance and historical space of buildings;

Historical situation immersion: Reproduce living, etiquette and deliberation scenes in the Republican Period;

Historical event interpretation: Immersive experience of key historical events;

Architectural art interaction: Disassemble and display brick carving, wooden structure, iron art and other crafts;

Online digital cultural museum: All-weather VR tour and cultural communication.

5.4. Cultural Tourism Integration and IP Development

Dig IPs of historical figures and events, develop cultural and creative products, study courses, thematic exhibitions and immersive script experiences; build Republican Period cultural experience blocks and form characteristic cultural tourism brands.

5.5. Long-term Operation and Guarantee Mechanism

Construct a diversified mechanism of government guidance, professional operation, social participation and market operation; establish a closed-loop system of fund guarantee, talent support, supervision and evaluation, and dynamic optimization to achieve sustainable operation.

6. Conclusion

Republican Period celebrity residences in Shenyang are highly valuable historical and cultural resources and important carriers of urban context inheritance and urban renewal.

The current activation and utilization face prominent problems such as insufficient protection, single function, low digitalization level, shallow cultural excavation and weak operation mechanism.

The digital activation, scene construction, cultural tourism integration and long-term operation mode with VR experience as the core is an effective path to solve the dilemmas.

Activation and construction should adhere to the equal emphasis on protection first, digital empowerment, function regeneration and cultural inheritance, and form an implementation strategy and mechanism system in line with Shenyang's regional characteristics.

The research results can provide reference for the activation and utilization of historical buildings, cultural industry cultivation and urban organic renewal in Shenyang and similar old industrial cities.

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