



Research on Landscape Design of Tongbai Mountain Rock Art Site Based on Heritage Corridor Construction

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Abstract. Suizhou Tongbai Mountain rock art has a very high value of prehistoric culture and regional culture research, which is of great significance to the traceability of human culture. However, due to natural damage and man-made destruction, the current survival status of rock art is worrying and urgently needs rescue protection. Therefore, the research will investigate the Tongbai Mountain rock art site from the perspective of heritage corridors, then integrate data and analysis results based on relevant data to carry out landscape activation design. Specifically, the corresponding theoretical verification and design practice are discussed in two ways: “spatial planning and dynamic inheritance”, with a view to promoting the protection and development of rock art cultural heritage.

Keywords: Rock art; Ruins landscape; Heritage corridor; Activation design

1 Introduction

Rock Art has the characteristics of ancient history, culture, economy, aesthetics and so on, and is the cultural remains of the early human society. As a world cultural heritage, rock art are constantly being worn out due to environmental changes and human activities brought about by the rapid development of industrialization and urbanization. At the same time, due to population loss, spatial degradation and lack of industrial functions, desertification, fading, damage, loss and other phenomena often occur in some regions with rock art resources, resulting in the continuous loss of valuable historical and social information carried by this art [1]. Certain cultural protection and dissemination measures are needed to preserve, restore and protect artistic monuments for future generations [2]. At the academic level, with the deepening of research and practice on site protection theories, heritage corridor theory has gradually integrated with landscape design, becoming a relatively novel research perspective.

Based on the above background, this paper takes the rock arts of Tongbai Mountain in Suizhou as the research object, combines the heritage corridor theory, introduces relevant activation design methods, so as to analyze the significance and measures of landscape design of rock art sites.

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2 Value Analysis of Rock Art Site Activation Design Based on Heritage Corridor Theory

2.1 Concept of Ruins Landscape and Theory of Heritage Corridor

"Ruins landscape" refers to architectural sites or site sites that have witnessed important historical events or recorded relevant historical information, but are now abandoned or have lost their original function [3]. It is a kind of achievement left by the natural environment as the carrier, but also one of the important forms of historical and cultural heritage protection and inheritance, with unique artistic value and research value. Heritage Corridor is a regional conceptual approach to heritage protection originating in the United States in the 1980s, corresponding to the concept of "green corridor", which has the advantages of inclusiveness in both heritage protection and development and cross-learning from related disciplines.

2.2 The Significance of Heritage Corridor Theory to Rock Art Site Design

This paper believes that through the concepts of cultural protection and green corridor construction in the heritage corridor theory and data analysis of the current situation of specific resources, certain targeted spatial protection strategies for sites can be proposed, which generally start from the comprehensive benefits of emphasizing the protection of regional ecosystem, the value of tourism development, and the planning of economic and cultural innovation [4-6]. This mode of mutual penetration and organic integration can not only realize the coordinated development of rock artting culture and regional economy, but also inject inexhaustible impetus into the sustainable development of site landscape. It can be seen that the "activation design" of rock art sites, as an overall elastic design and moderate renewal means of cultural elements, coincides with the key point of protection planning in the heritage corridor theory.

2.3 The Concrete Way of Activating Design of Rock Art Site

(a) The composition and cultural analysis of landscape space of rock art site. Based on site location conditions, the present situation of site landscape composition is analyzed, and the site landscape space is constructed by the steps of "rescue protection, reasonable management and innovative utilization", so that the design process can be followed by rules.

(b) Zoning management of rock art site landscape. For rock artting sites with high historical value and high site integrity, it is necessary to carry out some non-interventional protection and repair measures. Semi-interventional protection, renovation and construction of landscape space with important historical value and low site integrity; Interventional protection and reconstruction of rock art sites with low historical value and serious damage degree should be carried out.

3 Landscape Spatial Status Analysis of Tongbai Mountain Rock Art Site

3.1 Regional Climatic Conditions

Tongbai Mountain rock arts are the general name of the cave rock arts in Hubei and Henan provinces on the north and south sides of Tongbai Mountain, which belongs to the ancient cultural remains of Shennong Tribe. The region is located in the Qinling Mountains - Huaihe River area, the climate is in the north subtropical, four distinct seasons, abundant rainfall. Among them, the climate is relatively mild, with an average of 14.9°C to 15.9°C throughout the year. Overall, the geographical climate is suitable for living and tourism.

3.2 Status Quo of Rock Art Sites

Hubei cave rock art are mostly distributed in Suizhou and Zaoyang areas along the Suizao Corridor. In recent years, more than 40 rock arts have been discovered in and around the Tongbai Mountain area, with a distribution area of about 40 square kilometers, mostly concentrated in the gully line. The graphic style is mainly based on the abstract composition of circular cavities.

3.3 Analysis of Landscape Elements

In 2022, we conducted several on-site investigations on the existing space and environment of Tongbai Mountain rock art (see Figure 1). Combined with semi-structured interviews, questionnaires and other methods to collect relevant information for analysis. It focuses on four parts: social cognition of rock art, landscape environment of ruins, cultural landscape facilities, basic supporting facilities and traffic road network structure. The above satisfaction and importance were compared, and a total of 242 valid questionnaires were collected from visitors and surrounding villagers.



Fig. 1. Location Overview and Survey Site Survey Map(Picture Source: Photographed by the Author)

First of all, according to the relevant data obtained from the questionnaire, the importance and satisfaction of the surrounding residents to the landscape of the Tongbai Mountain rock art site were analyzed (Figure 2). The food and beverage supply, social services, traffic coherence and traffic convenience fall in the first quadrant; the fourth quadrant is protection measures, appearance attraction, interactive experience, living environment. It can be seen that compared with other sites, the traffic road conditions of the Tongbai Mountain rock art site have certain obvious advantages, which are mainly concentrated on the main road of the site. Among them, the highway has basically achieved hardened full coverage, and visitors and surrounding villagers are more satisfied with the main traffic network structure.

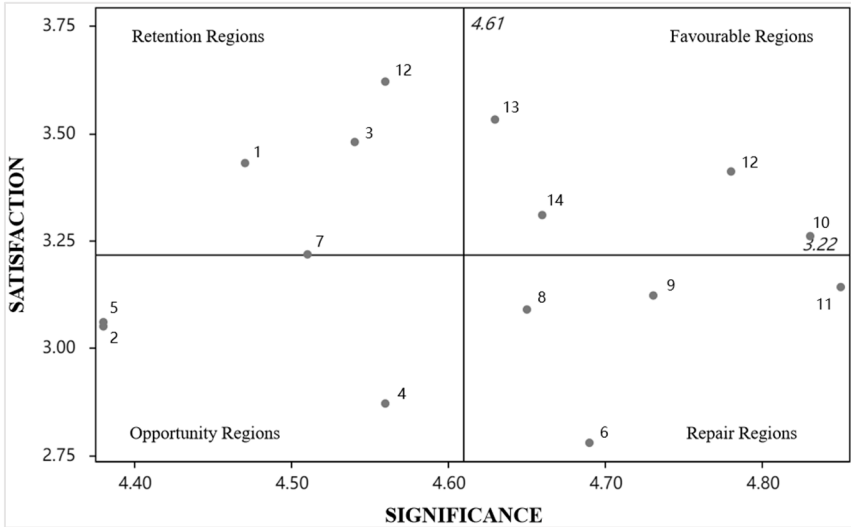


Fig. 2. IPA Analysis of the Importance and Satisfaction of Tongbai Mountain Rock Art Site(Picture Source: the Author Homemade)

4 Landscape Protection and Activation Path Analysis of Tongbai Mountain Rock Art Site

4.1 Spatial Planning: Establish Resource Protection System and Create Hierarchical Landscape Layout

According to the density distribution of the rock art site in Tongbai Mountain, it is divided into three levels, namely, the core protection layer, the protection extension layer and the heritage outer layer with the regional ecosystem protection as the core point. Among them, the highly dense rock art site area is the core protection layer of heritage, which mainly protects and optimizes the repair method of rock art itself. The low-density rock art site area is set as the protection extension layer, supporting the corresponding cultural infrastructure and corridor construction to promote its economic and cultural innovation. The rest of the rock art site area is set as the heritage outer

layer, excavating its tourism development value in the natural landscape space and supporting cultural tourism experience projects. The aim is to promote the integration of local culture and tourism by promoting the coordinated development of the rock art cultural heritage and the ecological landscape (as shown in Figure 3). The specific methods of specific planning and layout are as follows:

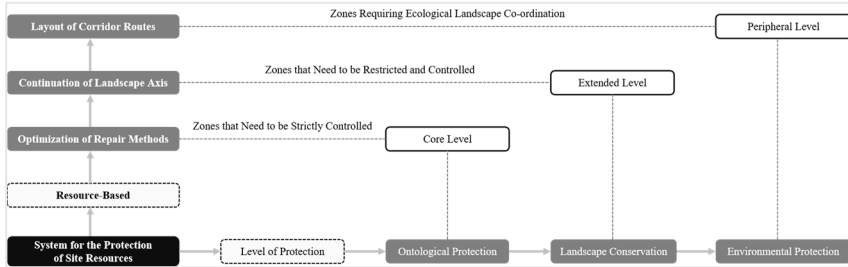


Fig. 3. Site Resource Protection Planning Analysis Diagram(Picture Source: the Author Home-made)

(a)Core protection layer: based on ontology protection, optimize the repair method of rock art sites. It is mainly used for non-interventional protection and repair, semi-interventional protection and interventional protection and repair.

(b)Protection extension layer: based on style protection, continue the landscape corridor space. First of all, the development axis of Tongbai Mountain rock art site corridor is continued, the ornamental site landscape is taken as the linear basic condition of the corridor, and non-interventional protection measures are adopted to form a continuous interface, so as to integrate it with the surrounding site environment.[7]

(c)Heritage outer layer: to ecological protection, systematic layout of corridor routes. Based on the construction of the top frame of the corridor, the walking system, interpretation system and greenway system are laid out (as shown in Figure 4). The walking system of Tongbai Mountain rock art site landscape is rationally planned by corridor nodes, and has the characteristics of walking, and its circulation road realizes the diversification of traffic modes.



Fig. 4. Landscape Distribution of Tongbai Mountain Rock Art Site(Picture Source: the Author Homemade)

4.2 Dynamic Inheritance: Improve the Heritage Corridor Model and Promote the Sustainable Development of Rock Art Sites

(a) Government-led, resource integration. First of all, we should break through the regional restrictions, integrate the rich tourism resources of the counties in the Baishan heritage corridor, enhance the cultural connotation of the landscape of Tongbai Mountain rock art site, and enhance the tourism competitiveness. Secondly, various types of rock art corridors are used to enrich the display forms of rock art in Tongbai Mountain, so as to enhance the attraction of tourists and promote the sustainable development of rock art site protection.

(b) Cooperative development and joint participation. In order to ensure the authenticity and integrity of the site in the process of the active display of the site landscape, it is necessary to participate and cooperate with all kinds of staff. On the basis of the relevant cooperation mechanism, combined with the actual development requirements of the village, the tourism development plan and publicity strategy are jointly formulated, multi-functional, multi-formats and multi-benefit clusters are carried out, and complementary tourism product lines are formed to enhance the comprehensive value of cultural tourism.

(c) Multiple display, spiritual inheritance. The activation design of rock art sites based on heritage corridors can greatly help people to have a deeper understanding of the excellent core of rock art culture. The rock art corridor mode is different from the common way of single protection and display of historical relics, but breaks through the inherent mode of traditional cultural relics protection, takes the ancient art form of rock art as an activation element, integrates modern design, and carries out diversified display with different landscape construction in the corridor space with different functions, and has considerable freedom and flexibility in cultural display and dissemination.

5 Summary

From the perspective of heritage corridor, this paper studies the activation design of the landscape of the rock art site of Tongbai Mountain, taking into account cultural relic protection, multiple display and tourism development, guides the rock art of Tongbai Mountain from single protection to multi-dimensional development protection, and explores a sustainable protection and development mode of the rock art cultural heritage.

The cost study uses landscape design methods in the strategy to solve a series of practical problems in the space of rock art sites, so that the value of rock art culture can be highlighted and continued. It is hoped that through this exploration, the value of the rock art culture of Tongbai Mountain can be developed to some extent in the future, and at the same time, it can provide useful reference for the landscape design of rock art sites with similar backgrounds.

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