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ENHANCING CONTEMPORARY DESIGN STRATEGIES FOR STREET ENVIRONMENTS IN XICHEHE, CHINA'S HISTORIC TOWN

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A field survey was conducted on the Chinese historical town of Xichehe in western Hunan to explore the dimensions and aesthetics of street space and reveal design strategies for the revival of a historical town using the method of environmental psychology, in terms of traditional street roads, boundaries, zones, nodes, and landmarks. The survey found that street space plays a crucial role as an important public activity area in residential areas, directly related to the quality of life of residents. To improve the living environment and health of the town space, this study selected six streets in Xichehe Township and examined the influence of human behavior on the layout and vitality revival of the historic town from the perspective of street environment perception according to the method of American professor Kevin Lynch.

Keywords: *traditional villages, street space design, vitality assessment, optimization strategies, Xichehe Town*

INTRODUCTION

Since the beginning of the twenty-first century, China's economic and social development has advanced by leaps and bounds, and a new wave of urban renewal has swept across the land. In this unprecedented reform movement, historical towns and cities have encountered unprecedented impacts and challenges: some historical towns and cities have disregarded their historical heritage and extensively demolished and rebuilt; some have caused damages due to insufficient understanding despite their intention to protect them [1]; while others have severed the cultural relics from their environment and made them lose their intrinsic value. In the face of these problems, scholars at home and abroad have put forward various theories and methods for the conservation and revitalization of historic towns. However, due to the geographical and humanistic differences between different historic towns, their conservation and revitalization methods vary. Currently, most of the literature research focuses on natural environment planning and still lacks sufficient attention on how to coordinate the relationship between the daily behavior of residents and the conservation of historic towns.



PURPOSE

This paper attempts to explore the potential connection between human behavior and the protection and development of ancient towns from the perspective of environmental perception, using the town of "XiChe River" in Xiangxi Autonomous Prefecture as an example. The aim is to develop a design strategy in the built environment by interpreting the behavioral and psychological patterns of residents [2].

RESULTS AND DISCUSSION

The theory of environmental perception focuses on the psychology and behavior of individuals and groups in a specific environment, emphasizing the individual and the collective. By objectively analyzing the psychological laws behind behaviors and the interactive influences between behaviors, psychology, and the environment, we can better understand how human behaviors contribute to the vitality of ancient towns. In this paper, based on Kevin Lynch's theory of overall perception of urban form, we conduct perceptual psychological design for the five street elements - roads, boundaries, zones [3], nodes, and markers. In traditional street design, the five elements are not only a simple classification based on experience but also a design carrier for the designer to act as a component that can be researched and modularized in the design transformation.

This article uses Dongping Street as a reference. In traditional street design. Running from west to east across Liangting Bridge, Dongping Street is the longest and flattest street in Xiche Town, located on the east side running north to south. It extends approximately one kilometer in length from the Eight Saints Palace in the north to the Temple of Gods in the south, with a width of about three meters, serving as a concentrated residential area for merchants in "XiChe River" Town. Based on Professor Kevin Lynch's theory of holistic perception, within the overall context of such streets, the presentation of the streets shapes the blocks, connecting different nodes of each street. These connections between nodes can be segmented into various roads, while the boundaries alongside the streets can enclose blocks, and landmarks indicate the core points within the blocks. It is through the comprehensive arrangement and interaction of these perceptual units that various street sceneries are formed and continue to be inherited and sustained.

Spatial layout of the village. From an overall spatial layout perspective, the ancient town is situated in the south of Longshan County in western Hunan, originating from the Horizontal Stream and Cat's Cave Stream, which boast rich water sources and dense bamboo forests. Nestled between two big mountains, it neighbors Laifeng County to the north, Yongshun County to the east, and borders with Baoding County to the south. Positioned at the confluence of the Hongyan River and Mengxi River, it forms a "Y" shape at the downstream of Wufeng Mountain, with two tributaries running through it. The riverbank naturally divides into six ancient streets: Dongping Street, Xin Street, Dingzi Street, Wanzi Street, Xiahe Street, and Pozi Street. Dating back to the Qing Dynasty, there are two ancient pavilions and a rainbow bridge (only one of which remains). Carefully arranged ancient shops and overhanging buildings flank the town of "XiChe River" alongside the river, reflecting the picturesque beauty of "XiChe River" Township [4].



The environmental landscape of ancient towns. The landscape pattern of Xichehe Town also follows the structural layout of landscape ecology. As part of the corridor landscape, the Xiche River traverses the entire Xiche Town area and has played a crucial role in species migration, energy flow, and information transfer since the ancient town prospered as a commercial port in the Han Dynasty. At the same time, the Xiche River continues as the spatial carrier of the ancient town with great significance. Serving as a water and land transit point for the “XiChe River” to enter the Sichuan River via Youshui, it has gradually transitioned from an economic function of transport to a function closely related to the quality of life. Upgrading the design elements of street space and improving the street environment along the Xiche River will enhance the quality of life for town residents and the public space environment, thereby improving the image of tourism and enhancing the livelihood of residents [5]. Following the Xiangxi Regional Tourism Construction Plan Environmental Enhancement and Improvement Project in 2016, the Xiche River section of the Youhe River Basin has undergone transformation (Figure 1-2 illustrates a comparison of 2005 and 2024 for the town of “XiChe River”). The design project involved widening the riverbanks and channels, effectively implementing peripheral greening, and enriching the landscape space. The “XiChe River” has been transformed into a central hub of the ancient town’s landscape, serving as a focal point for revitalization and vitality.



Fig.1. Townof Wash Creek
Landscape 2005



Fig.2 The Town of Wash Creek's
Transformed 2024 Landscape
Scenario

CONCLUSIONS

Next, the authors will continue to explore the relationship between human and environmental aesthetics from the level of human cognition, utilizing the Gestalt theory along with the three major constitutive relationships of landscape, design, and aesthetics to examine the relationship between the figure and ground of space. The protection and revival of the spatial layout of ancient towns represent a process of continuous exploration and long-term advancement. Addressing how to achieve efficient, harmonious, and sustainable development of historical ancient towns amid the challenge of rapid urban economic development is a key issue that necessitates



further in-depth research and analysis. Positioned as a valuable resource containing rich historical and cultural landscapes, the ancient town holds a crucial position in modern society. It serves not only as a critical area for preserving regional historical and cultural information and showcasing regional historical landscape features but also as one of the essential resources for capitalizing on the city's characteristic advantages. The protection and development of the countryside require an approach from the perspective of environmental perception, combined with the analysis of human behavior, to explore methods for protection and measures to stimulate its vitality and potential for revival.

REFERENCES

1. Xia H., Jiao S., He S. Street Space Vitality Evaluation and Optimization Strategy Based on Health Perspective - Taking Xizi Community of Zhuzhou City as an Example. (eds.) A New Idea for Starting Point of the Silk Road: Urban and Rural Design for Human: Proceedings of the 14th International Conference on Environment-Behavior Studies (EBRA 2020). Hunan University, 2020. P. 1104-1111.
2. Zhao, C. 'PSPL Survey: The Evaluation Method for Quality of Public Space and Public Life —The Study on Jan Gehl's Theory and Method for Public Space Design (Part 3), *Chinese landscape architecture*, V. 28.201, 2012. p. 34.
3. Liu, P., Zeng, C. and Liu, R. 'Environmental adaptation of traditional Chinese settlement patterns and its landscape gene mapping'. *Habitat International*, V. 135, 2023. p. 102808.
4. 凯文·林奇.城市意象[M]. 华夏出版社. 2017.
5. 芦原义信,尹培桐译.街道的美学[M]. 天津: 百花文艺出版社. 2006.

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УДОСКОНАЛЕННЯ СУЧАСНИХ СТРАТЕГІЙ ДИЗАЙНУ ДЛЯ ВУЛИЧНОГО СЕРЕДОВИЩА У СІЧЕХЕ, ІСТОРИЧНОМУ МІСТІ КИТАЮ

Польове дослідження було проведено в китайському історичному місті Січехе на заході Хунань, щоб дослідити розміри та естетику вуличного простору та виявити стратегії дизайну для відродження історичного міста за допомогою методу екологічної психології, з точки зору традиційних вуличних доріг, кордонів, зони, вузлів та орієнтирів. Опитування показало, що вуличний простір відіграє вирішальну роль як важлива зона громадської діяльності в житлових районах, яка безпосередньо пов'язана з якістю життя мешканців. Щоб покращити життєве середовище та здоров'я міського простору, в цьому дослідженні було обрано шість вулиць у містечку Січехе та вивчено вплив людської поведінки на планування та відродження життєдіяльності історичного міста з точки зору сприйняття вуличного середовища відповідно до методу американського професору Кевіна Лінча.

Ключові слова: традиційні села, дизайн вуличного простору, оцінка життєздатності, стратегії оптимізації, місто Січехе.