

Research on the Protection and Development of Ancient Town Cultural Landscape Based on "Four State" Elements: Illustrated by the Example of Qikou

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Abstract—With the deepening of the research on the connotation of cultural heritage and human geography, cultural landscape takes landscape as a cultural product, integrates and blends cultural and natural heritage to explore the cultural value behind its material landscape. Qikou ancient town is a typical traditional settlement with homomorphism of mountain and water veins. Its cultural accumulation and natural landscape play an important role in its development. Therefore, this paper will combine the material and cultural elements of Qikou ancient town to analyze the composition of the cultural landscape of the ancient town, and explore the protection and utilization of the cultural landscape of Qikou ancient town from the four aspects of ecology, form, cultural form and business form, so as to provide effective strategies for the development of the ancient town.

Keywords—Four states, cultural landscape, ancient town, sustainable development.

I. INTRODUCTION

THE ancient town generally refers to a town with rich cultural relics and important historical value. As a carrier, the ancient town breeds a unique and rich material and non-material culture, which is a unique tourism resource. At present, the protection and development of ancient towns mainly start from the protection of historical and cultural heritage and tourism development of ancient towns. On the one hand, the existing material and cultural heritage is only concerned from the perspective of humanity, and the value of natural environment associated with it is ignored. On the other hand, the protection of immaterial culture is isolated, and the influence of natural characteristics is not traced back. In 1992, the United Nations World Heritage Committee put forward the concept of "cultural landscape", which organically integrates human elements with nature and emphasizes the overall unity of all elements [1]. Cultural landscape has broadened the types of historical heritage, so digging into the value connotation of cultural landscape of ancient towns will provide a new way for the protection and development of ancient towns. By discussing the cultural landscape resources and value characteristics of Qikou ancient town in Linxian County, this paper analyzes the current situation of its cultural landscape and explores how to protect and utilize it, and puts forward strategies from the four aspects of ecology, form, cultural form and business form, so as to provide protection and development strategies for the cultural landscape of Qikou ancient town.

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II. CULTURAL LANDSCAPE PROTECTION UNDER THE "FOUR STATES" ELEMENTS

A. Connotation of "Four States" in Ancient Towns

a. Ecological Environment

Ecological environment includes geology and hydrology, soil, climate and biological factors. It constrains and guides its physical space and regional culture. The ecological environment inhibits the occurrence of natural disasters to a certain extent and has a protective effect on the ancient town. Plant elements can regulate climate, conserve water and stabilize soil. Soil types and characteristics, climate characteristics, hydrological characteristics are the direct factors of natural disasters such as mountain torrents and debris flows.

b. Form

The form is the spatial embodiment of all material entities in the ancient town, carrying the history, culture and industrial development of the ancient town. The spatial form base of ancient town is restricted by natural ecological elements and interfered by human behavior. It includes the landscape environment, topography and landform that the ancient town relies on at the macro level; spatial streets, settlement texture at the meso-level and roads, alleys and architectural landscape at the micro-level.

c. Cultural Type

In the historical development of ancient towns, cultural type is constantly precipitation, regional and unique, which is an important embodiment of the connotation of ancient towns, and also an important factor to create the heterogeneity of ancient towns. Ancient towns usually have a long history and unique functional characteristics, and have accumulated rich cultural values in the process of development. The ancient town needs to pay attention to the continuous excavation, protection, inheritance and utilization of culture in the process of protection.

d. Formats

Business formats are the source of vitality for the development of ancient towns. Under the trend of tourism development in ancient towns, the composition of business forms has become the key to the promotion of ancient towns. The proper development of the ancient town's industry needs to

be based on the in-depth excavation of the ancient town's regional culture, improve the composition of the ancient town's business form, and form a reasonable industrial support system.

B. Concept and Elements of Cultural Landscape

In 1992, the World Heritage Committee formally promulgated the Convention on the Protection of the World Cultural and Natural Heritage, which officially included the concept of "cultural landscape" into the category of heritage [2]. Cultural landscape is a comprehensive landscape bearing, which includes the physical landscape and the regional cultural characteristics carried by the physical landscape [3]. The introduction of the concept of cultural landscape extends the landscape from physical space to virtual space, and the research content changes from a single material space to an integral landscape value including the integration of immaterial elements, and the single value to multi-level value is transformed and expanded (Fig. 1).

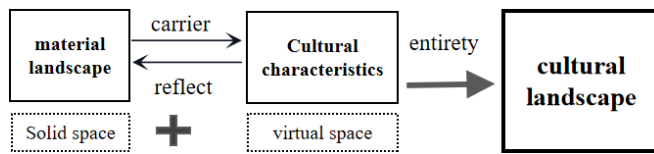


Fig. 1 Composition of cultural landscape

The elements of the ancient town's "cultural landscape" can be summarized as material elements and non-material elements. The material elements undertake the carrier functions through the material entities, including the natural environment and landscape entities that the ancient town relies on. It also includes the overall pattern, spatial texture, street pattern and architectural features of the ancient town formed under the influence of history and humanity. Material elements are the external expression and formal representation of cultural landscape. Intangible elements endow cultural characteristics through virtual space, which is the spiritual driving force for the development and evolution of ancient towns, including historical culture, folk customs, traditional skills and industrial culture. Intangible elements are the value connotation of cultural landscape, which provides spiritual guidance for cultural landscape.

a. Material Element

The material elements of ancient town cultural landscape are mainly natural environment and human space. The natural environment includes natural elements such as landform, hydrology, soil and vegetation, which is the material base for the construction of ancient towns. The natural environment bears the function of ecological barrier, and also implies the characteristics of the relationship between man and nature. The humanistic space is the bearing platform of the ancient town's humanistic behavior. The spatial pattern characteristics of the ancient town settlements are closely related to the landscape, reflecting "nature human"; space texture is the living and living space feature that people show in their constant creation; and, the pattern of streets and alleys and the architectural style and

features are the embodiment of people's adaptability.

b. Immaterial Element

The immaterial elements are the cultural connotation and spiritual basis of the ancient town. The unique cultural context of the ancient town in the process of historical evolution includes the wisdom crystallization of culture, art, society and other aspects. It is the continuation of people's behavior culture and has specific humanistic memory. Historical culture often embodies value belief and moral ethics. Folk customs are records of people's life behavior in the historical process. Traditional skills show people's survival needs and special skills under the influence of environmental factors.

C. Composition of the Relationship between "four states" Elements and Cultural Landscape

The ecological environment, spatial form, cultural and industrial formats are important elements for the protection and utilization of cultural landscape in ancient towns [4]. The "four states" are interrelated with the cultural landscape of the ancient town (Fig. 2). Ecology provides the basic background for the formation of cultural landscape in ancient towns, and the ecological environment is also the resource base for the form, cultural form and business form. The spatial form is the space carrier of the cultural landscape, which also carries the cultural and industrial forms; cultural style is the connotation of ancient town cultural landscape, affecting the form and form of business; and, the business form provides vitality for the development of the cultural landscape of the ancient town, and also provides energy power in the development process of the ancient town.

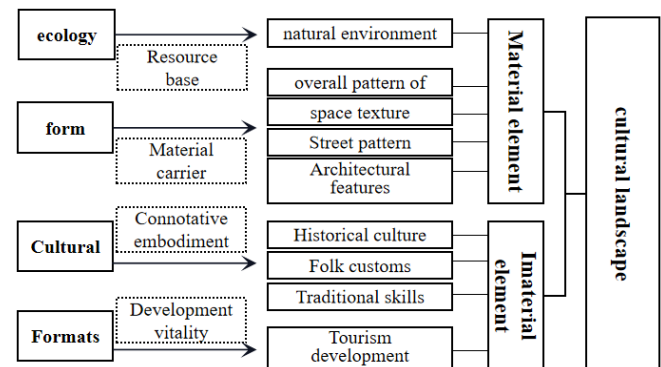


Fig. 2 The relationship between "four states" and cultural landscape

III. THE RESEARCH OBJECT

This paper takes Qikou ancient town in Linxian County as the research object. Qikou ancient town is an organic historical town on the Loess Plateau where people live in harmony with nature. Qikou arose because of the Yellow River, and then declined because of the rise of the railway. Tourism in the ancient town began in the 1990s. Unique natural resources and rich humanities provide an abundant cultural landscape for Qikou ancient town, but the consideration of a single factor, which only pays attention to the material composition of the landscape, makes the ancient town's cultural landscape is still

facing some problems in ecological protection, form continuation, cultural mining, industrial upgrading and other aspects. Soil and water loss in the Loess Plateau has threatened the material form of rural settlements. The relationship between geographical conditions and human landscape is not fully considered, which results that the resource characteristics are not fully highlighted. The separation of humanistic folk custom and natural elements makes the spread of humanistic tradition weak. Therefore, it is necessary to integrate the resources of Qikou into cultural landscape, and develop the ancient town from the protection and utilization of cultural landscape.

A. Environmental Background

a. The Natural Environment

Qikou Ancient Town is located in the exposed bedrock area of hills along the Yellow River in the middle of Shanxi Shaanxi

Grand Canyon. The continuation of Luliang Mountain to the Yellow River Canyon has formed a typical loess hilly and gully landform due to the influence of geomancy erosion and geological structure. Due to the crustal movement, it presents undulating mountains and hilly terrain. There are many hills and valleys in the territory. The terrain is high in the northeast and low in the southwest due to the Wohu Mountain. The ancient town is close to the Yellow River and Qiushui River. The water system belongs to the Yellow River system. Qiushui River has high sediment content, large flood flow and unstable water volume. It carries a large amount of sediment into the Yellow River, squeezing the Yellow River waterway and causing the riverbed of the Yellow River to shrink from 400 meters to 80 meters. Under the impact of the Yellow River and Qiushui River, a shallow Qilin Beach formed by the accumulation of sand and stone is formed at the intersection of the rivers (Fig. 3).

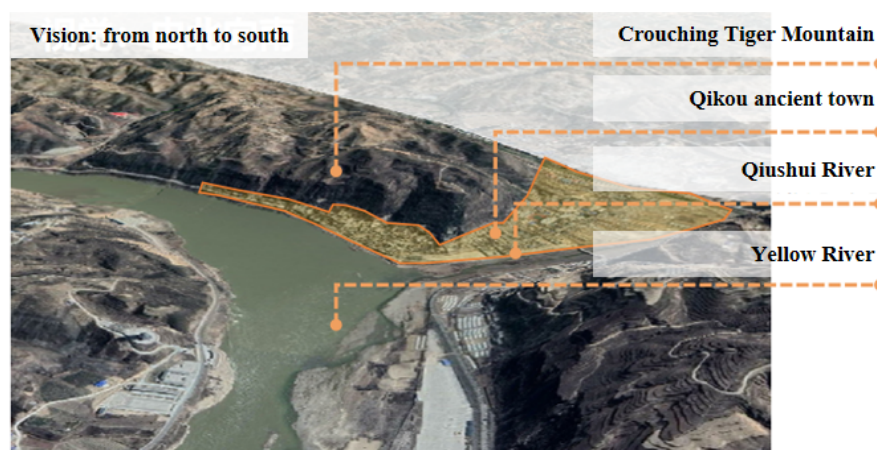


Fig. 3 Natural environment

Qikou Ancient Town is located in the mid latitude area of warm temperate zone, and belongs to temperate continental climate. It is mainly characterized by windy and less rainy in spring, hot and rainy in summer, cool and humid in autumn, and dry and less rainy in winter. As it is located at the edge of the Loess Plateau, the soil type is mainly gray cinnamon soil. Lime cinnamon soil is soft, loose and porous, with good air permeability, easy to be eroded, causing water and soil loss. Affected by the grey cinnamon soil environment, the ancient town has sparse natural vegetation, mainly including meadow vegetation, grassland shrub vegetation and woody vegetation. Grassland shrub vegetation consists of grass vegetation, and meadow vegetation and is distributed in low-lying valley. Vegetation is characterized by xerophysis, such as *Artemisia ordosica*, *Setaria viridis*, *Populus davidiana*, *Betula platyphylla*, *Salix matsudana*, *Hippophae rhamnoides*, etc. [5].

b. The Cultural Environment

Qikou ancient town is the result of commercial trade, and the water environment influences the superior geographical transportation conditions formed in Qikou. According to historical records, although Qikou has good geographical conditions for water transportation, there were no or few settled

families at the beginning of river transportation development because of the reef and treacherous beach formed at the junction of the Yellow River [5]. Later, flood occurred in Houtai, and merchants gradually moved to Qikou. In addition to the natural advantages of Qikou, which connected Qinlong in the west, Yanzhao in the east, Mongolia in the north, and Central Plains in the south, the transfer center of flood and drought was transferred from Houtai to Qikou during the Qianlong period [5]. The official rise of Qikou began to flourish in the early Qing Dynasty and the reign of Qianlong. Qikou ancient town is endowed with unique geographical conditions by the Yellow River, which makes it an important transfer port for water transportation in the middle reaches of the Yellow River. The goods transported from the Northwest to the Central Plains and the coastal belt, by land transport to river transport, in the middle and lower reaches of the Yellow River where the current is stronger stop, and then the Qikou ancient town turned to Taiyuan, Jinzhong land trade routes.

B. Cultural Landscape of Qikou Ancient Town

Qikou ancient town is located in Linxian County, Luliang City, Shanxi Province, Qiushui River and the Yellow River confluence. As a place connecting Qinlong and Central Plains

in history, relying on its unique geographical advantages, it formed a business margin settlement where merchants concentrated [6]. The unique geographical environment and humanistic environment have formed the rich culture of Qikou ancient town, and the integration of cultures has formed the unique cultural landscape, which is mainly composed of material elements and non-material elements (Fig. 4).

C. Material Elements

a. The Overall Pattern of Mountains and Rivers

Qikou ancient town is built in Luliang mountain as a whole, presenting the shape of loess hills and gullies in geomorphology. The terrain presents a pattern of hills. Moraine is a shallow bank formed by the accumulation of sand and stones in water. The

ancient town was built on a platform along the river, on a relatively gentle slope. Influenced by the topography, the location of the ancient town, with its back against the mountains and facing the river, is an example of ancient Chinese feng shui culture. The Yellow River reaches the reef dense, the current is swift, and the Wuhu Mountain echoes it to form the Morikou - Hushan Mountain and River honed belt. The Black Dragon Temple is located at the commanding height of the ancient town and co-exists with the landscape environment, forming the cultural form of the Black Dragon sacrificial river and tiger dragon structure. As a whole, it constitutes the landscape pattern of "one mountain, one river, one temple and one moraine" [7] of mountains, rivers, moraines, towns and temples (Fig. 5).

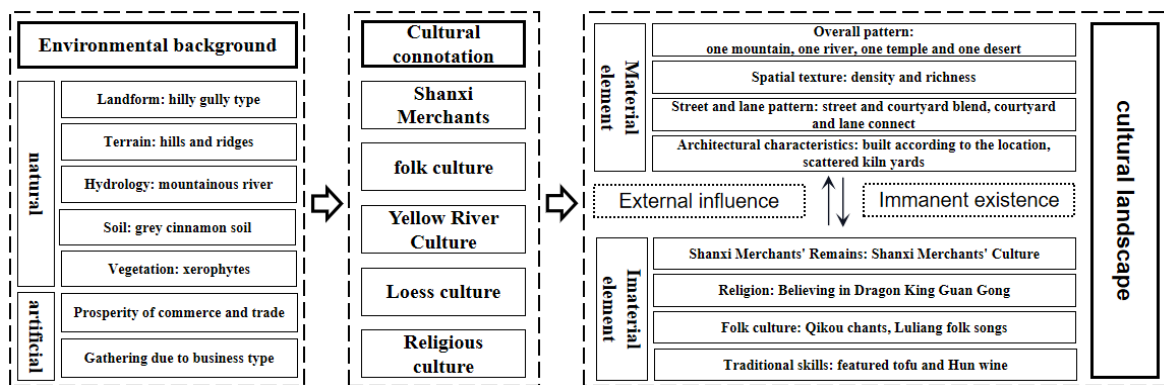


Fig. 4 Cultural landscape composition of ancient town



Fig. 5 Overall pattern of ancient town

b. The Orderly Space Texture

The spatial form of Qikou ancient town is free and flexible, and the mountain and water veins are homomorphic and coexisting. Limited by the Yellow River and the Wolhu Mountain, it spreads linearly from north to south and develops in a narrow length. Affected by the water body of the Yellow River, the boundary is irregular canine shape. The settlement fabric of the ancient town is divided into two parts (Fig. 6).

The texture and morphological characteristics of the side of the backside are relatively neat, with large building volume and strong sense of enclosure. Most of the buildings are arranged in a courtyard-style layout which conform to the terrain and are overall long and narrow. The buildings are built in a place with a relatively slow slope, and most of them are cave buildings

with rich layers and strong sense of three-dimensional space. The texture characteristics of the ancient town near the water side are small volume, relatively open space, scattered buildings, fine and flexible shapes, and no prominent spatial order and arrangement rules.

c. Multi-Dimensional Integration of the Street Pattern

The spatial characteristics of the strip and the functional support of the business margin make the pattern of streets as a fishbone shape. The overall alley skeleton is composed of three main streets and 13 alleys intersecting them vertically. The three main streets are East City Street, Middle City Street and West City Street. The west city street connects the Yellow River bank wharf; the space of Zhongshi Street is open; and, Dongshi

Street serves the transshipment function. The vertical contour of the roadway is evenly distributed, and the strike echoes the shape of the mountain of Wuhu Mountain. Its street structure presents the development mode of "street - yard - lane" (Fig. 7). At first, the settlements were accompanied by the streets along the Yellow River bank to build ordinary courtyard buildings;

with the development of the settlement, restricted by terrain and space, the buildings conform to the contour line in a zonal distribution, and a special two-level courtyard form is adopted to build the kiln courtyard at the elevation of the contour line. Alleyways were formed between the kiln compounds to facilitate the resolution of inter-compound transport links.

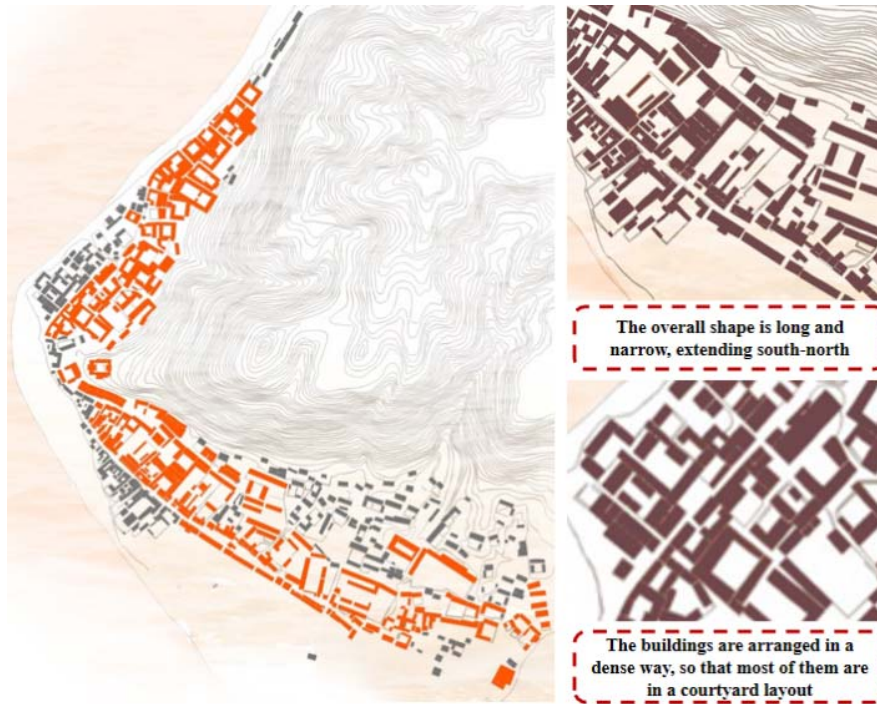


Fig. 6 Space texture of ancient town

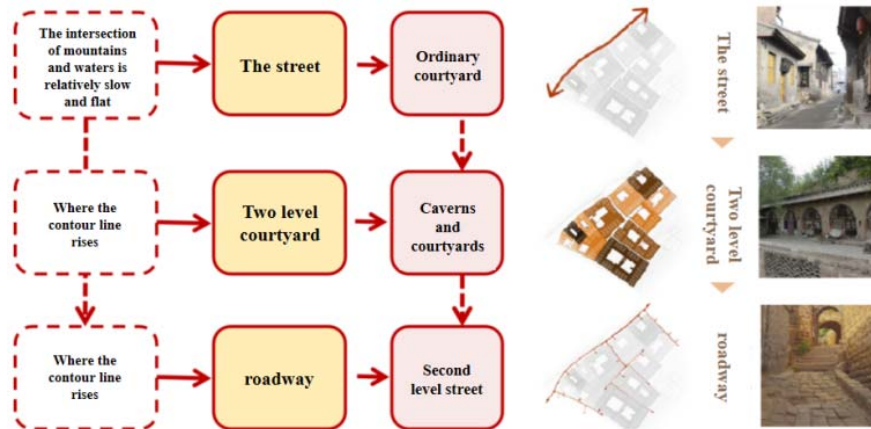


Fig. 7 The street courtyard forms a pattern diagram

d. The Combination of Cave Dwellings and Courtyards







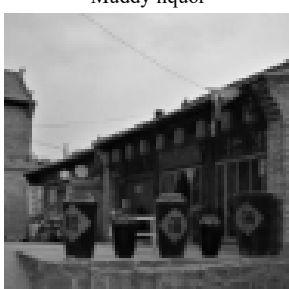

Qikou is located in the hilly and gully region of the Loess Plateau. Limited by the mountainous terrain, the buildings are built layer upon layer along the mountain, with three-dimensional integration and courtyard communication (Fig. 8). The contour line of the building also shows a step trend with the height change of the mountain. Qikou mainly adopts the building mode of supporting mountain kiln and kiln courtyard,

and presents the building arrangement form of ladder [8]. Along the side of the mountain, the way to maximize the respect for nature and the use of space is adopted. The roof of the next layer serves as the public activity space of the upper layer. With the development of the courtyard layer by layer to adapt to the changes of the environment. This architectural method also greatly improves the utilization rate of urban space, and also forms a hierarchical spatial sequence.



Fig. 8 Cave and cave yard

TABLE I
 COMPOSITION OF INTANGIBLE LANDSCAPE ELEMENTS

		Cultural embodiment	
Cultural elements	Shanxi merchant culture	Exchange shop 	Commercial culture 
	Religious culture	Dragon King 	Guan Yu 
	Folk culture	Qikou horn 	Luliang folk Songs 
	Traditional skills	Muddy liquor 	Mature vinegar 

D. Immaterial Elements

a. Commerce and Trade Interwoven Jin-Merchish Culture

The formation of Qikou ancient town is the result of the role of commerce and trade. Relying on the geographical advantages of water channel and land transportation, Jin-Merchish culture in the ancient town has been developed, forming the business margin settlements of commercial market towns, such as "Qikou mouth alkine", "Qikou oil", "Qikou tea", etc., which are not produced in Qikou but named after Qikou. The theory of "Shanxi singing and Shaanxi listening" on the stage of Black Dragon Temple is an important place for Jin merchants to sing "willing opera" through Qikou, which has a "practical value" in commercial activities. The architectural decoration and spatial nodes in the settlement also have a strong cultural style of Jin merchants.

b. A Religious Culture that Invokes Peace and Fortune

Hydrologic conditions under the influence of Qikou ancient town produced a certain religious culture, in order to pray for the Yellow River and Qiushui River flood, people worship the Dragon King, pray to bless the elimination of disaster and water control, good weather. The people worshipped Guan Gong, who valued faith and righteousness, and also worshipped as the God of wealth, praying for prosperous business. Black Dragon Temple is located in the commanding point town of Qikou ancient town, in which the upper temple and the lower temple are arranged to worship Guan Gong and the Dragon King, which is the religious belief place of the whole settlement [9].

c. The Folk Culture Nurtured by the Yellow River

The Loess and Yellow Rivers bear the immaterial culture of Qikou. The ancient town of Qikou, as a small dock in floods and drought, is prone to drowning and capsizing in water transportation. In order to pray for the safe sailing of ships, intangible cultural heritage such as river lanterns, Qikou Haozi and Luliang folk songs have been gradually produced. The Yellow River transport mainly depends on wooden boats and rafts, and boatmen pass information through rhythmic slogans, standardize actions, and return safely to the ship. Luliang folk songs are local dialects of Luliang which embody the Yellow River culture and loess flavor.

d. Traditional Skills with Local Characteristics

The unique natural environment and cultural environment of Qikou ancient town give birth to the unique traditional skills of Qikou, such as the intangible culture of production skills such as Qikou characteristic tofu, Hun wine and Qikou aged vinegar. The unique geographical environment of the Loess Plateau nourishes the raw materials of these techniques: red dates, sorghum, Tartary buckwheat, etc. These folk cultures also directly or indirectly represent the Yellow River culture and the loess culture.

IV. THE PROBLEM OF CULTURAL LANDSCAPE PROTECTION IN QIKOU TOWN

A. Destruction of the Natural Ecological Environment

Qikou ancient town is facing the deterioration of natural ecological environment. On the one hand, the opening of the idle land of the ancient town by residents destroys its ecological environment. The town as a whole is characterized by mountains. Some residents develop mountains and build terraced fields, resulting in the destruction of their original natural conditions, leading to the hidden danger of mountain floods and natural disasters. A large amount of soil flows into rivers, which destroys the environment of mountains and water bodies. On the other hand, the local exploitation of natural resources also poses a threat to the ecological environment of the ancient town to some extent.

The natural geographical conditions affect the spatial form of Qikou ancient town in a zonal structure, which is relatively simple and has limited carrying capacity. With the continuous development of the ancient town, the increasing number of tourists has impacted the ecological environment of the ancient town. The contradiction between the spatial carrying capacity and the ecological environment of the ancient town is also increasingly prominent. Therefore, space environmental benefits, social benefits and economic benefits need to be coordinated.

B. The Shape of Space

The protection of the space form of the ancient town is threatened by both nature and human beings. On the one hand, natural disasters have caused certain damage to the ancient town buildings. Qikou Ancient Town is built on the slope as a whole, and some buildings are closely distributed on the steeper slope. However, the water and soil loss in the edge of the Loess Plateau is serious. In the 1950s, the Yellow River flood occurred at Qikou, which washed down some streets and ancient buildings, resulting in the disappearance of one-third of the ancient buildings and the destruction of the spatial integrity of the ancient town. On the other hand, the residents once lacked the sense of protection. Linxian County is located in a poverty-stricken area concentrated in Taihang Mountains. The residents' economic conditions are relatively poor, and many ancient buildings are privately owned by residents, lacking the will to repair. With the development of the ancient town's tourism industry, some residents have blindly modified and expanded the ancient buildings to meet the needs of commercial development and use, which has broken the integrity of the ancient town's physical environment to a certain extent. The characteristic architectural form of the main street, "Ming Zhu Xia Yan", also gradually disappeared. The preservation of the old style and appearance has been greatly challenged.

C. The Environmental Background of Culture

The cultural formation of Qikou ancient town is inseparable from its natural geographical conditions. The natural geographical conditions such as the Loess Plateau, the Yellow River basin, and the flood and drought wharf at the intersection of two rivers have created the unique regional culture of Qikou

ancient town. The natural ecological environment of Qikou ancient town also affects the continuation of its culture to a certain extent. Qikou intangible cultural heritage has a strong dependence on the natural environment, including the production raw materials brought by natural regions and the production conditions created by climatic conditions. Therefore, the change of natural geographical conditions also has a great influence on the local regional culture.

The protection of Qikou ancient town lacks integrity and overall planning, and the overall spatial environmental protection concept is weak, which does not cover the natural geographical conditions of the ancient town. At present, there is a relatively one-sided understanding of the protection of Qikou ancient town, which lacks the concept of overall spatial environment protection and only focuses on the protection of key buildings in the ancient town, presenting point-like scattered protection and the lack of overall protection connected by lines and coordinated by surfaces, making the environmental style protection of Qikou ancient town face serious challenges [10].

D. The Vitality of Industrial Development

Although Qikou ancient town has good environmental resources, its popularity and influence radiation range are small, and its vitality is only reflected in the adjacent areas of Shanxi, Shaanxi and Mongolia, resulting in the lack of vitality of rural tourism and the revitalization of rural economy. As far as Qikou area is concerned, some surrounding villages have unique local cultural landscapes. Lijiashan Village and Henan Ping Village are nurtured and developed by farming culture, which are different from Qikou ancient town in the form of business edge development, but still have good landscape value. Qikou ancient town, as the center of these villages, has not formed a radiating cluster effect.

The elements of rural tourism are single, and the tourism development of Qikou ancient town focuses solely on the material landscape, ignoring the landscape relevance of the corresponding cultural elements. As a characteristic settlement space relying on the development of mountain and river environment, it is the product of the joint action of the Loess Plateau and the Yellow River. The space environment of Qikou ancient town gave birth to local religious culture, folk culture and so on. The protection of the spatial environment and regional cultural characteristics of the ancient town is general and simple, which weakens the uniqueness and regionality of rural tourism in Qikou, and thus poses a challenge to the tourism development of the ancient town.

V. CONSERVATION AND DEVELOPMENT STRATEGIES OF ANCIENT TOWNS BASED ON FOUR-STATE ELEMENTS

A. Ecological Approach: To Maintain the Ecological Base

a. Paying Attention to Environmental Governance

The ecological base is the prerequisite for the protection of ancient towns, and landslides induced by stormwater in ancient towns are the main types of disasters. For environmental management, the primary goal is to control soil erosion. By

increasing ground vegetation and reducing ground slope to improve the overall natural environment, part of the steep slope of arable land is returned to forest or grassland, through the hydrological effect of vegetation to increase soil suction, strengthen the stability of the slope body, reduce the amount of mud and sand washed into the Yellow River from Wuhu Mountain. The confluence of the Yellow River and the Qiu Shui River is a geographic condition formed by the Qikou Ancient Town, and therefore is prone to siltation and siltation that makes the water flow clogged and turbulent. In order to maintain the ecological balance of the Yellow River and the Qiu Shui River, it is necessary to carry out soil and water management on both sides of the river to control soil and water erosion [11].

b. Reshaping Landscape Pattern

The existence of a cultural landscape is dependent on the natural landscape pattern and is an interrelated existence between the cultural elements and the environmental elements of the landscape. Therefore, we need to construct the overall landscape pattern. The space landscape should be constructed from a holistic perspective. "Yellow River - Qiu Shui River - Huhu Mountain" natural elements formed the natural space order of Qikou ancient town, The intersection of the landscape space and the axis of the ancient town produces a specific landscape space structure. Therefore, it is necessary to emphasize the landscape cultural space model of the overall natural environment and reflect the structural connotation of the space (Fig. 9) [12].

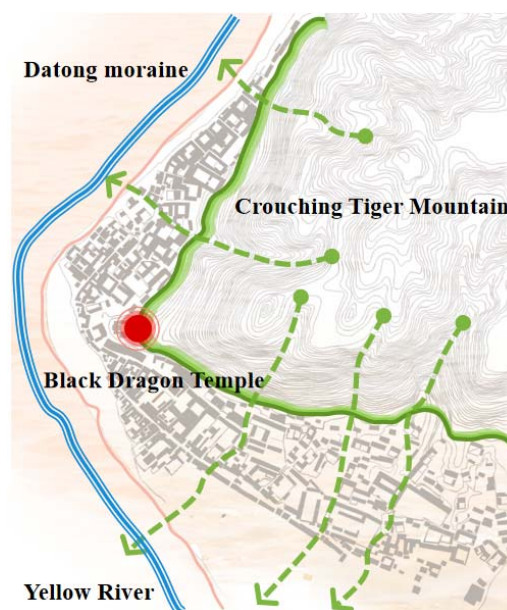


Fig. 9 Shaping the landscape pattern of ancient towns

B. Morphological Approach: Continuation of Spatial Characteristics

a. Preserve the Texture of the Streets

The form, style and color of the streets and alleys in Qikou ancient town are influenced by many factors such as history, terrain and climate. The streets and alleys of the ancient town

should retain the pattern of "three streets and 13 alleys" on the basis of meeting the traffic demand of the ancient town, so as to realize the overall protection of the material space of the ancient town. The restoration of streets and alleys needs to retain the historical heritage information to the maximum extent and continue the existing form. Conservation is carried out, for example, by reserving street space as well as road paving. In order to protect historic buildings and landscapes, existing buildings need to be categorized. Dilapidated historic buildings should be restored using raw materials to ensure the unity of the landscape.

b. Preserve Space Function

The east-west roadway in the ancient town is closely connected with the mountain gully and has the function of

collecting rainwater and flood drainage. Vertical alleys lead mountain torrents into drainage channels and then drain into the Yellow River to avoid the impact of floods (Fig. 10). And on the Yellow River side was built a high platform to avoid the collection of the flood waters submerging the ancient town. Therefore, in the protection of the ancient town, the functional features of its streets and alleys should be strictly preserved, and villagers are forbidden to expand buildings illegally to avoid blocking roadways and causing natural disasters caused by the inability of rainwater to discharge. It is necessary to strengthen the relationship between Qikou ancient town and the Yellow River, and ensure the corridor between the ancient town and the Yellow River through the restoration of spatial pattern and street texture.

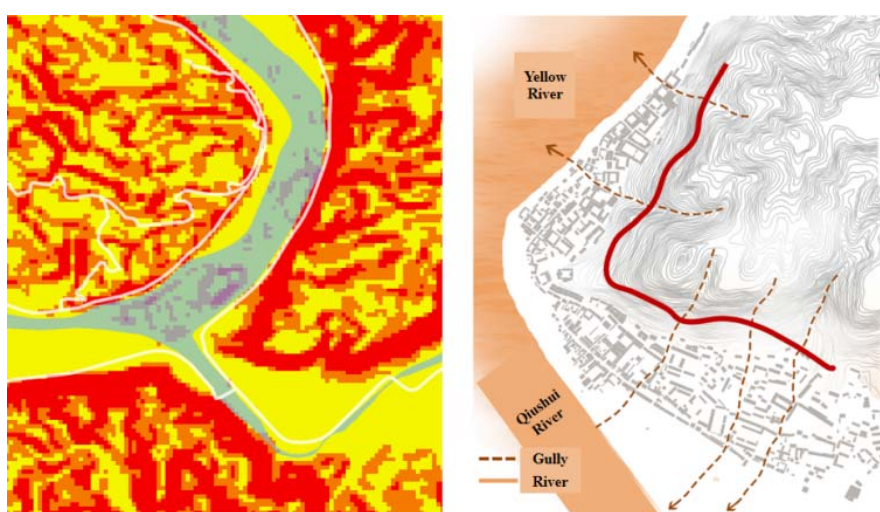


Fig. 10 Hydrological simulation and mountain gully

C. Cultural Approach: Darning the Cultural Space

a. Continuation of Context and History

The natural environment is the foundation of the human environment, and the human environment makes the natural environment show vitality. Qikou ancient town unique geographical location gave birth to its blessing culture, Jin merchants culture. Human factors affect the overall spatial sequence of Qikou ancient town, which is mainly started with the Black Dragon Temple, located in the Wolhu Mountain, which dominates the spatial relationship of the whole settlement. In terms of site selection, it is in accordance with the Feng Shui doctrine that "the pulse stops when it meets water - the point where the pulse ends is the true point" [13]. All these show that the natural environment and humanistic environment of Qikou ancient town are integrated and mutually generated. The protection should pay attention to the coordination of spatial relations, ensure the integrity of culture, improve the connection between cultural space and natural space, and pay attention to the sense of hierarchy.

b. Adhere to Live Inheritance

The immaterial culture is closely related to the natural ecological environment and the way of life and production in

the ancient town. As for the intangible culture such as the production techniques of characteristic tofu and Hun wine developed based on geographical conditions, it should apply to be added to the cultural heritage list to obtain the attention and protection of relevant departments, protect the environmental conditions of the culture, and repair the natural and cultural factors that can be restored. For the arts and crafts relying on social and cultural environmental factors, it is necessary to fully analyze the current social environment, pay attention to the inheritance mode that people adapt to the environmental needs of ancient towns, and use the current new modes such as "cultural creation +" and "Internet +" to inherit intangible cultural heritage.

D. Approach of Business Form: Activate Industrial Chain

a. Integrate Tourism Resources

Ancient town tourism takes the active state of landscape resources as the development path of the tertiary industry, and cultural landscape is an important support. Therefore, we should pay attention to the value of Qikou ancient town cultural landscape mining [14]. The villages in Qikou town have the same natural environment and cultural background. Under the development background of the whole regional tourism

planning in western Shanxi, it is necessary to integrate tourism resources, connect the cultural landscapes of villages with similar geographical and cultural backgrounds around Qikou ancient town, and finally build a cultural landscape corridor [15].

b. Enrich the Level of Business Forms

Ancient towns need to constantly enrich the levels of business forms on the premise of improving tourism infrastructure to avoid the empty and boring use of the cultural landscape. With the constant change of the main force of tourist groups, the tourism of ancient towns needs to meet the corresponding experience preferences and consumption habits of different groups. However, the uniqueness of regional culture must be guaranteed to avoid monotonous function development. The architecture of Qikou ancient town better shows the cave culture and loess culture, which can be optimized by using its own natural conditions and develop an "immersive" residential experience in western Shanxi based on the characteristic cave. We should pay attention to the excavation of the value of the local culture of the Qikou Ancient Township, and carry out cultural inheritance and reconstruction of vitality through the promotion of the industrial development model of regional characteristics and experience, so as to ultimately achieve the purpose of developing special agricultural products and enhancing the vitality of the agricultural economy [16].

VI. CONCLUSION

In the process of ancient town development, the protection and development of spatial elements and intangible cultural elements leads to the weakening of the relationship between culture and material space. The development of ancient towns needs to integrate the cultural landscape resources and seek the deep protection and development ways of cultural landscape. Ecology, form, cultural form and business form are interrelated. Based on the ecological environment, spatial form as carrier, cultural and cultural form as connotation and industrial form as vitality, a multi-level approach is provided for the protection and utilization of cultural landscape in ancient towns.

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