

The Study on the Overall Protection of the Ancient Villages

Zhang Yu, Ding Yi

Abstract—The discussion about elements of cultural heritage and their relevance among the ancient villages is comparably insufficient. The protection work is strongly influenced by touristic development and cultural gimmick, resulting in low protection efficiency and many omissions. Historical villages as the cultural settlement patterns bear a large number of heritage relics. They were regionally scattered with a clear characteristic of gathering. First of all, this study proposes the association and similarities of the forming mechanism between four historic cultural villages in Mian Mountain. Secondly, the study reveals that these villages own the strategic pass, underground passage, and the mountain barrier. Thirdly, based on the differentiated characteristics of villages' space, the study discusses about the integrated conservation from three levels: the regional heritage conservation, the cultural line shaping, and the featured brand building.

Keywords—Mian Mountain, fortress, historical villages, conservation.

I. INTRODUCTION

THE development of culture is diverse. Commonly, there are some sub-cultures within the main culture, and they form the complexity and diversity of the cultural circle, authentically recording the rich history and regional culture. Hongshan Village, Nanzhuang Village, Zhangbi Village, Lengquan Village at the foot of the Mian Mountain, Taiyuan Basin of China were built out of defending intention, then brought to prosperity by the Jin businessmen. They are an ancient village -group bearing the function of residential, living, and defense (Fig. 1). Taking the Qing Dynasty as a time node, the four historic villages almost had kept their continuous rampart before the Qing Dynasty and their courtyard pattern after it, which can reflect social lives of multiple periods.

II. THE FORMING BACKGROUND OF FOUR VILLAGES

A. The Influence of the Geographical Relationship by Mian Mountain and the Fen River in Shanxi Province

A long period of time is the history of stability and rarely change of all sorts of structure and the structure group [1]. The core concept of "Long time" is the intrinsic connection between geographical environment and social structure, such as mountains, plains, geography, climate, nature and social organizations, cultural traditions, which seems to be stationary through times. The formation and evolution of the traditional villages are also affected greatly by the diverse surrounding geographical environment. The four ancient villages are located

in the northern side of Mian Mountain, the Fen River helps in defense on the north, southeast is the Guanzi ridge channeling to Shangdang, southwest is the Shuque valley which is in the throat of the way towards south. The Mian Mountain is a branch of the Taihang Mountain, which is elevated more than 2000 meters. This geographical landscape stably exists for long-term, impacting on the space of surrounding villages holistically and even ultimately.

B. The Change of Regional Social Economic form in Ming and Qing Dynasties

Ming and Qing Dynasties, as a time unit during the long history in the middle of Shanxi Province, have influenced the four villages' current situation beyond any time. Because of the limited land but convenient transportation, numerous people seek out for business, the economy developed rapidly with the rise of a wide range of commercial trading activities. The evidence can be found in the "County Annals (1819)". After Qing Dynasty, the business routes had expanded based on the traffic routes (Fig. 2). Large number of merchants relied their business on the routes.

Villages meanwhile were gradually developed into commercial-service-oriented. Thanks to the good business environment, the villagers also gradually grew from poor to the wealthy celebrities. There were so many merchants gathered at the foot of the Mian Mountain for that moment.

Zhangbi Village had very few residents going out for business at the beginning of Qing Dynasty, and it became a businessman village at the middle period of Qing Dynasty. There were four big families, named Jia, Zhang, Wang, and Qi. The temples, stages, roads, houses, gates that are sponsored by the big families still stand till today. Hongshan Village was an important trading town during the Ming and Qing dynasties. With the rise of the business, the village banks were also gradually formed. The most famous bank was Qiao Shijie's Baofenglong Piaohao (bank). The existing building types, including housing, commerce, sacrifice and other kinds of buildings of the village, are important material evidence.

C. The Impact of the Historical War

Sudden major historical events in a short period affected not only the ancient villages directly, but also strengthened the cultural connection between them. The influence has locked the villages' special evolution in a particular historical period. The ancient war between the villages and outside happened frequently. His Royal Highness Li Shimin led soldiers chasing Song Jingang here in 2nd year of the reign of Tang Emperor Wude (619 A.D). Few months later, Li Simin fought eight battles in one day wining in a row, and then occupied Bing

Zhang Yu is with the Huazhong University of Science and Technology, China (e-mail: 15926268768@163.com).

state. The tunnel in Zhangbi Village hoarded grain for Song Jingang.

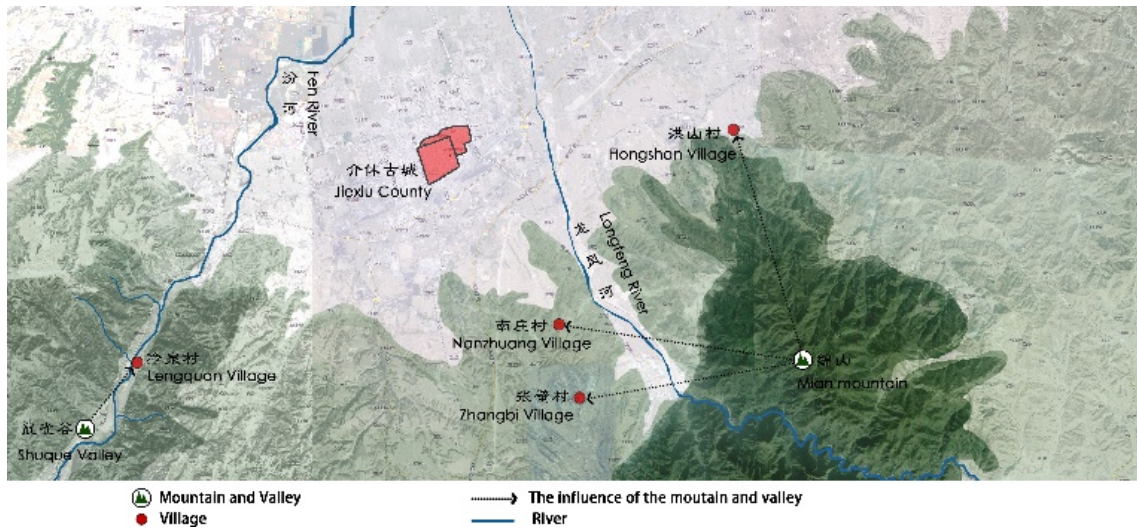


Fig. 1 Four villages' location

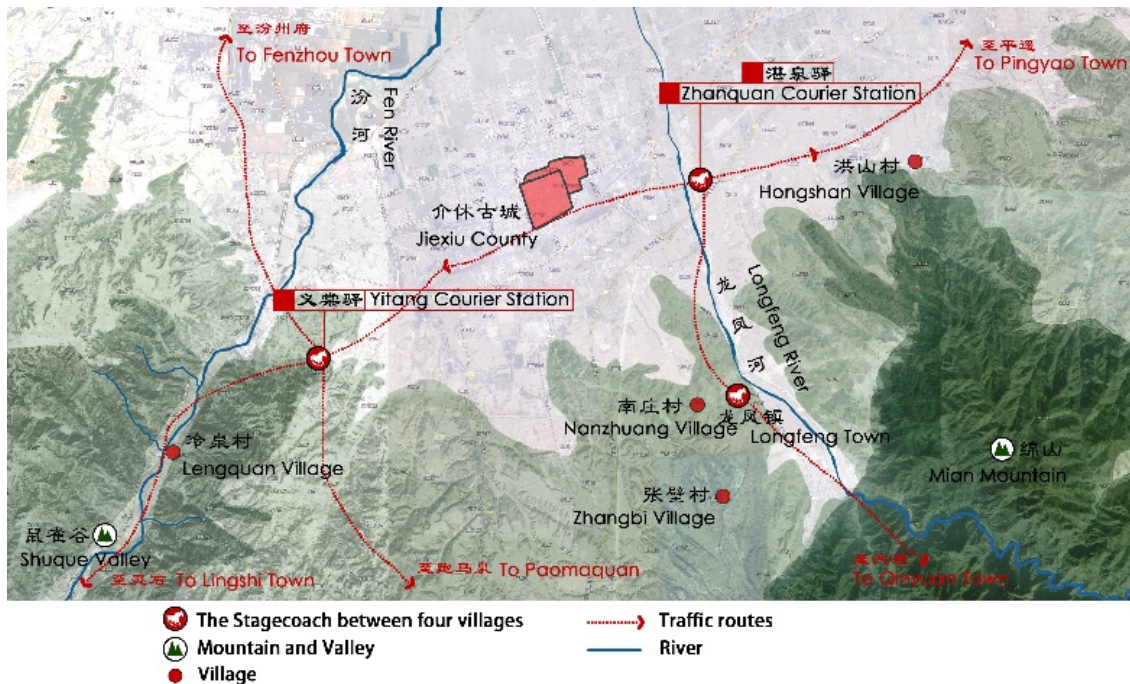


Fig. 2 Business lines in the late Qing Dynasty

III. THE DEFENSIVE ELEMENTS OF VILLAGES' PATTERN

Defense is the functional characteristics of the four villages, which has obvious features of the remaining space. The significant factors of the cluster of these villages are strategic pass, blind pass, walls, as well as other village defense facilities, which have a long influence on the villages' integral space pattern.

A. The Strategic Pass against the Huns

Lengquan Pass, named after the cold spring in it, was built by Emperor Gaozu to defend against the Huns. Lengquan pass is located at the arteries of the northern frontier to the central plains. The left of the pass is a mountain, the right side is a river. A number of emperors deployed combat troops to the pass, setting fortress here (Fig. 3). The historic map comes from Shanxi Archives. The pass has been the foundation of Lengquan Village from Ming Dynasty.



Fig. 3 Lengquan village's ancient position

Lengquan village's frontier pass culture is a special cultural form, which embodies the frontier village's defensive settlement pattern in a turbulent social atmosphere. The defensive culture and fortress culture were full of dynasties vicissitudes, peasant uprising, and bandits infest. The pattern of village belongs to the specific age stage, as time goes by, more and more social culture adding up to the village itself, now it shows in front of our eyes the rich and colorful remains of several dynasties.



Fig. 4 The underground passages of Zhangbi Village

B. The Underground Passage for Military Food Storage

Zhangbi Village is located on the high ground with mountains surrounding three sides. With retreating roads, it is easy to defend but difficult to attack. The geographical advantage of this village is obvious in those years. The initial purpose to build Zhangbi Village was simply building a military fortress. In order to meet the needs of the army, the troops of Sui Dynasty dig a huge system of underground passages and stored grains here. The passages formed "S" shape, in a length of total thousands of miles and are freely crisscrossed. It has approximately three layers underground, the top is about 1 meter beneath the surface; the middle layer apart from the surface from 8 to 10 meters; the bottom layer is 17 to 20 meters from the surface. Each layer is about 2 meters high (Fig. 4). The passages were built with facilities of surveillance, command, drainage systems, ventilation with stable, granary, and station troops in it. Outside the valley is the mouth of the cave, which can be used as the entrance and exit, and can be used as a sentry. The whole tunnel system constituted complete underground military defense facilities belonging to the

"Garrison Besieged" military tactics facilities, according to the fort "back channels" in the ancient art of war.

C. The Mountain Barrier as Ground Defense

Mountains and hills are commonly seen in this area. Many villages here are located on the hills, with natural barriers as boundaries. For example, Nanzhuang Village is located on a high mountain, the north and the west are big ditches, east and south are slopes. So, the villagers built the fort gate and walls in the east and south, and the other places all use natural terrain as barriers. All of these formed a safe enclosure space, there were also two attics at the fort gate, villagers can watch out for the situation of the enemy. The mountain ridge, the scarp and the artificial fort walls together formed Nanzhuang Village's boundaries together. Hongshan Village is located in the high hinterland of Mian Mountain, away from the Fen River. The north and west of Hongshan Village are cliffs, elevation difference reaching dozens of meters, forming a natural barrier. Like Nanzhuang Village, Hongshan Villagers use steep slopes to build up the castle walls, constructing the security defense system.

IV. THE DIFFERENTIATED CHARACTERISTICS OF VILLAGES' SPACE

The village space is not a short-term achievement, it formed shape through multiple cultural evolutions, as well alternately stacked influenced each other and then derived a temporal composite expression. The villages' defensive need caused by the war before the Qing Dynasty led to many remains as villages' fort gate, fort walls, hidden hole, gate houses, etc. After the Qing Dynasty, defensive need was reduced, there were many commercial trades. These trades pushed the defensive villages to embrace many typical characteristics of commercial towns, such as the main streets, commercial facilities along the streets, etc.

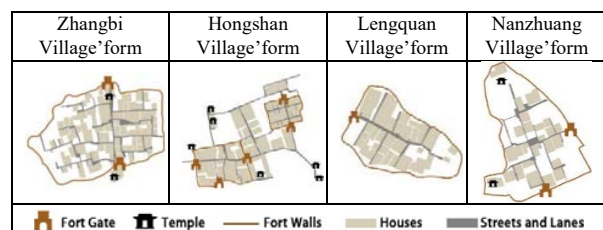


Fig. 5 Four villages' spatial patterns

A. A Street, Eight Lanes and Two Gates in Zhangbi Village

Zhangbi Village was surrounded by continuous fort wall. There were two fort gates each in the south and north of the village, with stone arch and brick structure. The north gate has a barbican. There was a main street connecting the two gates. The main street has four lanes on each side, the only exit at the junction. The street system looks like a dragon spine, so that the main street is also known as "Dragon-Spine Street". Zhangbi Village's architectural layout is clear: temples was built near the south and the north gates, while housing is distributed on both sides of the streets [2].

B. Two Forts in Hongshan Village

Mountains and river were the boundaries of Hongshan Village. The pattern remains intact basically. There are two forts in the village, named Baoze and Xitoubao, with the Yuan Temple and Kuixing building in the southeast corresponding at a distance [3]. Baoze is located in the highest point of the alluvial plain on the east, and the west is gully cliffs. The south and north are connected to the outside through gentle slopes. The houses lined up on both sides of the main street with huge fortress walls around. Two gates were set at the north and south walls; another gate is set at the southwest. The artificial fortress walls and natural valleys gave the village the best safeguarding of the internal security. Xitoubao's location is exquisite, turning into mutual horns towards Baoze. Through the remaining walls of the north and the west sides, we can clearly determine the boundaries. The internal is in the "back" glyph as backbone, remaining the traditional herringbone streets.

C. Lengquan Village: A Majestic Shut and an Important Node at the North of Fen River

Lengquan Village had been relying on the traffic advantages on the pass in Sui and Tang dynasties to become a famous commercial town, in addition to its military defensive function [4]. Lengquan Pass's military defensive function has weakened gradually after Ming Dynasty. The pass area became the first choice to build houses based on its natural defense. The gate tower was very tall, built in Ming Emperor Jiajing period. The street in front of the gate was a straight line along the slope towards the mountain. There are a lot of relics on both sides of the main street, such as street shops, banks, schools, memorial arch, drama stage, ancestral temple and so on.

D. Nanzhuang Village: A Street, Three Lanes and Two Gates

Nanzhuang Village was a "castle" mainly to defend the enemy. The village's function was complete as a military stronghold. The castle walls, streets, courtyard, residence formed a defensive system together. During Ming and Qing dynasties, the village became a commercial town because of its geographical advantages. The main street was the center of the trade and assembling. There were many shops on both sides of the main street, the important public architectures were strung into a line. Three transverse streets were built according to the topography, at the same time, undertaking the business trade, transportation, communication, folk culture activities and other functions, together with the main street presenting a “丰 (Feng)” glyph.

As a summary, the four villages present an exclusive character towards outer space, the internal street spaces are circuitous and changeable, privacy is strong. To meet the transportation needs in the Ming and Qing dynasties, the main street was built throughout the village, combining trading facilities and space together. Villages are the carrier of culture, its spatial characteristic is the core content reflecting the characteristics of culture. The impenetrable defense system, the

unique village layout, the courtyards all over the village have been staying here showing the defense and business culture during the hundreds of years.

V. THE INTEGRATED CONSERVATION OF THE FOUR VILLAGES IN MIAN MOUNTAIN

Unlike the up-to down formation cities, most of villages were formed from the bottom up due to the natural terrain. Its forming process is very slow and influenced by both nature and social environment. Because of the large quantity of villages, their scattered distribution and the lack of funds, the protection of ancient villages in China are often out of puff. For example, this study involves more than four ancient villages needing measures to protect. High efficiency and more systemic group covered protection methods are particularly important.

A. The Integrated Conservation of the "Material Evidence"

First of all, the base of the village's site selection and construction is the natural environment, including mountain, water, ravines and trees, etc. There is a contact between the cultural history information and monuments, from the ancient roads, battlefield handed down to the mountain temples, tombs and other historical witnesses. The last remains are common in these villages. We can find the typical defensive facilities such as the big gate and the towers from the inside and outside walls. The dwelling houses and commercial street had absorbed social structure change of local-style for a long time.

B. The Cultural Routes –Event System Protection through the "Material Evidence"

The macroscopic ancient village association system is the guarantee of the protection work's persistence and integrity. These four ancient villages contain the similar historical background, presenting pieces of culture characteristics under the series of historical events in different times. Excavating the cultural relationship between villages and planning all kinds of historical factor as a whole are the focus of this level's protection. The war before the Qing Dynasty had a strong impact on these villages. Business culture in the middle and latter periods of Qing Dynasty also impacted on the whole Taiyuan Basin hugely. Thus, the ancient war and ancient trade route station became the important clues throughout all kinds of remained "material evidence" (Fig. 6).

C. Branding the Characters - Discovering and Protecting Villages' Own Features

Focus of the historical origination has implicit difference, which led to the villages' characteristic differences in dominant form of expression directly. Each ancient village has its cultural independence. We create a cluster architecture and centrally associate cultural characteristics on these multiple villages, at the same time, what we should avoid is its culture identical and manufacture imitation going in a rough way caused by the similar characteristics.

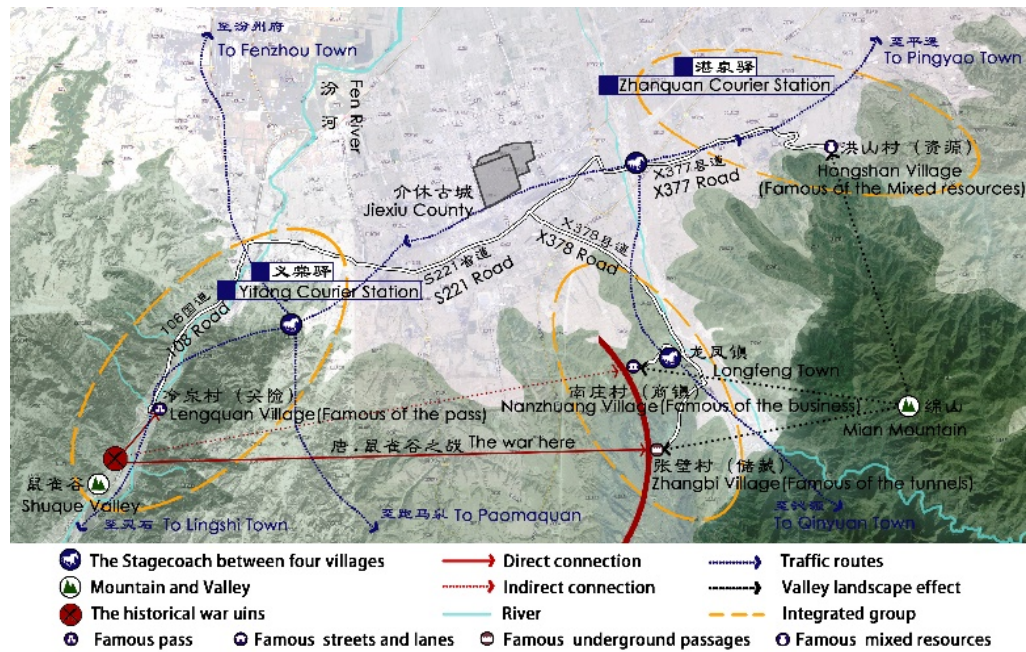


Fig. 6 Four villages' development clues

VI. CONCLUSIONS

In this case, Hongshan Village was greatly influenced by business in the Ming and Qing Dynasties due to its moderate natural geographic relatively, which is significantly different from Lengquan Village and Zhangbi Village under the influence of the war. In addition to the water culture formed by the Hongshan spring one thousand years ago, there are also pottery and porcelain culture due to rich forestry resource and climate conditions of cultural achievements in Hongshan Village. The rich intangible cultural heritage is particularly valuable. Nanzhuang Village as an old town in the past is more cautious, joint with Chinese traditional theory of environment like "nature and humanity". The value of the architectural remains is worthier of scrutiny. Given its serious damage, the village needs to limit its development. Lengquan Village and Zhangbi Village all have their defensive characteristics. The difference is that Lengquan Village's residents have relocated overall, the village has become a "site" village, as Brokeback Venus, needing not to be repaired deliberately. The loss of natural environment after the hollow broken beauty is very attractive [5]. On the other hand, because the ancient underground passages in Zhangbi Village have been developed, the village has been a well-known touristic site. We should avoid excessive development not to lead to the loss of the authenticity.

REFERENCES

- [1] Braudel F. *The perspective of the world: Civilization and capitalism 15th-18th Century*, Vol. 3. Sirirajmedj Com, 1992, pp. 27.
- [2] Yingna Hu. Study on the Lifang Pattern in Zhangbi Ancient Fort. *Huazhong Architecture*, Nov. 2006, pp. 99.
- [3] Tian Z. Probe into How to Strengthen the Water Resources Protection—Taking Jieixu City's Hongshan Spring as an Example. *Shanxi Science and Technology*, Feb. 2016, pp. 57.

- [4] Jing-Ya M A. Research on landscape environment pattern of Lengquan Village. *Shanxi Architecture*, Oct. 2013, pp. 22-23.
- [5] Zhang Y, Jia Y, Yi H E. The Study of Integrated Conservation Method of Traditional Plain Bao-village, taking Pingyao historic villages as an example. *Urban Development Studies*, Apr. 2015, pp.109.

Zhang Yu, Ph.D. candidate, School of Architecture and Urban Planning, Huazhong University of Science and Technology.

Ding Yi, M.Sc., an independent researcher, Faculty of Architecture, Civil Engineering and Urban Planning, Brandenburg University of Technology, Cottbus-Senftenberg.