

# Research on the Protection and Development of Traditional Villages from the Perspective of Ecological Wisdom—Taking Yanfang Ancient Village in Ji An as an Example

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## Abstract

As an important gene of traditional village culture, ecological wisdom embodies the wisdom of balancing human beings and nature formed by previous generations in the village, which not only preserves the success and glory, but also carries the bitterness and setbacks of our ancestors, becoming the nutritional foundation for future generations to draw experience. Taking Yanfang ancient village in Ji'an City, Jiangxi Province as an example, by cultivating the ecological wisdom of traditional villages, combining the ecological entropy theory, the lack of ecological function in the environmental system and the balance relationship between human beings and environment are analyzed, the ecological wisdom of traditional villages is summarized, and methods are proposed to solve the imbalance of ecological entropy system, which can help promote the ecological entropy system reach the balance state of sustainable and coordinated development and is of reference significance for rebuilding the strong vitality of traditional villages.

## Keywords

Ecological Wisdom, Traditional Villages, Ecological Entropy, Sustainable, Ecological Benefit

## 1. Introduction

As the wisdom that human beings gain through constant learning in the long process of evolution and survival struggle (Wang, Xiang, & Liu, 2016; Yuan, 2019), ecological wisdom has become the accumulation of wisdom already tested by practice, which can optimize the living environment of human beings. In this

paper, the optimally balanced development model of traditional villages and ecosystems are discussed. In addition, ecological wisdom is reflected in the stable and sustainable balance of ecological entropy system. Traditional villages are formed under the interaction of specific geographical environment, cultural beliefs, customs and other conditions, embodying different local cultural characteristics and contain the concept of ecological wisdom of harmonious coexistence between human beings and the nature. Interpreting the ecological wisdom and cultural heritage of traditional villages is a good attempt to understand and apply the ecological wisdom and explore the survival wisdom and life wisdom of the ancients, which is beneficial for the protection and development of traditional villages.

## 2. Overview of the Studied Area and Data Sources

### 2.1. Overview of the Studied Area

Founded in the middle of the Southern Song Dynasty, Yanfang ancient village has a history of more than 800 years, becoming a famous historical and cultural village with well preserved buildings of the Ming and Qing Dynasties. Yanfang ancient village is located in Jintan Town, Jishui County, Jiangxi Province. The whole village is in a belt shape, about 2 km long from north to South and 1km long from east to west. There are more than 100 mu of orchards in the village, which are distributed everywhere in the village. It can be said that “the village is built in the garden and people live in the garden”. Hidden in green clusters, the whole village owns an original ecological environment suitable for human beings to live (Yan, 2016). The map of the project area is shown in **Figure 1**.

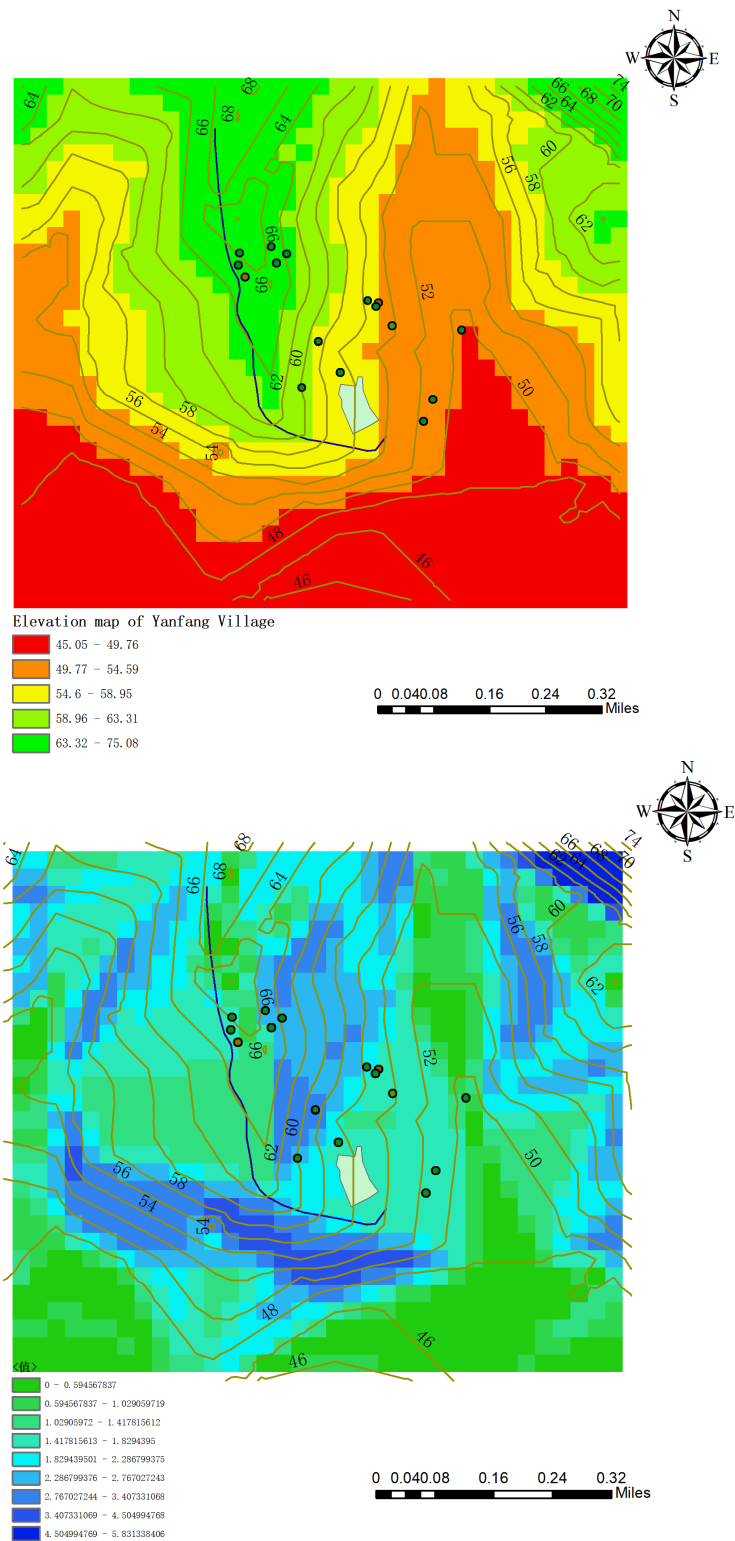
### 2.2. Source of the Data

The data of this paper is mainly from data collected by UAV aerial photography, literature analysis and field investigation, as well as data obtained from interview. Subsequently, some actual situations were analyzed, basic GIS information



**Figure 1.** Yanfang ancient village.

was collected, and the overall framework and ideas of the paper established combining the actual situation with theory. The GIS elevation and slope analysis of the project area is shown in **Figure 2**.



**Figure 2.** The GIS elevation and slope analysis of Yanfang ancient village.

### 3. Ecological Wisdom and Ecological Entropy System in Traditional Villages

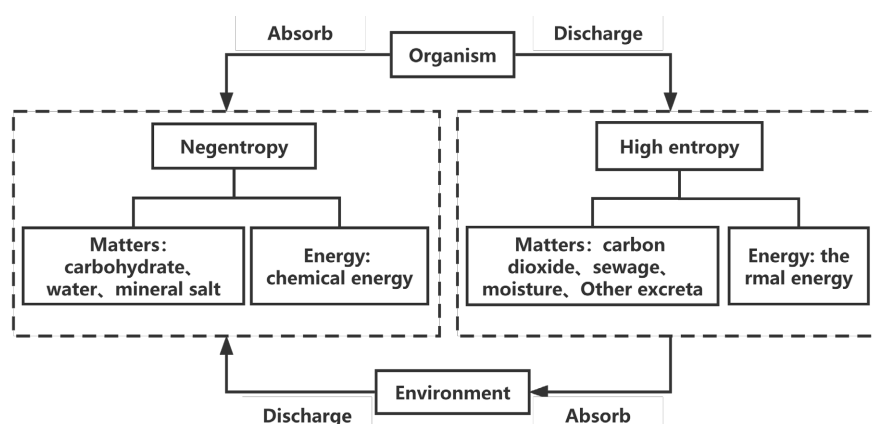
#### 3.1. The Concept of Ecological Wisdom

The concept of ecological wisdom was first proposed by the ecological philosopher Arne Naess in the 1970s, he believed that in ecological wisdom, the value orientation between human beings and nature was explored from the perspective of the whole ecosystem (Xu, 2011; Wang, & Gao, 2016), with direct goal of creating a safe, stable, harmonious and beautiful ecological environment for the survival and development of human beings. Simultaneously, the wisdom of ecological practice also refers to the ability to maintain a balance between stakeholders and different methods, effective participation in ecological practice, so as to promote the mutually beneficial symbiosis between human beings and nature (Xiang, 2016; Folke, 2006).

Yanfang ancient village adheres to the concept of ecological wisdom and organized operation and management. Though located on the shore of mountains and rivers, Yanfang ancient village does not blindly pursue nature, but realizes long-term sustainable development through harmonious coexistence with nature. The local people have their own spiritual beliefs and happiness, and spare no efforts to protect the original local natural environment. It is not difficult to find that the maintenance and practice of the villages here embody the concept of the development of ecological civilization and the ancient Chinese pursuit of “Unity of the nature and human beings” and “Yin, Yang and five elements”. Yanfang ancient village is built based on respecting nature and protecting nature, so that the nature is protected through establishing relevant mechanisms, restricting people’s irrational development and access to nature, and the connotation of ecological wisdom (Xiang, 2014; Wang, Palazzo, & Carper, 2016) is embodied in the concept. Therefore, analyzing the ecological wisdom of Yanfang ancient village is of important enlightening significance for the construction of national ecological civilization and the protection and development of traditional villages.

#### 3.2. Ecological Entropy System

Ecological entropy system mainly explains the objective existence form of dialectical unity between human beings and the environment. Human beings need to constantly absorb energy and material from the surrounding environment, and simultaneously release energy and material to the surrounding environment in their survival and development process. Lives need to absorb negative entropy from the environment to slow down the entropy growth rate of human activities; Moreover, the ecological environment can decompose and deal with the high entropy discharged by human beings, and then supply the necessary negative entropy to human beings, so as to make the ecological entropy system achieve the normal cycle and reach a stable and harmonious state (Lin & Xia, 2013; He, 2005) (Figure 3). Therefore, cultivating the ecological wisdom of traditional



**Figure 3.** Energy transformation process in the ecological entropy system.

villages, introducing the ecological entropy theory, and analyzing the lack of ecological function in the environmental system and the balance between human beings and the environment are of great significance to inherit the ecological wisdom of traditional villages.

## 4. Exploration of the Protection and Development of Yanfang Ancient Village

### 4.1. Analysis on Problems Faced by the Construction of Yanfang Ancient Village

After sorting out relevant literature on the ecological construction of traditional villages, combining the field investigation and analysis of the traditional villages of Yanfang ancient village, it is found that the key problems hindering the development of Yanfang ancient village are as follows: first of all, under the influence of the idea of “Emphasizing development and neglecting environmental protection; emphasizing production and neglecting ecology”, excessive agricultural production methods and a large number of unreasonable use of pesticides were carried out in the local village, which has great impact on soil, surface water and agricultural products, resulting in certain ecological damages (Zheng & Kang, 2016). Secondly, the rural environmental protection facilities are backward. Although sewer networks have been built in some villages and towns in the process of old house reconstruction, these projects were unreasonable. There are still some villages whose domestic sewage was discharged untreated. Thirdly, there was insufficient investment in the protection and development of traditional villages, and the overall benefits cannot be fully demonstrated. In the process of the protection and development of traditional villages, although some relevant fund policies have been formulated, the special use of ecological foundation has not been strictly evaluated and reviewed, making it difficult to implement in practical work. Fourthly, in the digital era, the establishment of scientific protection system is also far from enough. In the future, it is necessary to break through the static mode of traditional village structure protection activities and realize parametric dynamic protection. In brief, there is still a long way

to go in terms of the protection of traditional villages, and unremitting efforts are required from generation to generation.

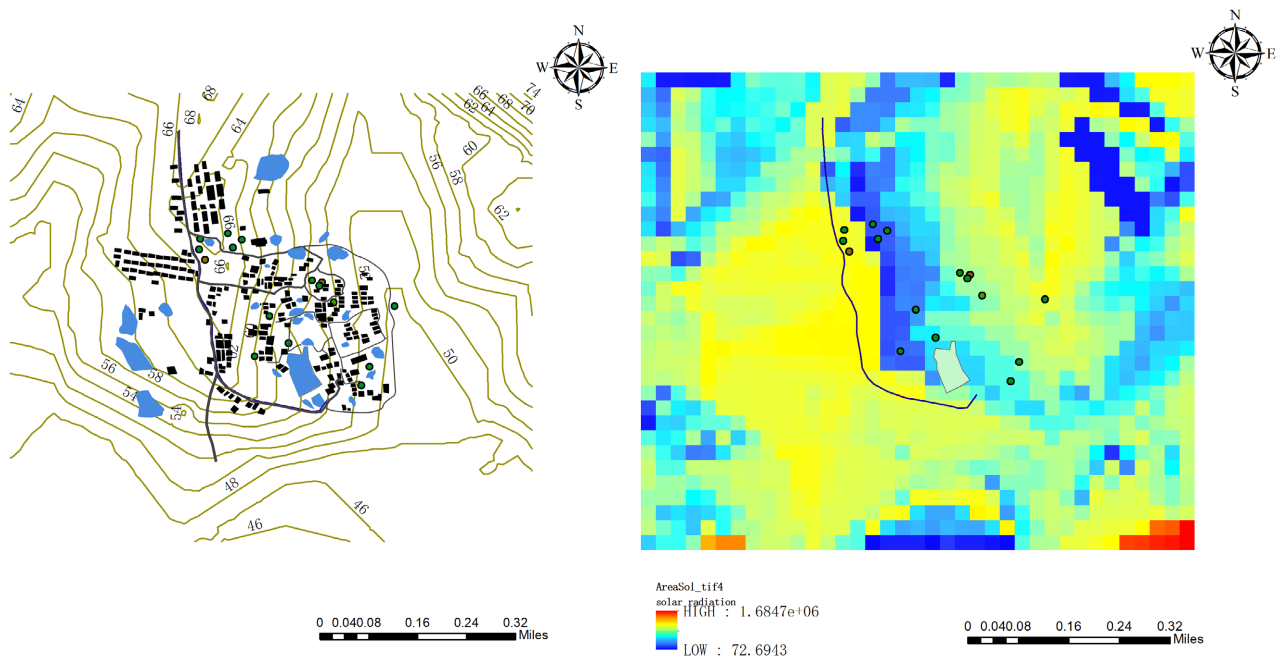
## 4.2. Ecological Wisdom with Local Characteristics of Yanfang Ancient Village

### 4.2.1. The Affinity between the Village with Mountains and Rivers

According to the field investigation in Yanfang ancient village, it is found that in Yanfang ancient village, not only the natural environment is fully taken into consideration, but artificial environment is well handled. The site selection of Yanfang is consistent with the traditional Chinese view of Feng Shui. Back to the mountain and facing the water, it can resist the cold northwest wind in winter. Furthermore, it echoes with Dadong mountain on the East of Ganjiang, with a warm breeze in summer, so that you can enjoy the convenience of boating, irrigation and breeding. There is an open field in front of the village facing the sun, making it convenient for villagers to gain enough sunshine. In brief, located on the gentle slope, Yanfang ancient village is near to water without flood disaster, making the plantation here rich in levels and the cycle of ecological entropy efficient (Figure 4).

### 4.2.2. The Pattern of Scattered Streets and Alleys

The road from the camphor tree forest surrounded in the west to the central pond is the main traffic trunk road in the village, which is about 3 to 4 meters wide. In some important areas, including places around ancestral halls, most drainage ditches are made into underground ditches and covered with stone slabs. After hundreds of years of development, only some fragments of the original road are left, but you can still see the steps made of green bricks on both



**Figure 4.** The pattern of Yanfang ancient village and appropriate solar radiation.



sides of the road and the pavement paved with red slate in the middle. The function of drainage ditches set on both sides of the road is retained, and it still plays a role in people's daily life (Figure 5).

#### 4.2.3. Simple and Elegant Traditional Architecture

The magnificent ancestral hall of Yanfang ancient village not only reflects their respect for their ancestors, but also displays the merits and virtues of our ancestors in terms of architecture and decoration, making future generations remember the virtuous of their ancestors. In addition, Confucian ethics such as the three cardinal principles and five standing orders and the gentleman's style are advocated, which can help enlighten future generations and inherit the patriarchal style and context. The local folk houses open windows above the door and make the cornice wall into "Yuanbao window" (Figure 6), which not only replaces the drainage and lighting functions of the courtyard and saves the internal space, but also solves the problems of coldness and moisture of the courtyard,

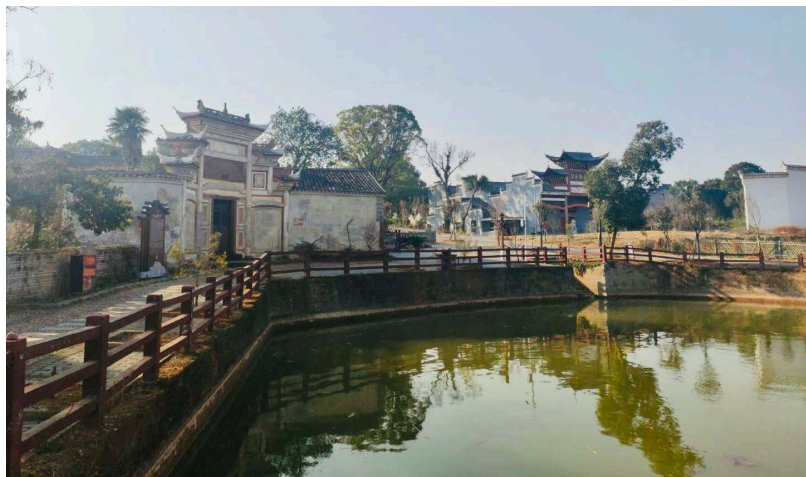


Figure 5. Central pond and road in Yanfang Ancient Village.



Figure 6. "Yuanbao" window above the entrance of a residence house.

such unique architectural form only exists in the central Jiangxi area of Ji An (Li, 2011).

## 5. Practice of Ecological Wisdom in Yanfang Ancient Village

The ecological wisdom generated in the process of mutual adaptation and coordination between Yanfang ancient village and nature is explored, the inheritance and Contemporary Enlightenment of ecological wisdom is summarized, which is then raised to the theoretical level, so as to offer guidance for the ecological protection and construction of today's traditional villages, which is beneficial for the circular and efficient use of energy and the sustainable and balanced development of ecological entropy system (Figure 7).

### 5.1. Planning and Construction Should Be Carried out According to Conditions of the Location and Time

It seems that Chinese traditional villages have been existing for hundreds of years. When ancestors built the village, they fully took the geographical conditions, topography, mountains, water resources management into consideration, and followed the laws of nature under the premise of welcoming, respecting and obeying nature. Firstly, they fully contemplated the follow-up development of the village, and then whether there was room for development, which was forward-looking. Whether it was Yanfang ancient village or other traditional villages, space was left for the survival and development of the population (Xin, Zeng, & Huang, 2019).

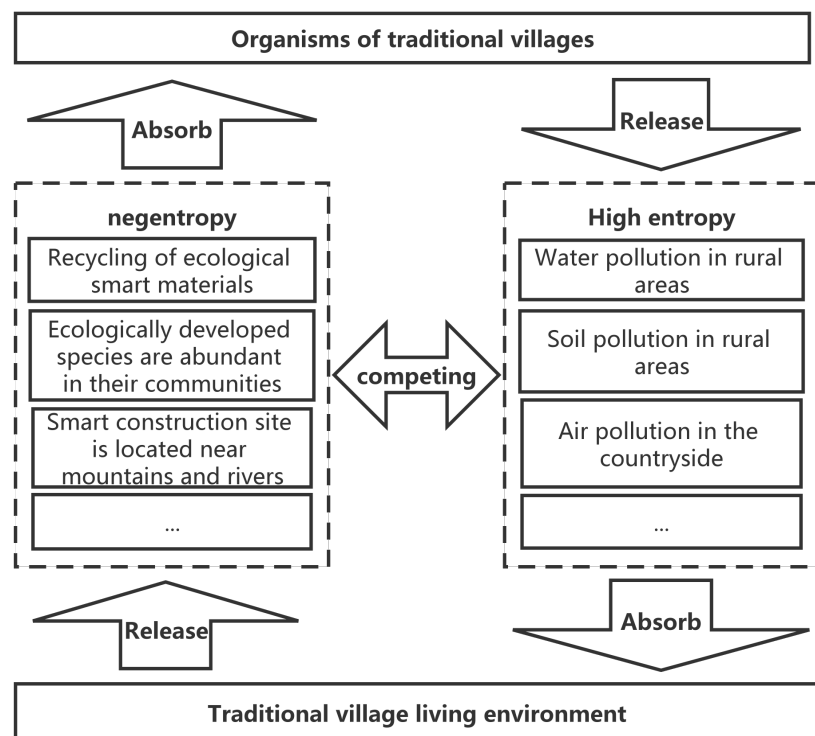


Figure 7. Diagram of ecological balance in traditional village.



## 5.2. Reduce Detrimental Factors and Improve Ecological Resilience

The protection and inheritance of traditional villages should be based on a relatively stable ecological security pattern, in which green space and water system are the essential contents of ecosystem planning. Using the theoretical paradigm of ecological wisdom, first, appropriate human intervention will be carried out to reduce adverse factors like high temperature, rains and flood, water logging and air pollution, increase greening areas and enrich the level of plant community by replanting local tree species; In addition, the structure of biological community can be optimized and biodiversity can be enriched, so as to reduce water and soil loss, improve ecological conservation capacity, and finally achieving the purpose of improving the service function of the ecosystem (Zeng & Zhu, 2018).

## 5.3. Focus on Humanistic Perception and Return to the Original Design

As the common product of regional society, economy, culture and art, cultural landscape embodies a large sense of history and culture. Under the concept of ecological wisdom, humanistic perception should be paid attention to, and the original value of design should be returned in the protection of traditional villages. Simultaneously, appropriate materials should be selected to reduce the damage to nature. While meeting the building functions, environmental protection materials should be used and the treatment methods of construction waste should be taken into consideration. New materials can be developed to replace trees cutting.

## 5.4. Establish Cultural Consciousness and Arouse Cultural Self-Confidence

The wisdom of ecological practice in Yan Fang ancient village embodies the cultural potential of China's traditional village system, with advanced predictable characteristics. The concepts of low-carbon green, reduction, recycling and reuse are still widely recognized in the field of contemporary urban and rural planning and landscape design. Therefore, in the contemporary context, it is necessary to carry out a comparative scientific research on the history of Chinese and Western architectural culture, and pay attention to the cognition and excavation of the value of the traditional wisdom system of Architecture (Wu & Xiao, 2003).

## 5.5. Guaranteed through Systems and Measures

The rules and regulations formulated by traditional villages (including clan rules, community and township rules, etc.) were not laws of the nation, but have the effect of "regulations". It was mandatory, especially related to the construction of village ecological environment, trampling on villagers is accompanied by coercive measures, ranging from education and fine to detention, and even expulsion from villages and ethnic groups. Today, we consider from another pers-

pective whether the ancient villagers focused on warning and prohibition in the protection of the ecological environment, which also plays an exemplary role in today's society in strengthening the punishment of ecological environment damage (Wu & Wang, 2014), all of which are of enlightening significance for the construction and implementation of contemporary traditional villages.

## 6. Conclusion

As the carrier of cultural memory, traditional village records (interprets) the ancient people's lifestyle and social form, and shows us the wisdom of ancient people. From the perspective of the local life experience of the unity of the nature and human beings and the view of construction wisdom from the selection of living environment and the construction of space quality, Yanfang ancient village contains the ecological view between human beings and the nature, and is vividly shown in the balance diagram of ecological entropy system; the system of material circulation and energy flow is reflected. In this paper, the causal cycle between the natural environment and social environment of traditional villages is shown, the historical process and causes of various practical difficulties are clarified, the unique survival and ecological wisdom of Yanfang ancient village are revealed, and the optimal scheme for the integration of human settlement environment and ecosystem are sought through minimal human intervention. The ecological wisdom that emphasizes biodiversity, cultural diversity, behavioral diversity and style diversity is of universal and sustainable significance in both space and time, which can not only guide the construction of traditional villages in China, but is also of reference significance for the practice of ecological construction in other villages and even towns.

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## Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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