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THE ECOLOGICAL AESTHETIC CONNOTATIONS IN CHINESE TRADITIONAL ENVIRONMENT CONSTRUCTION SKILLS

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ABSTRACT

This paper tries to explore the ecological aesthetic connotation of Chinese traditional environment construction skills (CTECS) from ecological benefits, ecological aesthetic experience ways, ecological aesthetic taste. (1) CTECS formed a pluralistic and complete system. Some of them are less damage to nature and consume less resources in the course of their creation, which are beneficial to the sustainable development of human and nature. (2) As two common aesthetic experience ways, far view and static view, which set at the beginning of the construction of CTECS, keep a certain distance between human and nature, which have some ecological significances. (3) The creations of some of CTECS with good ecological benefits have unique aesthetic tastes which are ecological aesthetic affordances. The study mentioned CTECS research working hypothesis highlight new research frontiers potentially extending the aesthetic role of it under a sustainable design approach.

keywords: Environment construction skills, Ecological aesthetic, Ecological benefit, Sustainable development

1. INTRODUCTION

As an intangible cultural heritages, CTECS are all the skills that used in the construction of human settlement by Chinese and inherited by generations from ancient times to the present. They have been formed a pluralistic and complete system and reflect the ability to transform the natural environment, the unique spiritual value and the mode of thinking, which incarnate the vitality and creativity of China. In 3, 000 years ago, the Chinese traditional architecture structural system had emerged(Liang Sicheng, 2013: p.5). The division of CTECS labor has been specialized in Song Dynasty(960-1279 AD). There were some types of work of CTECS: wood, stone, earth, tile, oil paint, color paint, laminating and so on, on the whole, in the wooden factories in Beijing in the Qing Dynasty.

Ecological aesthetic is a new aesthetic paradigm and originated in the middle of the 20th century. Aesthetics theory should be rethought and reconstructed by the ecological principles in *Notes Toward an Ecological Aesthetic* published in 1972 which is the first article used 'ecological aesthetic' as a terminology. Meeker considered that aesthetic theory should combine the artistic creation with the natural creation and break the boundaries between science and humanity(Meeker, 1972: p.120-136). The alternative viewpoint is that ecological aesthetics which opposes the dualism of human and environment is a paradigm of environmental aesthetics. Inclusive unity, dynamic balance and complementarity can explain aesthetic experience and aesthetic quality of designs and other creative products(-Koh, Jusuck, 1988: p.177). Ecological aesthetic should reform the traditional aesthetic concepts and be based on the modern ecological principles when there is a conflict between aesthetic value and ecological sustainable value(Gobster, 2007: p.972). In the mid-late 1990s, ecological aesthetics was introduced to China and aroused great research interests in Chinese scholars. It gradually moves towards the stage of establishing an ecological aesthetics system that is a bridge of China and the West, past and present from the initial stage of calling for the ecological consciousness.

Ecological aesthetics, which integrates ecological knowledge into the construction of aesthetic theory, coincides with the sustainable development of human and nature. As a new aesthetic idea in ecological civilization era, it is a response to the ecological crisis which is become more and more serious in the world. It is an aesthetic redemption of the ultimate goal of ecological ethics(Guo Qingge, 2015: p.218). We must sublimate anthropocentrism and adhere to ecological holism(Zeng Fanren, 2005: p.48). Ecological aesthetics should establish an aesthetics research model centered on the aesthetic that is the three-way model of the aesthetic ability, the aesthetic affordance which are what the aesthetic object offers, and the aesthetic experience(Cheng Xiangzhan, 2016: p.328). The Chinese traditional ecological thoughts provide some references for the ecological aesthetic(Xu Hengchun, 2000: p.8-9).

Some of CTECS can produce the ecological benefits which is propitious to the sustainable development of human and nature. The creations of CTECS are important aesthetic objects in Chinese traditional aesthetic. There are some distinguishing characteristics of ecological aesthetic in the aesthetic experience ways and the aesthetic tastes of CTECS.

2. ECOLOGICAL BENEFITS

Chinese regarded the economic use of natural resources as a virtue very early in ancient times. In ancient books *Shi Ji*, it is recorded that Huang Di, who is the legendary ancestor of the Chinese people, saved water, fire, materials and everything. Later, some dynasties also enacted regulations about environment construction to avoid unnecessary waste, such as *Ying Zao Fa Shi* compiled about 900 years ago and *Qing Gong Bu Gong Cheng Zuo Fa Ze Li* codified in 1734.

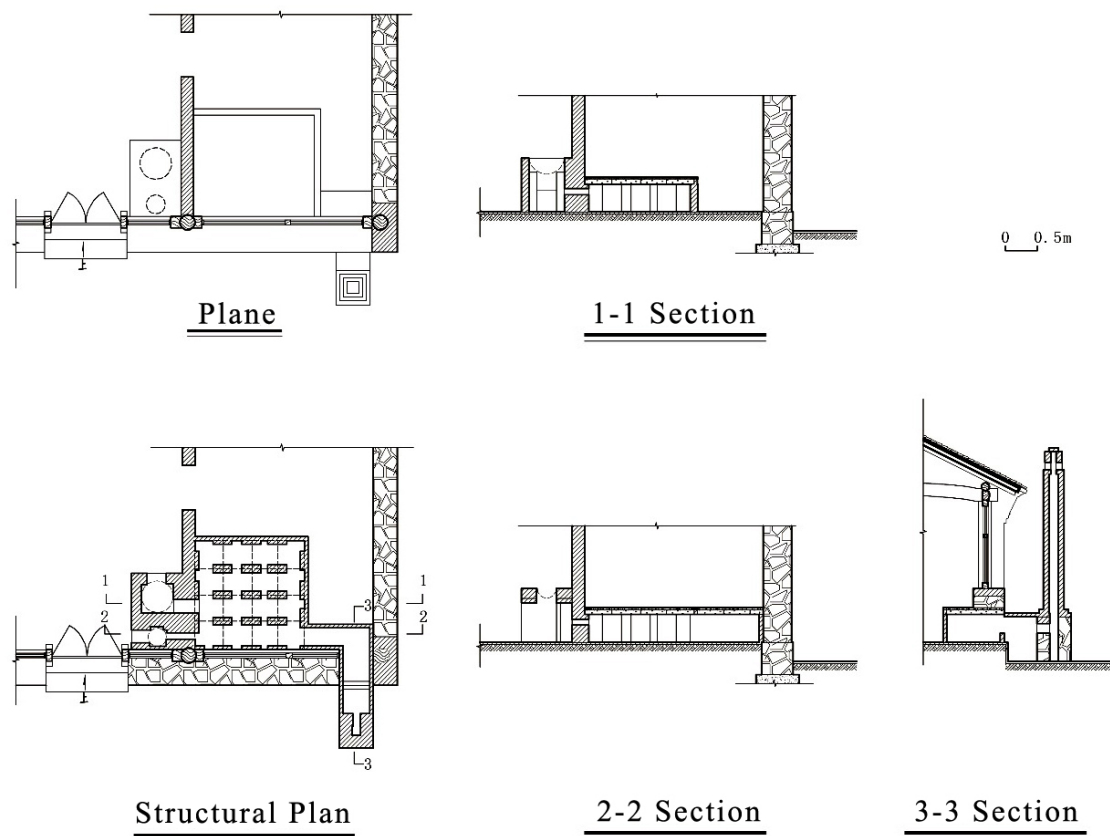
Most of the materials of CTECS are got as near as possible in the locality, especially in the traditional folk houses. Soil, crop stalk and hemp, which are the basic materials of CTECS, are also obtained from the nearby farmland. The way is less damage to the environment, and not consume exceedingly much resources on the material transportation. Some ways of getting materials in the locality destroyed the local natural environment, such as felling tree. But the excessive exploitation is not the inevitable consequence of it. In terms of ecological benefits, getting materials as near as possible in the locality is a ecological construction way.

China is one of the oldest countries to use wood. CTECS have accumulated the rich experience in the use of wood. Even its history is the history of the use of wood. The wood is used on the basis of the characteristics of it. The main materials of the building unit exposed outside are Korean pine, mongolica pine and willow, such as handrail, pillar, door and window. The wood meeting the ground or the wall easily absorbs water and decay. According to the positions, Chinese ancient craftsmen adopted different preservation measures of wood. The common moisture-proof measures include ventilation, brushing tung oil, filling lime or charcoal and so on in Beijing. For example, the air vents with brick carving were fitted on the upper and lower of the walls with wooden pillar inside for maintaining good ventilation. The part of wooden stake sinking into soil was filled with white lime slurry or covered with charcoal.

In ancient China, cooking and heating are the main ways of energy utilization. Kang(Figure 1), which is a simple central heating system, widely set inside the residential buildings in northern China. It is a bed, which people sleep on, made of bricks or soils along a side of the interior. The lower part of kang can be burned with any fuel from outside. The rudiment of it had appeared before the Song Dynasty(Zhao Lisheng, 1996: p.207). In the traditional folk houses in Beijing, kang is generally connecting with the fire stove. In the cold season, people combine the behaviors of cooking and heating by this ingenious design, so as to improve the utilization efficiency of the energy

resource. It is commonly known as “a fire for cooking and heating.” In many villages in Fangshan District of Beijing, water tank is fixed under the ground next to the fire stove of kang. The waste heat from the stove cooking food will heat up the water in the tank to meet the needs of people for daily washing. A recessed space of about 30 centimeters set on a side of kang is used to put shoes in. This can make the shoes dry and warm in winter. These simple and intensive energy-saving technologies of CTECS can reduce energy consumption.

There are some ecological practices for the protection of trees in *Yuan Ye* which is the first monograph on Landscape Art in China written in 1631. Because poplars and bamboos are easy to survive and grow, the new garden should plant them in order to improve the survival rate. The exquisite buildings are available, but old trees are not easy to grow. When the garden is renovated, the old trees should be preserved. If a old tree hinders the construction of the new house, it should be considered taking a step back from the wall to avoid cutting down the tree or cut off some unimportant branches(Ji Cheng, 1981: p.49).



[Figure 1] Observation Map of Huo Kang at No.30 Chaoguan Village, Gubeikou Town, Miyun District, Beijing.
Source: Draw by Tan Changliang, 2019.

If there is water in Chinese traditional garden, people will farm fish. From tall trees, low flowers to goose, ducks, fish and other aquatic animals, they comprise a small and diverse ecosystem, even weeds have a certain ecological significance to survival. This idea that person live in harmony with all creatures is different of the traditional concept of garden-making in the West.

The main materials of CTECS can be decomposed naturally after use. The biodiversity is better conserved in the living environment. In the stages of the creation, such as getting materials, building and using, some of CTECS consciously consume less resource and protect the nature around human settlement. It means that some good ecological benefits are directly produced. When the creation of CTECS enter into aesthetic experience, the idea is consistent with the value orientation of ecological aesthetic.

3. ECOLOGICAL AESTHETIC EXPERIENCE WAYS: FAR VIEW AND STATIC VIEW

In the season suitable for tourism, some scenery spots with beautiful nature landscape are overcrowded. The curious aesthetic behaviors about animals and plants spawned a large number of circus, zoos and botanical gardens. Most of these aesthetic behaviors are the destruction of biodiversity, which is the unsustainable development of natural ecosystem. Therefore, the influence of aesthetic experience ways on the sustainable development of human and nature needs to be focused in the studies of CTECS.

The building forms of pavilion, waterside pavilion, windowed veranda, tower and gazebo are very popular in the creations of CTECS(Figure 2). Their main function is to meet people’s aesthetic needs. The classic aesthetic experience ways of them are far view and static view which are set at the beginning of the garden construction.

Far view is a way keeping a certain distance between the aesthetic person and the nature. Static view means that the aesthetic person needs to reduce his intervention in the growth micro-environment of animals and plants. The two aesthetic experience ways mainly depend on the visual perception of people. Although their aesthetic experience is not optimal, they have distinct ecological significance. Improper behaviors of human including some aesthetic experience ways are the roots of ecological crisis. In many cases, only far view and static view can avoid destroying the natural ecological environment in the course of appreciating beauty. CTECS provide a very useful enlightenment for the study of ecological aesthetics.



[Figure 2] Zhi Chun pavilion at the Summer Palace of Beijing. Source: Photograph by Tan Changliang, 2017.

Aesthetic behaviors have an impact on natural balance. From the perspective of protecting the stability and integrity of whole ecosystem, in the majority of cases, far view and static view are the ecological aesthetic experience ways when people appreciate the beauty of nature. It is surprisingly that they are already inhere in the traditional Chinese aesthetics reflected in CTECS.

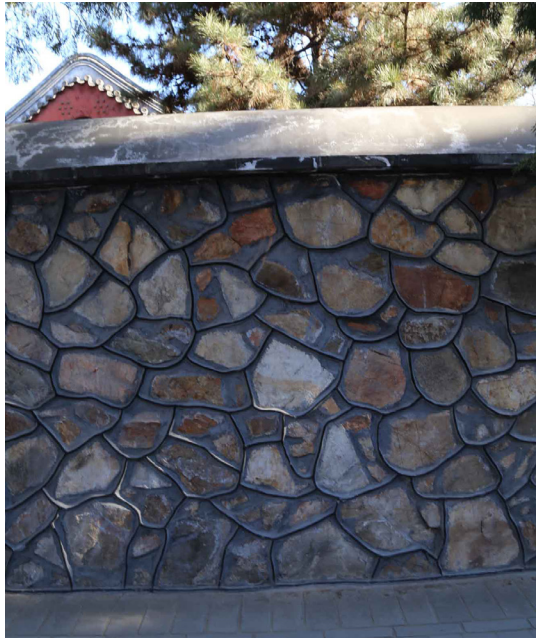
4. ECOLOGICAL AESTHETIC TASTES

As an aesthetic terminology, aesthetic taste, which has a very rich connotation, refer to aesthetic characteristics, aesthetic style, aesthetic preference and so on. There are great diversity in the understanding and the needs of the appreciation of beauty among people, so aesthetic taste is universal and emotional. When faced with a specified aesthetic object, aesthetic behavior may not necessarily happen because of the preferences of aesthetic taste.

In a stable external environment, CTECS will form some aesthetic tastes. The creations of CTECS with good ecological benefits can give people sense of pleasure, which means that they have aesthetic affordance. If these aesthetic behaviors were stable and widely accepted, some aesthetic tastes had naturally formed. In Chinese traditional folk houses and gardens, a large number of raw materials are directly used without deep processing, which makes irregular woods and stones everywhere. At Cuandixia Village of Beijing, the houses and walls are constructed by raw stones. The wall with the drop of more than 20 meters is a visual leading role for the mountain village which is ups and downs (Figure 3). Those practices of CTECS are also common in traditional Chinese gardens and even royal gardens, such as tiger skin wall. The wall, which is a typical form of wall in Chinese traditional architecture, is built with stones of irregular shape. The seams among the stones are filled a few limes. The shape of the seams like the stripe of tiger skin. The appearance of tiger skin wall is simple and wild (Figure 4).

[Figure 3] Cuandixia Village, Zhaitang Town, Mentougou District, Beijing. Source: Photograph by Tan Changliang, 2016.





[Figure 4] Tiger Skin Wall of Huo Kang at the Summer Palace of Beijing. Source: Photograph by Tan Changliang, 2017.

Chinese was infatuated with the curved growth state of plants. In the construction of CTECS, lawn consisted of a kind of grass was not planted and trees, flowers and bushes were not trim to regular geometry shapes. Compared with the West, this aesthetic taste about nature beauty is less artificial and reflects a more ecological consciousness.

Because some aesthetic tastes of the environments which provided by CTECS can improve some good aesthetic experience, They were endowed some ecological attributes. Any aesthetic standard need to be built on a certain form. There are precisely some true forms of ecological aesthetic in these distinctive aesthetic tastes, which close the emotional distance between human and nature and awaken the consciousness of protecting nature.

5. CONCLUSIONS

CTECS are the productions of Chinese agricultural civilization. Although they are not completely ecological, they have many ideas and methods that are beneficial to the sustainable development of human and nature. According to the above analysis, it can be found that the ecological aesthetic connotations in CTECS are mainly in the following aspects. (1) In the process of creation, the good ecological benefits produced by some of CTECS are objective. Some methods can no longer be adopted by the modern environment construction, but those ideas consisting with ecological aesthetic are worthy of our reference. (2) In the process of appreciating beauty, far view and static view set by CTECS can reduce the damage to nature and the creation of CTECS with good ecological benefits formed some delightful ecological aesthetic tastes.

Ecological aesthetic originated from the modern ecological consciousness. As an aesthetic paradigm, it should not be limited to the concepts and the methods of the creation of protecting nature. It should be expand into the aesthetic experience of visual forms. More researches about the typical structure of visual forms, such as symmetry, duplication, should be continued in the future study.

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