

The Green Mode of Parks and Green Space Construction -a Study on the Exemplary Type of Ecological Landscape

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Abstract:

As for the green space construction of the modern parks, landscape design is not only for the aesthetics but its also to promote the spiritual connotation. The appearing of the exemplary type of ecological landscape reflects landscape architects have developed realization and wishes to improve the deteriorating environment and put them into practice. This paper introduces the basic intension of the exemplary type of ecological landscape, and discusses the relative background and ecological aesthetic foundation of the exemplary ecological landscape which appeared under the crisis of urban environment; lists the modern landscape designers practices of the exemplary ecological landscape; studies the developing trend of this practice which becomes multifold along with the reformation of city.

Key Words : Landscape Design, Exemplary Type, Ecological Landscape, Ecological Aesthetics

I. INTRODUCTION

In the next 50 years, China will undergo high-speed urban development. In this period, more and more cities will face the urgent problems such as exasperate environment, disordered city management, complicated human and land relation, declination of green landscape, etc.. On the other hand, along with the improvement of living quality, and peoples environmental requirement on job, habitation and living will constantly increase.

There is no doubt that park and green land construction in city is indispensable in improving the urban environment quality. As for the park and green space of modern city, the function of landscape design

is no more only to improve the aesthetic, or just to create a place for the citizens to rest and entertain, but also utilize modern science and new landscape technology appropriately introduces nature and humanity elements to responses to conflict among human race, city and nature brought by high-speed urban development. Landscape design will go through multiple phases before perfecting. Accordingly, landscape designers gain unprecedented chance to annotate landscape from various professional views and to try many landscape expressing forms suitable for Chinese city development. In this process of exploration, the exemplary type of ecological landscape appeared. It reflects the meditation of modern landscape architectures about the exasperate urban

living environment, and is a construction model of urban park and green space responding to Chinese urban development which has been found by the designers in the process of search.

II. BACKGROUND OF EXEMPLARY TYPE OF ECOLOGICAL LANDSCAPE

1. Chinese Urban Development Leads to The Appearance of Exemplary Type of Ecological Landscape

Compared with 1960s, western industrialized countries enter the so called "post-industry" society. Since 1980s Chinese cities also has entered the period of second and third industry transform types, the declined industry, business and service area begin to rebuild and revive, and pursuing the economic benefit becomes the main aim of urban development.

In both east and west China, the city expands rapidly and the urban development rises quickly. This process has brought negative effect on the living environment which is indispensable for peoples existence. The overuse of resources and waste of energy driven by profit seriously destroys the original environment structure of city and its outskirt.

The change of environment structure requires new form of urban landscape. This new landscape form must be able to stimulate the benign development of urban ecological environment structure. In this condition, many landscape architectures try to adapt western mature model of landscape ecological planning to responding this requirement. Landscape ecological planning model is an important ecological programming approach which considers comprehensively the ecological and social process of land-

scape and the spatio-temporal conjuncting relation between them, and employs the knowledge and principle of landscape ecology to manage and supervise landscape, so as to not only maintain the structure, function and ecological process of the landscape but also enable the sustaining use of land¹⁾. This landscape model can undoubtedly play an important role in the development of urban environment, so there has been a vigorous mass campaign of landscape ecological planning in many cities of China, many green lands being hastily reconstructed attempting to give play to the effect of ecological landscape. However, affected by many elements such as the structure of the city itself, programming aim, construction cost and the complexity of this new form of landscape itself and the relative lag of Chinese urban economy, etc., the practice of directing the landscape design of urban park green land with landscape ecology is greatly restricted. At the same time because that adapting landscape ecological planning asks for the participation of large-scale land, while the usable land resource in city of China is relatively in short, this landscape designing form is not able to play its supposed role.

In this condition, the development of Chinese urban landscape construction needs to find a new way. Landscape designers began to introduce the exemplary type ecological landscape into park green land programming.

2. The Exemplary Type if Ecological Landscape is the Embodiment if The Designing thought if Humanism

The ultimate aim of urban landscape is to satisfy the need of human race, that is, "based on human being." The rise of the standard of contemporary people's material living is sure to lead to peoples pursuit of higher level spiritual life. The pure cultural

implication and aesthetic value expressed by the traditional landscape and its ordinary function can no longer satisfy modern peoples requirement and pursuit. They hope that landscape in living environment can transfer more clear image and function, and new landscape form can satisfy spontaneously higher standard of art, economy, technology and inner thought to the largest extent. The exemplary ecological landscape just has this educational signification. It conveys to people the relationship between environment protection and ecology using the means of ecological technology and promotes peoples deep-level cognition of modern urban landscape.

III. THE CONNOTATION OF THE EXEMPLARY ECOLOGICAL LANDSCAPE

The so called exemplary ecological landscape means the landscape creating form which is typical representation in one ecological technological field and combines the artistic technique and ecological technology. It endows the landscape with ecological aesthetic characteristic and takes it as an example to exhibit the meaning of ecological landscape, so as to awaken peoples sense of protecting living environment. The exemplary type of ecological landscape fully combines the two main function of urban park green land, that is, the landscape appreciation and educational significance, having the following characteristics:

1. Exemplary

The main value of the exemplary type of ecological landscape is not that it can brings to the urban environment around it the ecological effect which has absolute signification, but that it has clear exemplary

signification, foreseeing conveying to ordinary acceptors ecological information with educational signification. This conveying of ecological information is sensible and visual, and easy to be understood and accepted by the masses.

2. Representative

The ecological technology applied to the exemplary type of ecological landscape should have typical representative meaning in some field. It may have typical characteristic in manipulating means or mechanism. For example, the Flowing Water Park beyond Chengdu Funan River contains a whole set of exemplary landscape which is characterized by the technology of ecological water disposal. This type of ecological landscape usually has detailed explanation and label system of principle and mechanism of ecological technology.

3. Developing

The ecological technology used by the exemplary type of ecological landscape and its exemplary characteristic are not unchangeable, but have the characteristic of exemplary type in some period, and the ecological technology considered mature at present will exit the stage of exemplification along with the change of material instruments and development of technology in the process of history.

4. Humanistic

Modern exemplary type of ecological landscape is not only an exhibition of scientific technological instruments, but also the reflection of humanism. Landscape construction has always contained peoples understanding of environment and society and their requirement of improving natural environment since

the ancient times. Modern exemplary type of ecological landscape reflects the meditation of some responsible landscape designers on the problems such as some absurdness in industry type transformation and exasperate urban environment in the background of high speed citification. They hope to find designing means to respond changes of urban environment, and have made practical exploration of improving urban environment in exemplary form using ecological principle and technology.

5. Having the Characteristic of Ecological Aesthetics

Landscape artistic form is the externalization of landscape aesthetic sentimentality. The landscape beauty reflected by the exemplary type of ecological landscape expresses the idea of ecological aesthetics. The study of Chinese ecological aesthetics started from 1994²⁾. Its essential is to study aesthetics with ecological principle and its extension in the field of aesthetics. Specifically speaking, ecological beauty is the key ideology proposed by ecology. It means the aesthetic characteristic of the ecosystem itself, which does not only include natural ecological beauty, but also the social ecological beauty and spiritual ecological beauty³⁾. The present exemplary type of ecological landscape still focuses on the field of natural ecological beauty and social ecological beauty.

IV. THE PRACTICE AND FUNCTION OF EXEMPLARY TYPE OF ECOLOGICAL LANDSCAPE

In modern cities of China, the practice activity of exemplary type of ecological landscape has developed gradually since the end of the 20th century. Early in

the 1990s the landscape made of worn-out tires and reclaimed tins in "the green world" of Shenzhen, Guangzhou is the rudiment of the landscape designers' application of their understanding of exemplary type of ecological landscape, and causes great reaction in contemporary landscape design field. After that different forms of exemplary type of ecological landscape appeared in other areas of our country.

1. Chengdu flowing Water Park

In 1998 the completion of the flowing water park in Chengdu city which is the capital of Sichuan Province in western China symbolized the gradual maturity of the development of the exemplary type of ecological landscape in cities. It is the first theme park which calls for the protection of water environment and its value as a big school of environmental education is immeasurable.

The flowing water park shows the purifying process of the branch of Jin River. The designer made design from two angles. The first is to build the complete artificial marsh ecosystem. Although only 200 cube water can be purified each day, the rivers and pools involved in each step of the purification are all exhibited. The processes such as the deposition, absorption, redox and microbial decomposition of sewage are very clear. The second is that the designers set up explanation posts of different forms, using the way of Chinese and English comparison to show how to purify water through the natural effect.

This design is good at attracting visitors and minutely explaining to them the process of water purification. Especially for the visiting children, it conveys to them unconsciously the significance of ecological purification of water.

In order to exhibit ecological beauty, the park is designed into the shape of fish, close to the river, using the phrase "fish and water are inseparable" to

compare that water is the source of life, and also symbolizes vitality and health. The visitors often enter from the mouth of the fish and walk towards the tail of the fish. The whole process of visiting is full of healthy park aesthetic attitude.

The city-planning water purification project of flowing park is rare example of environmental education, for building ecological disposal place of water source in the center of city is rare even in the world. The flowing water promotes citizen's love and protection of natural environment through each design element while satisfying their enjoying of natural favor and exhibit an exemplary landscape model of nature protection.

2. Beijing Olympic Forest Park and Central Zone Landscape Designing Competition

In the international competition of Beijing Olympic Central Zone and central Zone held by Beijing Planning Commission in 2003. The exemplary type of ecological landscape appeared in all designing programs of the competitive bidding parties.

In "flower islet" scenic spot of the program called "the axes leading to nature" with the theme of exhibiting marsh water disposal, there is special educational base of science, to exhibit the process of marsh water purification. In the program Beijing Turen landscape programming academy there is also water recycling system which has educational meaning, with water aqueduct as its main body to raise the lake water of forest park. Beijing Association of Landscape Architecture adapts the terrace form and uses "middle water filter system", water enters the lake area after being filtered in marsh. The small marsh is near the lake, adapts "lake water self-cleaning recycling system". Besides, two solar energy sewage disposal systems are built to develop ecological exemplification education together with the

ecological exhibiting hall.

The "dragon and phoenix symbolize good luck" is co-offered by Beijing Institute of Landscape and Traditional Architectural Design and Research and URS Australian Co., Ltd. This program designs exemplary type of ecological landscape with the theme of "environmental protection education center". environmental protection education center is located in the central place where the lake, marsh and forest have a common boundary, and makes the visitors able to watch the operation and protection of environment and ecosystem on line through the computer system which connects with all the relative areas in the forest park. The environmental protection itself is used as an exemplary ecological landscape to exhibit construction model of energy self-support. It explains how the new construction reduces its depend on water supply through rain collection, reclaiming system and self-cycling sewage disposal system⁴⁾.

V. STUDY ON THE DEVELOPING TREND OF EXEMPLARY TYPE OF ECOLOGICAL LANDSCAPE

1. The Multifold Tendency of Exemplary Landscape Form

The existing exemplary type of ecological landscape mainly focuses on the fields of water disposal and recycle and reuse, forming some marsh landscape or directly exhibit landscape of the reuse condition of wastes. The former is to reproduce the landscape model in nature through landscape artistic means combined with ecological principle; the latter is the probation of reuse form of production of social civilization.

It can be foreseen that along with the development

of science, the various ecological forms included in exemplary type of ecological landscape are sure to develop towards diversification, and will introduce more advanced technological means. Landscape designers can more deeply understand and explore the ecological process of human being's life and nature's operation, to introduce multi-element and multifold ecological scientific-technology. For example, the use of permanent energy such as solar energy, wind energy and geothermal energy in park, is taken as an example together with corresponding landscape carrier to show its value in use.

2. Exemplary Type of Ecological Landscape Will Have Instructive Meaning for the Development of City

In cities the power of landscape design can not only influence individual action, but also can advocate the city leaders. The exemplary type of ecological landscape promotes the mass' recognition and understanding of ecological idea while pleasing them. In fact, exemplary type of ecological landscape is helpful drug for urban construction and will have greater effect on urban decision makers to persuade them to apply more ecological means in the construction and revival of Chinese city.

3. The Development of Ecological Aesthetics Will Have Influence on the Formation of Exemplary Type of Ecological Landscape

The development of society pushes the change and progress of aesthetic consciousness. The exemplary type of ecological landscape could not develop without the direction of park artistic aesthetic. After all, park landscape art is "humanized nature and humanization of nature".

The ecological aesthetic art exhibited in present

exemplary type of ecological landscape is direct and temporary. It is not enough to express the natural formal beauty of the ecosystem itself, so the landscape designers will create deep-level social ecological beauty and spiritual ecological beauty of exemplary type of ecological landscape with more active attitude considering each aesthetic angle and the relation between society and culture.

VI. CONCLUSION

The Nobel prize winner Mr. Siglize once said in World Bank's China representative office in July 2007 that "the most influential historical events at the beginning of the 21st century is the citification of China in addition to high technology."⁵⁾ The appearance of exemplary type of ecological landscape is the inevitable result of urban development of China, and the breach of traditional design model urban park green land landscape which is looked for by Landscape designers. It should be recognized that exemplary type of ecological landscape is after all a new landscape form, and has not been fully developed. It overemphasizes the content of function and practicability and the design means it adapts and the aesthetic expressive power need to be improved. Its appearance conforms to the development of Chinese urban citification, proposes an example of solving the relationship between human being and nature of this time, but it can not replace the other landscape artistic forms. The exemplary type of ecological landscape strengthens peoples understanding of city and environment, at the same time it will drive the development of urban park green land construction through its exemplary and educational function.

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