

Design Strategy of Sustainable Ecological Landscape Returning to Normal Life

Liqun Guo^{1*}, Yiqiu Wang¹

¹ School of Arts and Design, Wuhan Institute of Technology, Wuhan, China

Email Address

46732899@qq.com (Liqun Guo)

*Correspondence: 46732899@qq.com

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Abstract:

The essence of ecology is to ensure the state of life and survival. Ecological design is not human centered, but should be environment-oriented. Ancient landscape and life are closely related, ecological landscape is presented as a normal life. Learn wisdom from the ancients, combined with the current situation of ecological environment, this paper puts forward the ecological landscape design strategy to make the ecological environment return to the original, healthy and suitable for life.

Keywords:

Sustainable, Ecological Landscape, Normal Life, Design Strategy

1. Introduction

With the deterioration of urban environment and the natural resources shortage, the natural environment that people live with day and night is becoming increasingly tired. As the biggest beneficiary of the environment, human beings can no longer sacrifice the environment for profit. As the most intuitive reflection of environmental system, ecological landscape construction and restoration need to be put on the agenda.

2. Interpretation of Ecology - Coexistence of “Life” and “State”

“Any design form that is coordinated with the ecological process to minimize the damage to the environment is called ecological design”. This is the definition of ecological design that most people can understand and accept. From another perspective, this paper interprets the ecological split into “life” and “state”. Life means life and survival, which is alive and contains a kind of vitality. Its opposite side is decaying, and dying and losing vitality. “State” means state, posture and normality, and its opposite is metamorphosis. Ecology describes a state and normality that can make people live and give birth to life. Based on this, we can judge whether the ecological design which is full of people's life has touched the essence of ecology, that is, is it a living state or a dead metamorphosis?

In this way, ecological design is no longer people centered, nor is it the supremacy of Party A's requirements and the promotion of economic benefits. Naturally, it is not flattering the aesthetic and visual experience of some artists. Ecological design should take the environment as the center, human beings as the reciprocity, should play the

role of respect and maintenance, and use certain means to adjust when necessary to ensure the normal and healthy operation of the ecosystem [1].

3. Current Situation of Ecological Environment

Since the Second World War, the West has rapidly entered into urbanization. Cities, large and small, have sprung up like mushrooms, and rural population has poured into cities and towns. The beginning of the Industrial Revolution has made cities and towns develop rapidly, but at the same time it has accelerated the deterioration of the environment. Since the reform and opening up, with the economic development, the scale of domestic cities and towns is also expanding. Today, China's cities contain about 60% of the national population, but the ecological environment is not optimistic. In more than 600 cities in China, more than 400 of them are short of water resources, and more than half of the rivers have been polluted and unable to continue to supply drinking water. According to the fifth national desertification monitoring results revealed by the press conference of the Ministry of ecological environment on June 2 of this year, the desertification land area in China has reached 2.616 million square kilometers (accounting for 27.2% of the total land area), and the sandy land area has reached 1.7212 million square kilometers [2]. In recent ten years, the area of desertification land has been improved, but it is still not optimistic. At the 19th National Congress in 2017, President Xi Jinping pointed out clearly that adhering to the guiding ideology of harmonious co-existence of man and nature, establishing and practicing the conviction that lucid waters and lush mountains are invaluable assets. In the past, we traded lucid waters and lush mountains for mountains of gold and silver, and GDP soared, at the cost of serious damage to the ecological environment [3]. Nowadays, the detours we have taken can not be taken again

4. Ecology - the Survival Wisdom of Ancient Times

As early as before the modernization of society, people still lived a simple life of working at sunrise and resting at sunset. At that time, the ecosystem was much more complete and healthy. Even if there were natural disasters, the resilience of the ecosystem itself was enough to heal the wounds and metabolize the ugly traces. It is in the process of symbiosis and running in with the natural environment that our ancestors have accumulated rich living experience and wisdom. The creation and activities of ancient people for adaptation and survival can be regarded as outstanding ecological landscape design. It is precisely because they constantly explore the way to survive, and follow the natural rules, that they wrote an excellent epic of ecological sustainable development [4]. In ancient times, villages, houses, fertile fields, barking dogs and insects all closely conform to the ecological concepts such as species diversity, adapting measures, local materials, and soil and water conservation. Therefore, the ancient ecology is actually their way to survival and also their life state. The lush earth and simple and pure life at that time were exactly what modern people yearned for.

Today, the world has already changed. We can't stay at the living state and production level thousands of years ago. However, the ideas provided by our ancestors make us have traces to follow in the current sustainable ecological landscape design [5].

5. Ecological Landscape Design Strategy

From a macro point of view, the ecological meaning of landscape design means that the design respects species diversity, also respects the original appearance and objective law of the living things and the environment on which they depend, so as to improve the living environment and maintain the stable and sustainable development of the ecosystem. From the micro point of view, every individual in the society can play a role in the restoration and construction of the ecological environment. Through the spread of ecological culture, the ecological value system can be constructed, and people's thoughts and behaviors can be influenced and changed. Everyone can become the maintainer of the ecological environment. Ecological design is not only the unilateral responsibility of designers or environmental protection departments, but also requires the joint participation and efforts of all.

5.1. Respect the Local Environment and Cultural Traditions

First of all, the design should be deeply rooted in the local natural environment. The environment in different places is different, which leads to the diversity of species. The reason why native tree species can thrive is because it adapts to the local natural environment. Nature is the best planner and designer. It determines what plants should grow in what environment. Respecting the natural laws, protecting and utilizing native plants can shorten the adaptation period of plants to the environment, maintain the stability and integrity of ecological communities, save a lot of transportation costs, and it is good for later maintenance.

When facing a piece of land, we should first understand what kind of landscape such a place allows us to do, rather than wishful thinking. In landscape design, we should proceed from the current situation and design based on the local natural conditions such as water, soil and climate. This is an inevitable requirement of ecological design and an effective way of environmental sustainable development. As the saying goes “The unique features of a local environment always give special characteristics to its inhabitants”. As well, give special characteristics to its landscape. In this regard, the Qijiang Park in Zhongshan City, Guangdong Province has submitted a perfect answer sheet in the water landscape design. Affected by the sea tide, the daily water level of the Qijiang River can reach 1.1 meters. When the water level drops, the mud will be exposed and it is difficult for people to get close to it. How to build a platform under such complicated conditions can let visitors contact with nature. The ecological method adopted by the designer is to build 3-4 retaining walls at the bottom of the lake between the highest and lowest water levels to form a terrace planting platform, the trestles with different heights are set in the water. The space enclosed by the trestle is used to plant hygrophyte and aquatic plants. The height of the trestle is staggered to meet the ornamental and hydrophilic needs at different water levels. Thus, an excellent ecological practice is completed on the basis of respecting the local environment. (Figure 1)



Figure 1. Water landscape design of Qijiang Park, Zhongshan City, Guangdong Province.
(picture source: www.gooood.cn)

Landscape is the complex carrier of nature and culture. The social culture bred by the land must include rich landscape connotation, which is an inseparable whole. The local traditional culture often contains the wisdom of harmonious coexistence of human and environment, which should also become the design source of designers [6]. In the process of ecological design, rooted in the local natural environment and cultural tradition, not only can protect the ecological nature of the natural environment, but also can protect the spiritual and cultural ties of coexistence of human and environment that have been passed down for thousands of years [7].

5.2. Pay Attention to Saving Resources and Recycling Materials

The natural resources on the earth include renewable resources and non-renewable resources. The excessive use of non-renewable resources will eventually lead to global energy depletion and can not be recovered in a short time. Moreover, energy consumption such as oil and coal will also bring very serious environmental pollution, which is irreparable. Nowadays, new energy vehicles and solar lighting are very common. With the continuous progress of technology, more and more new energy will enter the public's vision. Landscape designers can explore and use these technological achievements in a forward-looking way, so as to seek more long-term benefits for the ecological environment and human society.

Based on the sustainability of the landscape, there is also a very important point is the economic ecology. Recycling can not only avoid pollution, but also save resources and reduce the cost of landscaping. There is a similar example in nature. The autumn leaves return to the soil after the decomposition of microorganisms and become the nutrition of the trees in the next spring. Another example is the famous ecological agriculture model. In a closed circulation system, feed can be used to raise poultry. The feces of these poultry enter the biogas digester, and then biogas is used for living energy, cooking, lighting, etc. biogas residue and slurry can be used to feed fish, fish pond mud and part of biogas residue can also be used for fertilizer fields. Such an ecological chain is closely linked to maximize the utilization, which is an efficient ecological practice. Nowadays, our development trend is a one-way cycle, production and life produce a lot of garbage and waste, but there is no effective treatment of these wastes, not only causing pollution, but also causing great waste. In eastern Zhejiang, there is a traditional technique of recycling old bricks and tiles to build new walls. It is made of recycled waste building materials mixed with mortar and laid in layers, very artistic and creative, and it can save energy. Ningbo Museum has adopted this technology, and has successfully carried out modern transformation of traditional technology, which makes the building achieve the special regional cultural significance, at the same time; it saves resources and costs, and realizes the concept of economic ecology and sustainable development.

5.3. Combining Landscape Construction with National Education

As ecologist Aldo Leopold said, the essence of leisure is to create and enhance the public's awareness of the natural environment [8]. Therefore, the purpose of leisure and recreation is not to construct roads in beautiful countryside, but to establish cognition and love of natural environment in human mind. It is an interpretation of educational function of ecological landscape. The environment we live in includes not only the natural environment system, but also the social and cultural system. The relationship between human beings and the environment includes explicit physical contact and experience, but also implicit ideological and cultural influence. At the

same time of improving the natural environment and restoring the ecological system, Combine the landscape construction with the education of the whole people, make school education and natural education go hand in hand, realize the transformation from “material development” to “heart development”, carry out the national ecological education, construct the ecological value system, and improve the ecological consciousness of the whole people.

The living water park in Chengdu City, Sichuan Province, China is a typical ecological education theme park. The original intention of the park is to solve the Funan River’s environment that has been seriously damaged. Through the filtration of water by animals and plants, the circulation of water, and the use of anaerobic tank, the purpose of ecological transformation and purification of sewage is achieved. The Environmental Protection Education Hall in the park combines the cases of ecological practice with ecological knowledge to deepen the understanding and learning of ecology for visitors. It is an important base for ecological education.

Ecology is not a metaphysical, ethereal concept. It concerns everyone. The decisions that everyone makes every day will have more or less impact on the environment, including the choice of vehicles, the treatment of garbage, the use of water and so on. Ecology is an extremely complex subject, covering from astronomy to geography, society and humanities. It is a comprehensive interdisciplinary subject. Ecological design is not a task that can be completed by landscape designers alone. It needs to gather the wisdom of everyone, take the advantages of each family, make concerted efforts and strive together [9].

6. The Influence of Ecological Landscape on People

Gropius, the founder of Bauhaus, once said: “architecture can help to form a lifestyle” [10]. People will be affected by the living and living environment imperceptibly, both physically and psychologically. For example, a simple and capable office decoration can greatly improve the work efficiency of workers, a convenient channel can optimize people’s travel plan, and a reasonable structure of the seat can improve the comfort of people's experience. With the help of space construction, by constructing landscape space, landscape designer can awaken people's awareness of environmental protection and crisis, guide people to form ecological values and lifestyle, and realize the requirements of sustainable development, make the landscape live up to its essence of survival art.

7. Conclusions

Ecological landscape design is a process, not a product. It must go through a long time process in which most people participate. In this process, people know more about nature and their position in nature, and more actively coordinate the relationship with nature, so as to more continuously coexist with it. In the last century, the West has already had a painful lesson of sacrificing the environment for economic development. Modern designers should take this as a warning. In the process of design practice, whether it meets the requirements of ecological concept and sustainable development will become the touchstone of landscape quality.

Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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