Research on the Development Status of Eco-architecture Based on Symbiosis Theory

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Abstract: Ecological architecture is a new thing for modern construction projects. With the gradual improvement of people's attention to the ecological environment, under the advantage of ecological architecture with good ecological characteristics, ecological architecture has become an important direction for the development of the future construction field, and is consistent with the strategic goals of sustainable development. Therefore, the application of ecological buildings has become an important force to promote the development of China's construction market. The idea of ecologicalization is the orientation and inevitable choice of human beings. The ecologicalization of urban and architectural design is an inevitable trend of historical development. This paper first introduces the current research status of ecological architecture design in China, and then summarizes the problems arising in the development of ecological architecture. Finally, it proposes corresponding solutions and improvement measures. It aims to protect the urban and rural ecological environment and promote urban and rural sustainable development through research results. The role of development to achieve sustainable development of urban and rural ecological buildings.

1. Introduction

Since the 1990s, China's urbanization has entered a stage of rapid development, China's economy has developed rapidly, and the level of urbanization has reached a certain height. At the same time, the urban and rural space in China has been greatly affected, the urban and rural ecological environment has been seriously damaged, the urban and rural dualization phenomenon is obvious, and the waste of land use is serious[1]. In order to improve this situation, the state has promulgated relevant laws and regulations and put forward policies to encourage the planning and development model of ecological civilization. New urbanization has put forward new requirements for urban and rural planning and construction, and planners are constantly seeking advanced planning concepts and means[2]. In this context, the concept of symbiosis has been applied to the planning and design of ecological architecture, to achieve the harmonious development of urban and ecological landscape, and to closely link landscape with environment, culture, society and economy.

The ecological architecture under the symbiosis concept integrates the symbiosis concept into the planning and construction of ecological architecture, changes the traditional unilateral planning of architecture, combines natural ecology, culture, society, green space, economy, layout and infrastructure, in order to protect the ecological environment, embody and publicize culture, put people first, coordinate urban and rural green space system, modernize industrial structure, optimize urban and rural layout, and comprehensive utilization of infrastructure is the development strategy to promote the formation of urban and rural landscape, the connection between urban and rural areas, the protection of ecological environment, and the sustainable development of urban and rural areas, so as to achieve the symbiosis of ecological building system[3].

Firstly, this paper starts with the research of related theories, clarifies the basic connotation of basic theories and related theories, and analyses their relevance to this paper. Secondly, using symbiosis theory, this paper analyses and studies the symbiosis status and symbiosis meaning of ecological architecture, and puts forward the guiding ideology and principles of planning and

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construction of ecological architecture, which points out the direction for the development of symbiosis of ecological architecture[4]. After that, the symbiosis theory is applied to the development of ecological architecture planning and construction, and the corresponding countermeasures are putting forward.

2. Problems in domestic ecological buildings

2.1. Lack of correct understanding of ecological architecture

There are many different versions of the concept of ecological architecture in the academic circles at home and abroad, but the core content is consistent. According to the local natural environment, the relationship between architecture and other related factors is reasonably arranged and reduced, and the use cycle of the building is reduced. Nature's injury is the core concept of ecological architecture[5]. This process involves saving land, saving energy, conserving resources, extending the life of buildings, and also involves recycling of raw materials, reducing waste generation, non-toxic and non-polluting. content. Some people think that ecological architecture is the possibility of greening the interior and exterior of a building or simply building energy, and the possibility that the plane of the building will be re-divided in the future. Obviously, these views are not comprehensive in understanding ecological buildings.

2.2. Economic rationality of ecological buildings

In terms of economic rationality, eco-building is a kind of project that needs more investment in the early stage but the rate of benefit recovery is relatively slow. More importantly, the return from the large amount of investment in ecological facilities in the early stage can not be put into the pockets of developers, but be shared by society and users. Even so, it generally takes several years to see that the value of saving resources is greater than that of investing in ecology. All of these have directly caused decision makers and developers to hesitate or fail to take care of the ecological architecture.

2.3. Lack of extensive practice of ecological architecture

In the past ten years, the theoretical research and exploration of ecological architecture in China have been strengthened continuously. A large number of monographs and papers on ecological architecture have been published and published, which has played a positive role in promoting the promotion and healthy development of ecological architecture in China, and the concept of sustainable development has been deeply rooted in the hearts of the people. However, at present, the research on ecological architecture in our country only stays in the theoretical framework, design principles, the integration of ecology and architecture, the introduction of foreign advanced experience and other theoretical research, and lacks the corresponding exploration of computer simulation, engineering practice, environmental effect testing and analysis[6].

3. The value of ecological architecture based on symbiosis theory

3.1. Ecological value of environmental protection

Applying the concept of symbiosis to landscape planning and design is based on the premise of protecting the ecological environment, and changes the traditional “first map back” development model to “first bottom and back map”. Urban and rural landscape planning should pay attention to protecting the ecological environment and preventing the destruction of urban and rural space by pollution. It is necessary to vigorously strengthen the construction of ecological and environmental protection facilities in urban and rural areas, and vigorously strengthen urban and rural greening and environmental sanitation construction to improve the comprehensive natural environment of urban and rural space.

3.2. Promote the overall value of urban and rural

Eco-architecture symbiosis aims at advantageous production, convenient life, promotion of circulation and common prosperity. It promotes and serves the adjustment of urban and rural structure by adjusting land use, optimizing the distribution of productive forces, and rational layout of urban and rural construction, so that rural areas can have modern science and technology and high-quality services of cities, and cities can have them[7]. The good ecological environment of the countryside will make overall planning of the city and the countryside, and ultimately achieve the ideal state of coexistence, coexistence and co-prosperity of the city and the countryside.

3.3. Increase modern economic value

Based on the strategic requirements of sustainable development and the principle of "cherishing and rationally utilizing every inch of land and effectively protecting cultivated land", the symbiosis of ecological buildings should rationally utilize wasteland and sloping land to improve the utilization level and efficiency of constructed land, so as to achieve the high efficiency of land use and increase the efficiency of land use[8]. Add the economic value of land use. In the landscape economy, we can increase the value of modern economy by increasing the content of science and technology, increasing the industrial chain and other means, using landscape and creating landscape.

3.4. Inheritance of historical and cultural values

The history of Chinese celebrities has a long history, and thousands of years of history and culture are contained in every landscape of the land of China. The urban and rural landscape is not only the external manifestation of nature, but also the carrier and performer of Chinese history and culture. The history of China is not only found in books, but also in the landscape of China. Buildings, gardens, essays, murals, etc., various cultural symbols are embedded in the urban and rural space of the country in a distinctive form[9]. The symbiosis of ecological architecture aims to integrate culture and landscape. While constructing a good visual effect, it inherits the historical and cultural values of the nation and reflects history, culture and characteristics.

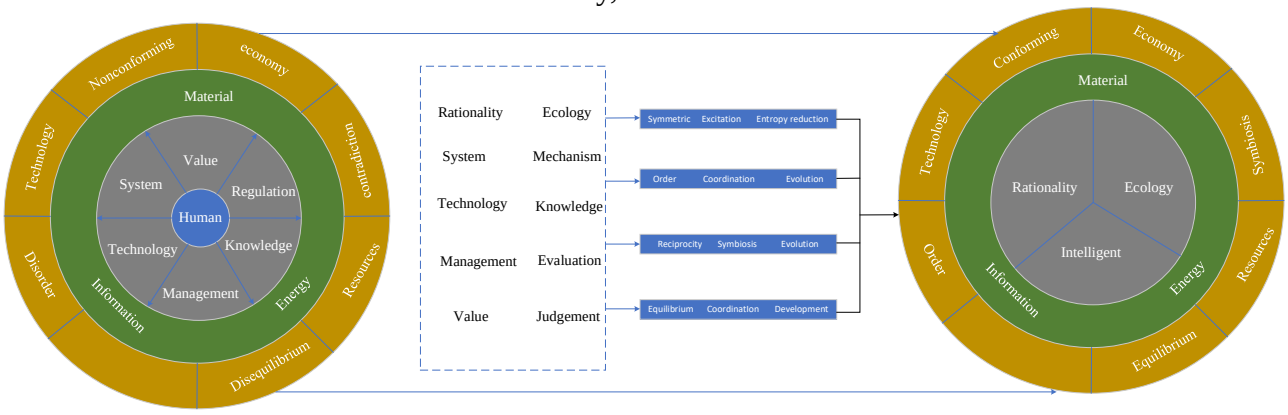

Figure.1 Sustainable development of ecological architecture design based on symbiosis theory

4. Development and improvement of ecological architecture design based on symbiosis theory

4.1. Development ideas

Land resources are limited, so the development of cities needs to make full and effective use of space and build a three-dimensional network coordinated underground, ground and air. Eco-architecture pays attention to the harmony between architecture and environment. While maximizing the use of environmental benefits, it will minimize the adverse impact on the environment as far as possible. Eco-architecture design pursues mutual selection, coexistence and common development with the environment, which needs to proceed from the actual topographic conditions of various places, and combine the surrounding environment and climate characteristics to achieve local adaptation. An important manifestation of ecological principles in the field of

architecture is to bring as many natural elements as possible to the user. People are a part of nature. It is necessary to carry out related activities on the basis of ecology[3]. Only when they live in harmony with nature will they win a larger and broader development space in the future. Ecological buildings should aim at providing users with high-quality living space and building environment. It is necessary to promote the rationalization of building functions as much as possible, and to build a bridge for users to communicate with the natural environment. Introducing the concept of adaptability into the field of architectural design is actually an extension of the extension of architectural activities, which makes the creative thinking of architectural design jump out of the architectural ontology and move toward broad-based ecological thinking and environmental thinking[7]. Adaptable architectural design is a creative idea of integrating architecture and its surrounding environment. It integrates architectural, environmental, social, cultural, economic, and technological thinking into one, making architectural design activities systematic. Make the construction results more suitable for the specific natural environment and society.

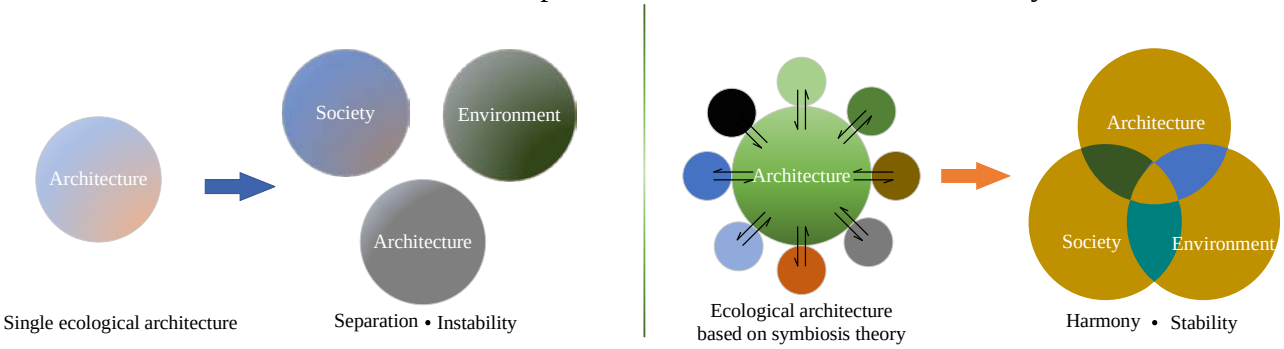

Figure. 2 Analysis of development ideas of ecological architecture

4.2. Improve of the countermeasures

From a macro perspective, urban planning should be based on ecological principles, develop land use and development planning based on familiarity with urban development processes, and pay attention to maintaining coordination between urban construction and the environment, especially in space utilization. Form, strength and functionality should be adapted to the natural system[4].

On the micro level, we must deal with the relationship between the whole and the part, architecture and nature, and be brave in innovation in ecological building design; promote the continuous improvement of laws and regulations in the field of ecological construction. The development of ecological buildings is inseparable from the protection and support of laws and regulations. At present, China has formulated and implemented a series of laws and regulations such as energy conservation law, air pollution prevention law and building energy conservation management. This is a healthy and orderly development of the ecological construction industry.

It has played an important positive impact. In the future, it is necessary to strengthen legislation to ensure that the adoption of ecological strategies in building design can be implemented in accordance with laws, standardize ecological building design, and promote the further development of ecological buildings.

5. Conclusion

With the development of society and the progress of human civilization, the ecological concept will be the inevitable choice for human development, and the ecological design of architecture will become the trend of future development. The ecological building is people-centered, respects the subjective position of the people in the architectural design, practices the principle of caring and respecting people, and integrates the concept of sustainable development that has been agreed on a global scale. At the same time, it is also for cities and buildings. With the deepening of ecological building theory research, the content of building science and technology will become more and more abundant, the construction industry will be more artistic, and the construction field will usher in new development opportunities.

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