

# *Research on Urban Cultural Design from the Perspective of Ecological Aesthetics*

Yirui Wang

*Shanghai University, 200444, Shanghai, China*

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**Abstract:** Urban cultural design based on ecological aesthetics is a comprehensive and sustainable design concept and method. It has important manifestations in various aspects of urban material and intangible culture, covering urban architecture, public spaces, traditional customs, cultural activities, and many other fields. This article analyzes the connotation of ecological aesthetics from the perspective of ecological aesthetics, introduces its important significance in urban cultural design, analyzes the problems existing in current urban cultural design in ecological aesthetics, and finally elaborates on how to carry out urban cultural design based on ecological aesthetics.

## 1. Introduction

With the acceleration of urbanization, cities are facing many problems, such as ecological environment destruction and loss of cultural characteristics. In this context, urban cultural design needs to be approached from a new perspective. Ecological aesthetics provides unique theoretical support and practical guidance for urban cultural design. It emphasizes the harmonious coexistence between humans and nature, while meeting human aesthetic needs, paying attention to protecting the ecological environment and promoting the sustainable development of cities.

## 2. Overview of Ecological Aesthetics

Ecological aesthetics is an emerging discipline developed on the basis of ecology and aesthetics. It combines the concepts of ecological balance and biodiversity in ecology with aesthetic concepts in aesthetics, focusing on the aesthetic relationships between humans and nature, and humans and the environment. Ecological aesthetics emphasizes the integrity of ecosystems, the harmony of nature, and human respect and reverence for nature. Essentially, ecological aesthetics holds that nature itself has intrinsic value and is not just a resource utilized by humans. In the ecological environment, there are interdependent and interactive relationships between living organisms and between living and non living organisms[1]. These relationships have unique aesthetic significance, such as the hierarchical distribution of plants in forests and the ecological chain of wetland ecosystems, which can become objects of aesthetic research. The development of ecological aesthetics can be traced back to the early 20th century. With people's increasing attention to environmental issues, ecological thinking began to permeate into the field of aesthetics. In the early days, some philosophers and ecologists began to contemplate the aesthetic relationship between nature and humanity, such as American scholar

Leopold's "ethics of the earth," which proposed that humans should extend moral care to the entire earth, laying the ideological foundation for the development of ecological aesthetics. After the mid-20th century, with the rise of environmental movements, ecological aesthetics received more extensive research and development [2]. It is no longer limited to theoretical exploration, but has begun to involve multiple practical fields such as architectural design, urban planning, landscape design, etc., aiming to create a more harmonious and sustainable human living space through the combination of science and art [3].

### 3. The Importance of Ecological Aesthetics in Urban Cultural Design

#### 3.1. Improving the living environment of the people

Good ecological aesthetic design can make the urban environment more pleasant and comfortable, and its specific functions are shown in Table 1.

Table 1: The Improvement Effect of Ecological Aesthetics Design on People's Living Environment

Design content	Role
Design of Urban Green Space System	It can purify the air, regulate the climate, reduce noise, and provide a good place for leisure and entertainment for the masses
Design for natural lighting and ventilation	It can reduce energy consumption, improve living comfort, and enable people to live in a healthy and beautiful environment

#### 3.2. Contributes to the long-term healthy development of the city

From a long-term perspective of urban development, the integration of ecological aesthetics into urban cultural design contributes to achieving sustainable urban development. When planning urban spatial layout, considering the carrying capacity of the ecosystem, protecting natural resources and ecological environment, can avoid environmental degradation and resource depletion caused by excessive development [4]. In addition, promoting urban cultural design related to ecological aesthetics can also guide residents to form a green lifestyle, such as promoting environmental behaviors such as garbage classification and recycling, shared bicycle travel, etc. in the community, thereby promoting the healthy development of the entire city.

#### 3.3. Inheriting and promoting regional culture

Every city has its unique natural ecology and cultural traditions, and ecological aesthetic urban cultural design can combine regional culture with the local natural environment. For example, incorporating local characteristic plants, traditional building materials, and other elements into urban landscape design can not only protect and inherit regional culture, but also bring new vitality to traditional culture in modern urban environments.

### 4. Problems in ecological aesthetics in current urban cultural design

#### 4.1. Weak ecological awareness

In the cultural design of many cities, developers and managers often focus more on economic benefits and visual effects, while neglecting ecological factors. For example, in the process of urban

renewal, in order to pursue maximum commercial benefits, a large number of old buildings with historical, cultural, and ecological value are demolished, and some high energy consuming and high polluting buildings are newly built. In urban landscape planning, there is an excessive emphasis on the luxury and grandeur of artificial landscapes, while neglecting the protection and restoration of natural ecosystems.

#### **4.2. Unreasonable utilization of natural elements**

On the one hand, some urban cultural designs excessively exploit natural elements. For example, in tourism development, in order to attract tourists, excessive transformation of natural landscapes has disrupted the original ecological balance, causing some natural landscapes to lose their original charm. On the other hand, there are also cases of neglecting natural elements. Many places in the city do not fully utilize local natural resources such as landforms, water bodies, and vegetation, but rely entirely on artificial materials for construction, resulting in a disconnect between the urban environment and the natural environment [5].

#### **4.3. Lack of ecological considerations in urban spatial layout**

Modern cities often present an absolutization of functional zoning, such as clear boundaries between residential areas, commercial areas, and industrial areas. This layout leads to urban traffic congestion, with residents shuttling between different functional areas every day, increasing energy consumption and environmental pollution. At the same time, there is a lack of reasonable planning for the ecosystem within each functional area, such as excessive building density, limited green space, and a lack of ecosystem service functions in residential areas.

### **5. Ecological aesthetic cultural design ideas in cities**

#### **5.1. Architectural Design**

Firstly, use eco-friendly building materials. When choosing building materials, give priority to renewable, recyclable, and low-energy materials. For example, wood is a renewable natural material, and if sourced legally and sustainably managed, it is a great building decoration material. In addition, the use of recycled concrete, straw boards and other materials can reduce reliance on traditional building materials such as cement and steel, and lower carbon emissions.

Secondly, achieve natural lighting and ventilation design. Architectural design should consider fully utilizing natural light sources and ventilation. For example, designing the size, position, and orientation of windows in a reasonable way can provide sufficient natural light indoors and reduce the need for artificial lighting during the day. By setting ventilation structures such as vents and courtyards, the exchange of indoor and outdoor air is promoted, indoor air quality is improved, and the use of air conditioning is reduced.

Finally, integrate into the design of biological habitats. Incorporate appropriate elements of biological habitats into urban architecture. For example, bird shelters can be set up on the high floors of buildings, and plants suitable for the local ecology can be planted on the green roofs of buildings to attract insects and small animals to inhabit. This is not only beneficial for the protection of biodiversity, but also adds a natural atmosphere to the city.

#### **5.2. Landscape Design**

Firstly, protect and restore natural ecosystems. Protect and restore the natural ecosystems that exist

in the city, such as rivers, lakes, forests, wetlands, etc. The ideas to be followed in river landscape design and on-site landscape design are shown in Table 2

Table 2: Ideas for River Landscape Design and Field Landscape Design

Design content	Design concept
River landscape design	Following the natural flow laws, reducing the hardening treatment of the river channel, restoring the natural vegetation of the riverbank, and providing habitats for aquatic and terrestrial organisms
On site landscape design	Maintain natural features such as water level changes and soil properties in wetlands, plant local wetland plants, and attract migratory birds and amphibians

Secondly, construct a multi-level plant community landscape. Construct multi-level plant communities based on the growth habits and ecological functions of different plants. For example, in urban parks, it is possible to design from tall tree layers, middle shrub layers to low herbaceous plant layers and ground cover plant layers. Such plant communities can not only enhance aesthetic effects, but also improve ecosystem service functions, such as increasing air purification capacity and reducing surface runoff [6].

Finally, incorporate regional cultural elements. Integrating regional cultural elements into landscape design to give the landscape a unique cultural connotation. In classical Chinese gardens, elements such as rockeries, flowing water, pavilions and towers are often used to reflect the artistic conception of traditional Chinese culture. In modern urban landscape design, innovation can be made based on regional characteristics, such as incorporating local folklore, traditional patterns, etc. into the design of landscape ornaments.

### 5.3. Cultural Activity Design

Firstly, hold an ecological themed cultural festival. Organize various cultural festivals with the themes of ecological protection and cultural inheritance, such as the Environmental Protection Art Festival, Wetland Culture Festival, etc. These activities can attract the participation of citizens and tourists, and promote ecological aesthetics knowledge and environmental protection concepts through exhibitions, performances, interactive experiences, and other forms. For example, at the Environmental Art Festival, artworks made from waste materials can be displayed, which not only reflects artistic creativity but also conveys the ecological concept of resource recycling.

Secondly, carry out ecological education practice activities. Organize citizens to participate in ecological education practice activities, such as afforestation, river protection volunteer activities, etc. These activities not only enhance citizens' ecological awareness, but also strengthen their understanding and love for the natural environment of the city. Through practice, citizens can personally experience the impact of their actions on the ecological environment, and thus actively practice the concept of ecological aesthetics in their daily lives.

### 5.4. Design of Folk Customs Inheritance Activities

Firstly, explore the ecological aesthetic connotations in folk customs. Deeply explore the ecological aesthetic elements in folk culture, such as the seasonal customs in traditional agricultural culture. Each solar term is closely related to agricultural production and natural phenomena, and these solar term customs contain ecological aesthetic ideas that respect nature and conform to natural laws. By organizing and showcasing these folk cultures, ecological aesthetic values can be inherited and promoted.

Secondly, incorporating ecological protection awareness into folk activities. Integrating ecological protection awareness into traditional folk activities to make them more in line with the requirements of ecological aesthetics in the process of inheritance. For example, reducing the use of fireworks and firecrackers in traditional festivals and advocating the use of electronic fireworks or flowers to celebrate not only preserves the festive atmosphere but also reduces environmental pollution.

## 6. Conclusion

The design of urban culture based on ecological aesthetics is an inevitable trend in the development of modern cities. In urban material and cultural design, from architectural design to landscape design, ecological factors need to be fully considered to achieve the ecologicalization of buildings and the ecological friendliness of landscapes. In terms of intangible cultural design, cultural activities and folk heritage should also be in line with the concept of ecological aesthetics. This design concept and practice are of great significance for improving the urban ecological environment, enhancing the cultural value of the city, and leading the values of sustainable social development.

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