The Technical Function and Application Exploration of visual concept in environmental engineering projects

Yin Fang 1,*, Gong Zheng 2, Gu Bo 3

1Department: Rizhao Polytechnic
2,3Shandong Vocational and Technical University of International Studies
123276826
tg667788@xzcstudio.com

Abstract: The industrial economy has greatly improved China’s overall strength and the quality of life of its people has also improved significantly. However, the fact that human health is threatened by the natural environment caused by industrial economies cannot be underestimated. In order to solve this universal problem affecting all mankind, different countries have put forward the concepts of energy conservation, emission reduction, ecology and sustainable development, and reached consensus around the world. The paper will study visual concepts to better promote environmental art design for the service of society.

1. Introduction
Various websites and magazines related to environmental protection represent a huge space for environmental art design. Environmental problems have seriously affected human sustainability [1]. In recent years, China’s foggy weather is a typical example. The continuous deterioration of the environment has increased the burden on people’s daily lives and affected the international status. Faced with such a severe situation [2], how to achieve harmony between man and nature and sustainable development has become a worldwide problem. As an environmental project, the concept of creating vision should also be focused on.

2. The evolution of visual concepts
The emergence of environmental problems is closely related to the uncontrolled activities of human beings. At the same time of rapid economic development, the effective management of natural ecology is ignored [3], which leads to the continuous destruction of the environment. Therefore, the concept of green development has penetrated into all areas of life with many types, such as design and production. The design concept can improve resource utilization, effectively reduce costs, and achieve the goal of coordinated design and environment. The visual concept [4] pays more attention to the coordination between consumers and the environment. In short, in order to achieve the harmony, the visual concept undoubtedly provides its possibility.

3. The principle of visual concept and its influence on environmental art design

3.1 Resource conservation principle
The tremendous development of industry has created social prosperity at the cost of low resource consumption. Therefore, in the actual visual concept, using the core design can simplify the design and
minimize unnecessary resource consumption. Simplified design must be based on the environmental art design without losing the soul of the project to save resources [5]. In the field of recycling, efforts should be made to implement the protection principle. Taking decorative materials as an example, there is a difference between recyclable and disposable materials.

3.2 Objective principle
The visual concept must face the real existence, its creativity should not be too capricious, and the actual situation should be fully considered.

3.3 The principle of return to nature
For the good operation of the system, nature is an inevitable law [6], and human will will not change nature. The development of human society must have a clear understanding of the law to live in harmony with nature. The visual philosophy should be strictly followed. The first thing is to respect the laws of nature and strike a balance between the laws of nature and human. Relying on natural ecology does not mean that people are passive and do nothing. Designers should also pay attention to the negative impact on the ecology. In fact, nature is an aesthetic point of view with the highest state that can be achieved through design [7], and people can feel the beauty of environmental art design at the same time.

3.4 Safety bottom line principle
The visual concept does not apply to any project. Safety is the basic guarantee for all work aimed at designing environmental art design to serve mankind and avoid damage caused by environmental art design to maximize design efficiency. The method not only causes a huge waste of resources but also is extremely detrimental to the realization of harmony between man and nature. The visual philosophy clearly defines the goal of putting people first and advocates avoiding excessive consumption to meet the needs of consumers.

3.5 The influence of impressionism in visual concept on environmental art design
The use of colors in impressionism will not only have a profound impact on the painting, but also the environmental art design closely related to Jue Art. The use of colors in contemporary landscapes and images has the same ideological origin in light and shadow. The application aspects of the principles of cold and heat, color system also have universal significance [8].

In fact, the color of the image and the environmental design are also different. Painting is a two-dimensional space modeling represented by canvas, while environmental design is three-dimensional that brings people different visual effects. Therefore, the image rarely changes in the viewer’s perspective.

Due to the limited space for painting, environmental art designers can only create a relatively small number of works. To a certain extent, painting is a medium for environmental art designers to express their personal emotions, while landscape is a supplement to private houses. In addition, usually as a public place, more groups should be considered. Although there are differences between the use of colors of painting environments and the use of colors, the development of color theory and visual methods provides new ideas for environmental design. Among them, the post-impressionist has had a profound influence on contemporary environmental art design styles of various genres, and has also promoted the rise of structuralism.

3.6 The new environmental art design movement in visual and its influence
Fauvism was founded at the beginning of the 20th century and was the product of the early avant-garde environmental art design movement. The term “beast” is used to describe the distorted and shocking bright colors and forms and the objective pictures in nature are somewhat different. The color is better than the color science research of the Neo-impressionist period. It is the non-descriptive color used by Van Gogh that directly matches and deforms the color or other forms of painting. After
Beast Paide environmental art designer tried this style, he finally realized the release of color. They directly use the only color not based on the observed object. Using this color will not only stimulate the retina to vibrate [9], but also produce wave images pervading, and the mysterious atmosphere also creates a new painting style.

This painting by Henri Matisse shows how feasible it is (see figure 1). The photo shows a portion of the foreground with the open window taking up most of the image divided into planters, which are placed on the windowsill with sailing boats, sea and blue sky in the distance. Vertical stripes of green, blue, purple and orange are used to represent walls and window frames, and window decorations are represented by relatively small brushstrokes. Gradually expand from the green spot near the window to the brush stroke and change the colors to pink, white, and blue. The use of color reveals the trend of abstract color, but more importantly, it contains the true sense of landscape within the author. Matisse’s observations and representations have nothing to do with reproduction with how humanity really feels about nature. The expression method he uses is to break down the real form of things after creation. In order to create new expression forms and include the designers or the images presented by products, its colors, lines, composition, and emotions also form a unified whole.

![Figure 1 Open window](image)

### 3.7 Cubism in visual concept and its influence on environmental art design

After the demise of Faunism, Cubism took its place, separating the shape from the picture. He created a new style of contemporary environmental art design. The French environmental art designer George Braque in 1908 worked together for many years. The icons of environmental art design style are observed from a multi-dimensional perspective. Under the influence of many environmental art design styles such as impressionism, classicism, feminism, etc., these experiences are reflected. “The Avignon Girl” was created by “CLes Demoiselles d'Avignon” in early 1907. It is uncertain whether it is the first Cubist painting.

### 3.8 Futurism in visual concept and its influence on environmental art design

Futurism comes from the poet and editor Filippo Marinetti. “The 1908 Manifesto of Ideas”, a school of environmental art and design, was born at the beginning of the 20th century as a literary concept. Unlike other schools of environmental art and design, the century has no combination of theory and work based solely on the study of literary theory, which is based on representations of Italian symbolism. But there was not much innovation in painting, and the style continued. In addition to the concepts of overall color and pattern, there were also traces of embellishment techniques in Neo-impressionism.

An optical illusion of light scattering has a strong visual impact, and the halo of light is almost certainly the presence of matter. As shown in figure 2, Barra pursues experimental work with personal characteristics while combining different objects. In “The Dynamics of a dog on a leash”, the dog’s legs are added with movement, which symbolizes his rapidity and will be similar to a spinning wheel, and vividly expresses the function of this combination. As shown in figure 3, this method of expressing the speed of movement or activity is then used such as cartoons and animations.
In 1914, the Italian futuristic architect Antonio Sant’Elia published the “Future Architecture Manifesto”, and proposed an urban plan and the use of new materials to build a city to show the face and vitality. Although this idea only stays at the theoretical level, it is still true. “Fantasy” is a typical pseudo-modernism and it promotes urban construction and landscape in Europe. The manifesto wrote that “We must rebuild a noisy modern city. The shipyard is flexible, mobile and dynamic. Modern buildings are like huge equipment. Elevators should not be hidden in elevator shafts”. It means that streets are an extensive network formed, and urban transportation has been integrated, and people’s travel has become more convenient. These encourage the use of new materials and mechanical structures to replace traditional materials, and the establishment of rapid transportation systems, and the creation of new subways and three-dimensional intersection network. They all belong to the field of environmental art design like the Steiner House designed in Vienna. It is simple and clear with little change in appearance. His beauty should not depend on the decoration but people feel its beauty, as shown in figure 4.
4. Visual concept plays an important role in environmental art design
The above analysis shows that visual concepts are also developing dynamically. The proposal of this principle shows the direction of efforts. In order to better realize the visual concept in environmental art design, it can start from the following aspects:

4.1 Strengthen the lead of visual concepts in design
In modern environmental design, it needs to actively change the traditional design concepts and constantly try to use different conditions. At the same time, it helps consumers establish a visual philosophy, instead of blindly pursuing high-end consumption, and replace it with a healthy and ecological design concept. As people’s requirements for the quality of the surrounding environment grow, people’s awareness of recycling resources is also increasing.

4.2 Ensure the key position of the designer
The designer is the key to linking the man-made environment with the nature. As a scientific concept, the visual concept must be based on the design and implementation of the project to be transformed into reality. Designers want to know exactly which materials to use and how to reuse items. Consumers can express their internal expectations during the design, but they cannot replace the designer.

4.3 Creation of natural atmosphere
Judging from the design style of modern environmental design, the country style is commonly used. Since this style does not have too many traces of industrialization, it emphasizes the green characteristics and brings people closer to nature. It can create a seamless integration of indoor and outdoor landscapes, and achieve a perfect match between the beauty of nature and environmental art and design with a good environmental experience. The concept of vision is scientific put forward by people for their own survival and development with a decisive effect on the sustainable development of all mankind. It opens up a new way for modern environmental art design. To achieve extraordinary achievements, we need the continuous efforts of market cultivation and environmental art design industry.

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