Pictorial techniques of Russia and China in environmental design

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Abstract. Environmental design in Russia and China in academic terms refers to the field of education in the areas of art and culture, in methodological terms it is based on the methods and principles of fine art. The article presents a creative project of the photo exhibition “Dance of Leaves”, which was created by the author using techniques of Chinese traditional painting and Russian abstract art, in particular the ideas of V. V. Kandinsky. The project applied the method of integration of disciplines, for example, color science, cultural studies, engineering etc. A special feature of the photo exhibition was the presence of various lighting technologies, as well as the game of colors and lines with symbolic cultural connotation.

Keywords. Environmental design, photo exhibition, lighting technology, color symbolism, abstract art, Chinese painting.

1. Introduction

Environmental design as an academic discipline from the perspective of classification and methodology has a close relationship with fine arts. According to the scheme on the Figure 1, based on the materials of the Russian Classification on Academic Specialties (OKSO) [1] and a similar Catalog and Content of Undergraduate Educational Programs in the universities of China [2], the specialty “Environmental Design” refers to the “Art and culture” field of education, and to the enlarged groups of “Fine and applied arts” in Russia and “Design” in China.

The study program of the specialty “Environmental Design” is focused on the formation of the “imagery” of thinking and the “artistic” aesthetic view of students, since the key disciplines, in addition to the design itself, are drawing, painting, composition. This characteristic fundamentally distinguishes “Environmental Design” from the related disciplines such as “Design of the architectural environment” and “Landscape architecture”.

In methodological terms, environmental design is based on fine art. The content of environmental design consists in the study of the “image”. The concept of “image” arose within the framework of fine art. The objective of fine art and environmental design is to coordinate relations. The designer of the environment, like the artist, pays great attention to the process of creativity, which indicates the
“processuality” of the objective of coordinating relations between the environment and a person [3].

![Classification of the specialty “Environmental Design” in Russia and China.](image)

**Figure 1.** Classification of the specialty “Environmental Design” in Russia and China.

### 2. The project “Dance of Leaves”: materials, methods, technologies

During the creation of this project, the author uses the method of integration of the following disciplines: cultural studies, color science, engineering, ergonomics, and sociology.

The project “Dance of Leaves” is an exhibition of a series of photographs called “Food” taken by a Chinese photographer Zhang Da (张达). The natural theme was a key focus of the photo exhibition: exhibition structures were made in the shape of trees, branches, leaves and tree burrs (Figure 2) [4].

The entire exhibition space was divided into several parts, according to the four seasons of the year. Each zone was dominated by the characteristic colors of structural elements and photos: thus, “Spring” zone was colored with white and cool green; “Summer” - warm tones of orange and green; “Autumn” - dark red; “Winter” - black and white. At the same time, the main color of the walls of the exhibition space was white. Black and white colors were used when creating the frames of structures.

Most of the exhibition stands were made of an electrically conductive composite material based on carbon fiber. It is light in weight, easy to use, and flexible enough to create the shape of exhibition structures that follow the curves of wood.

The author used several forms of stands in the project. The first type was the floor stands with “growing up” branches of “trees”. The second type was stands consisted of hanging “falling” branches of “trees”. Photos and colored rag items in the shape of leaves were placed on these stands. Each “leaf” was attached to the “branch” with a metal chain; if desired, it could be removed from the “tree”. The third type of stands is called “burrs” in compliance with the wood theme. Zhang Da's film photos were inserted to the “burrs”, and could be viewed through the viewfinder with “zoom in” function. All stands met the requirements of ergonomics, were made in accordance with the average parameters of
human height, which provided convenience in viewing photographs and made the exhibition areas quite passable.

One of the features of the exhibition space was working with light, which provided the necessary effect of communication [5] between the designer and visitors. The interactivity of lighting technologies was important for the author to create a sense of the “natural” environment of the exhibition. The author used the following sets for working with light:

- light bulbs with motion sensors: each of the stands was equipped with them;
- the system of reed switches: they were placed inside the “branches” of hanging and floor stands in the shape of trees; when removing the “leaf”, the lights located on the stands lit up;
- the system of image projectors (two HD high-resolution projectors, 1920 × 1080P) on the ceiling structure of the exhibition space: the beam of the projector was directed to the floor and showed photographs of the series called “Food”;
- infrared synchronizers used for flash: they were located in the “Autumn” zone; this lighting technology was needed to demonstrate the culmination of the “natural” cycle;
- viewfinder system with triple magnification: it was necessary for viewing film photos of Zhang Da.

![Figure 2. Elements of the “Dance of Leaves” project.](image)

3. The influence of the ideas of Russian abstract art and traditional Chinese painting on the creation of the project “Dance of Leaves”.

Since the 20th century, Western art has been deviating from realism, as an example, that was the time when abstract art appeared. The concepts of a “point”, “line” and “plane” became symbols of painting in the European region and were closely associated with the name of V. V. Kandinsky, whose ideas made a huge contribution to modern painting and design.

The materials used in Chinese traditional painting, differed from those in the West, and early creative ideas were strongly influenced by the concepts of Confucianism, Buddhism and Taoism that have shaped the traditional style of wenrenhua (“文人画”, “literati painting”), which was expressed in the phrase: “Convey the spirit with images” (“以形写神”, yi xing xie shen). Undoubtedly, the use of
points and lines still has an indispensable place in Chinese painting art.

The author selected the results of studying the symbolism of points and lines in Russian and Chinese painting art, which became a kind of theoretical guide when creating the exhibition “Dance of Leaves”, in particular, forms of exhibition modules in the shape of trees and leaves. The use of points and lines is a kind of technique for abstract artistic expression, and the most direct and striking example of it is written symbols. In both Russian and Chinese languages, during the writing process there should be pauses, change of signs’ form and thickness to display the signs’ symbolism, their content and hidden context. In “the hyper-industrial society” [6] due to changes in writing tools and standardization of fonts, people gradually stop paying attention to the thickness of characters and their “rhythm”. The author would like to convey this characteristic feature of today’s society, so he did not concentrate on the thickness of the exhibition modules, but sought to show the direction of the growth of “trees” so that they looked like real ones.

According to V. V. Kandinsky, “the geometric point is the ultimate and most singular union of silence and speech” [7]. In the project “Dance of Leaves”, the “point” represents the embodiment of the “pause” on the branch line. These “pauses” became interactive positions where, for example, a reed switch was placed and film photographs were presented. “Pause” is what attracts attention.

“A form which, when on the otherwise empty basic plane, may still be considered to be a point, must be termed a plane when, for example, a very thin line appears with it upon the basic plane” [8]. In the exhibition modules of the project “Dance of Leaves”, “pause” is a “point” that hides a surprise for visitors when bulbs are lighting, as well as a plane on which the “branches” with photos are placed.

Using these “pauses”, the artist and designer can control the behavior and visual direction of the “readers” of the artwork (in this particular case, they are visitors of the exhibition), and contribute to the appearance of some thoughts of the “readers”. In this way, the artist builds relationships between the artwork and a “reader”.

According to V. V. Kandinsky, “the concept, element, can be understood in two different ways: as an external, and, as an inner concept. Externally, each individual graphic or pictorial form is an element. Inwardly, it is not this form itself but, rather, the tension within it, which constitutes the element. In fact, no materializing of external forms expresses the content of a work of painting but, rather, the forces - tensions which are alive within it” [9]. The creative photo exhibition “Dance of Leaves” is accompanied by the “elements” of lighting. The purpose of these “elements” was to “awake” the minds of visitors to provoke their certain associations. According to the author, associations are manifestations of the internal tension of art forms. In other words, the exhibition “Dance of Leaves” is an opportunity to influence the mood and thoughts of visitors through interactive methods of working with the light. It is also a kind of experiment that explores the degree of tension in a design work created with use of artistic language.

As V. V. Kandinsky said, the artist should take into account the relationship between the point and the plane, as well as the relationship between the point and other forms on the plane, and as the designer of the exhibition “Dance of Leaves”, the author should pay particular attention to the relation of lines and color forms in space. It is well-known that V. V. Kandinsky formulated the theory of color, according to which color affects the consciousness, it is able to generate certain feelings that are not related to visual perception [10]. As for color, in the exhibition “Dance of Leaves” the author applied
the method of dividing the exhibition areas according to the four seasons, and each area was prevailed by the specific colors. That method made it possible to influence the feelings, emotions and consciousness of visitors.

In addition to the specific use of color in the exhibition “Dance of Leaves”, the author sought to combine some art techniques of Russian and Chinese painting when creating the project. From the standpoint of research on the artistic depiction of lines, the author believes that Russian abstract art mainly focuses on the direction and tension of lines in drawing, while the basis of Chinese painting is the frequency and intersection of lines. These differences do not contradict, but can complement each other.

In Chinese painting, it is believed that “thread is bone, ink is flesh” (“线为骨，墨为肉”，xian wei gu, mo wei rou). Therefore, there should be used a soft and long brush to write or draw the lines that have internal power. It is not only a test of the painter’s art, but also a kind of embodiment of the truths of Confucianism that tell us the following phrase: “A nobleman should be gentle in his treatment, but firm in his decisions” (“君子外柔内刚”, junzi wai rou nei gang), and Taoism that can be demonstrated in the next passage: “Yin and Yang exist inside everything” (“万物阴阳相济”, wanwu yin yang xiangji). Therefore, each line of the structures of the exhibition “Dance of Leaves” had to combine the hardness with the softness of the embodiment. This is one of the important reasons why a composite material based on carbon fiber was chosen to create structures: it provides beauty and power of visual perception.

Since ancient times, the art of traditional Chinese painting has been rooted in the principle that says: before creating an artwork, it is necessary to work out its concept in detail. Therefore, the special state of mind called “enlightenment in silence” (“静思顿悟”, jingsi dunwu) is so important in traditional Chinese painting, and this idea has been preserved until nowadays. Thus, due to the fact that the cultural environment in the development of Russian and Chinese painting traditions is not the same, there are differences in types of painting, where the use of lines is also not exceptional. The basis of Chinese painting is the pursuit of true knowledge, which is most often realized through the black and white lines. The key of Russian painting is the search for the expression of human emotions, which is usually embodied in a combination of color and lines.

Moreover, the technique of “scattered perspective” is mainly used since the very beginning of Chinese painting tradition [11] (in Chinese painting, there are no rules of perspective, similar to the Western one, in which perspective ensures that the entire space is filled with a drawing). This aesthetic taste was influenced by Taoist ideas about “emptiness of material world” (“虚空”, xukong). In the 40th Chapter of the Lao Tzu’s work “Tao Te Ching” (道德经, Daode jing) it is said: “All things in the cosmos arise from being. Being arises from non-being” (“天下生生有，有生生”) [12]. Only by making the mind and body empty, one can approach the enlightenment. In other words, the focus of Chinese painting tradition is mainly laid on the emptiness. The presence of empty spaces helps and allows the “reader” of the artwork to further imagine the picture and think of its story by him/herself. Combining the ideas mentioned above, the author chose black and white lines as the main colors prevailing in the exhibition space in accordance with Chinese style, which ensured the existence of empty spaces in the composition.

At the same time, the author while creating the tree structures, used the painting method called
“crab claw” (“蟹爪画法”, xiezhua huafa), which is based on the image of lines in their frequency or cross lines (Figure 3). The origins of this method can be traced in the paintings of the album “Mustard Seed Garden Manual of Painting” (“芥子园画撰”, Jieziyuan huapu). This album is very famous in China; it contains pictures of various dynasties. Until nowadays artists still use the painting methods that were previously used in the pictures of this album.

![Figure 3. Painting method “crab claw”.

A reference to the ideas of abstract art can be the fact that the author used a certain length of tree branches depending on the conditions of space, thereby forming the orientation of the shape of exhibition structures. By combining the colors of photos, the shape of exhibition structures, and color classification, the author sought to create the internal tension of exhibition objects.

The direction of the “branches” in the structures was different: in hanging stands, there was the effect of “falling” branches, in floor stands there was the effect of “growing up” branches. The “falling” branches had no trunks, and it seemed as if they were suspended in the emptiness. The predominance of “falling” branches in the “Spring” and “Winter” zones reflects a state of calm in the emptiness. In addition, in the “Winter” zone, photos in black and white were attached to hanging stands, which reflected the idea of “falling asleep” of nature. In the “Summer” and “Autumn” zones, on the contrary, there was a predominance of the floor stands in the shape of trees with growing up “branches”, which symbolized the “splendor” of nature. Through the use of color photographs and small items in the shape of green and red leaves, the author sought to reflect the internal tension of the exhibition works in the “Summer” and “Autumn” zones.

4. Conclusion

Light technologies, a game with a color palette, - all this created a sense of interactivity of the exhibition “Dance of Leaves” and attracted the attention of visitors. Each exhibition structure met the requirements of space ergonomics. The natural theme and symbolism of color and lines, which are typical for Chinese and Russian painting traditions made the project aesthetically attractive.

The author believes that there is no fundamental difference between Russian and Chinese painting. The study and application of points and lines in the art of Russia and China have their own characteristics. The cultures of both countries have given the world deep and memorable masterpieces. They have become the creative basis for the modern development of environmental design, which in methodological and academic terms reveals deep relations with art.
The author intended to ensure that the project of the photo exhibition “Dance of Leaves” from theoretical and practical angles met the current interdisciplinary approach, had an experimental character, combined development in the art of the West and the East, and at the same time preserved cultural continuity.

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