

The Correlation Analysis between Traditional Culture Elements and Chinese Modern Environmental Art Design

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Keywords: Traditional culture elements; environmental art; analysis; correlation

Abstract. It is the research direction of environmental art design deserved to be explored by developing environment design art that is suitable for China's national conditions and blending traditional culture elements in the design process. In order to explore principles and methods of blending traditional culture elements into the modern environmental art design, an analytical method about the correlation between traditional culture elements and Chinese modern environment art is constructed in the paper. Moreover, by gathering specific examples, the modern environment art with abundant traditional culture elements is obtained to improve sense of beauty for art design.

Introduction

As a newly-emerging interdisciplinary subject, modern environmental art design is in the ascendant in the development of China^[1,2]. Traditional culture elements are crystals of culture and arts of various for thousands of years, having extensive themes, abundant connotations, and various forms. Traditional culture elements have unique inheritance value in various fields. Environment can change surrounding people imperceptibly. Good cultural atmosphere is good for our life. People who live there will be well educated. Thus the majority of people sublimate their spirit by being influenced by what they constantly see and hear. This is the target pursued by the modern environment art design. In order to develop environmental design art that is suitable for China's national condition, it is the research direction of environmental art design deserved to be explored by blending traditional culture elements into the design process. Therefore, the title named "Combination of Modernism and Tradition—Discussion on Tradition Culture Elements in Modern Environmental Art Design" is selected as the research content to try to look for principles and methods of blending traditional culture elements into the modern environmental art design^[4,5].

The paper applies statistical thought to analyze correlation between modern environmental art design and traditional culture elements, embody Traditional Chinese culture elements in modern landscape design flexibly, and blend Traditional Chinese culture elements into the modern landscape level, and also give consideration to different areas and cultures, indicating that it not only inherits traditional culture elements, but also combines these elements with Chinese local regional landscape. By combining with applied examples of traditional culture elements in modern landscape, flexibility of traditional culture elements in modern landscape design is analyzed.

Cognition of Traditional Chinese Culture and Analysis of Element Symbols

Traditional culture is the life flow with continuous evolution from the origin of excellent cultural gene to enlightenment culture in the period of Ming and Qing Dynasty, and then modern culture. This is a historical process with continuous renewal and continuous development. Current people not only are carriers of history, but also are successors of history. Though it begins with tradition, it won't be finished from tradition. Instead, it will innovate continuously in the continuousness of traditional culture.

Traditional Chinese culture emphasizes on the theory that man is an integral part of nature and syncretism of “sentiment” and “scenery”. Traditional Chinese culture has duration in time and uniformity in space [6]. In millennium of development, traditional Chinese culture stands on the oriental world resolutely. Except for certain material basis, it also owns certain ideological basis. The ideological basis is the basic essence of Chinese culture and is the quintessence of Chinese culture. Traditional culture elements symbolize tradition of the traditional culture and element association of constituting things. From the perspective of language composition, the traditional culture element is a compound word or a kind of traditional element. In Chinese and foreign dictionaries, traditional culture elements are explained as the thought, customs and arts with historic continuity and are stable social elements accumulated by endless practice of all nations. These are embodied in the thinking mode, lifestyle and behavioral ways and are passed from generation to generation by virtue of some materialized medium or social mental structure. It generally is a material with national patterns and artistic form with bright regional culture characteristics.

(1) Contents and Features of Traditional Culture Elements

Contents of traditional culture elements contain visual images and non-visual images. Traditional culture elements of non-visual images are the pattern of manifestation for traditional culture spirit. The concept involves in each branch of cultural system. Contents of traditional culture elements aim at Traditional Chinese culture and mainly include: firstly Traditional Chinese philosophy, including Confucianism thought, Taoism, Mohist thought and Legalism, etc.; secondly traditional Chinese literature, including traditional (Chinese) opera, prose, poetry, novel and various schools of literature; thirdly, Traditional Chinese religion, including Buddhism, Taoism, Islam and other folk religion etiquette and custom culture, etc., The specific situation is shown in Figure 1.

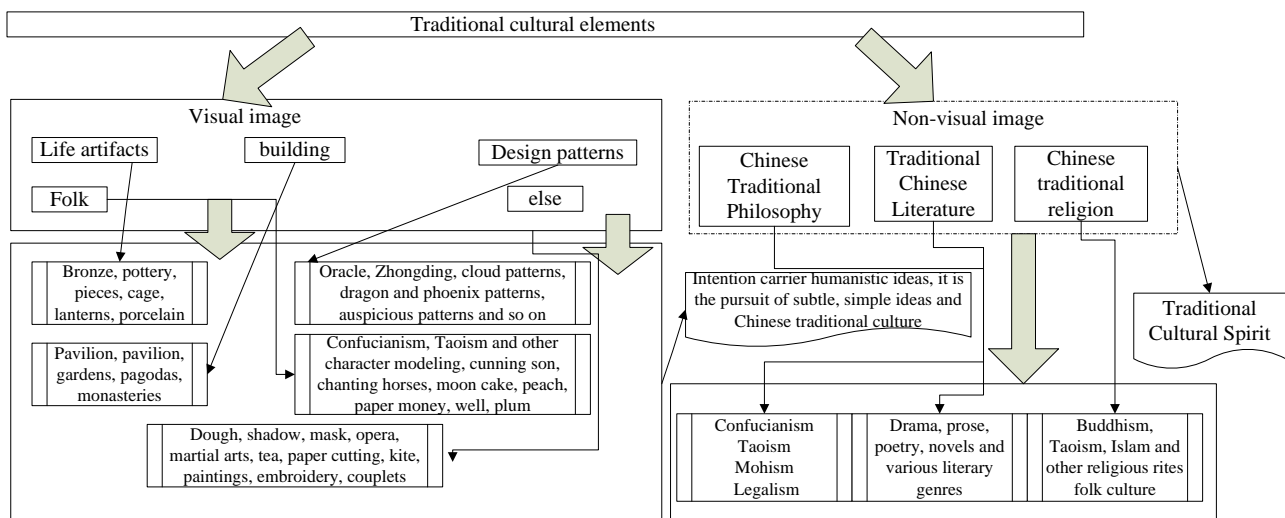


Figure 1: Contents of Traditional Culture

Traditional culture elements with visual images are intentional carriers of humanistic thought. It pursues for implicit and plain thought and is closely linked with traditional Chinese humanity, philosophy and nature and fully embodies Chinese artistic conception and spirit as well as aesthetics of Chinese nationalities. These traditional culture elements are independent of the nature and buildings or find out unique images in life vessels, pavilions, terraces and open halls in buildings, or even goldfish in water, common lanterns, fans and birdcages in daily life, clothing and accessories, and facial makeup in Peking Opera. In the long time history, they are gradually developed into unique images, showing stronger reference functions for traditional culture elements with visual images. Based on traditional Chinese culture elements with visual images are classified and analyzed.

Traditional culture elements are presented in visual images, so that traditional culture spirit is presented in front of people objectively and is comprehended by people's sense organ. These patterns of manifestation form contents of traditional culture elements. Traditional cultural characteristics have reasonability, aesthetics and creativity, etc., characteristics.

(2) Innovative Understanding and Analysis of Traditional Culture Elements

As the modern artistic design workers, how to refer to our traditional culture, summarize and explore beauty of traditional culture, creative methods and disciplines of traditional culture elements is an important topic faced by the diversified society. The original application of traditional culture elements strives for materials and process. At that time, works have higher aesthetic value and arts. The current application of today's traditional culture elements attach to a new carrier to integrate new concepts again and create unique lasting appeal. As shown in Figure 2, appearance design of Poland Pavilion is a scissor-cut box. The scissor-cut in the pavilion is reflected with colorful effects by lights. All props in the pavilion include sofa, wall clock and TV bench are "sheared". There is a scissor-cut dragon in the pavilion. Such a scissor-cut model and a story of dragon also pull in the distance between people of two countries and increase the friendship of both countries.



Figure 2: Scissor-cut Model in Poland Pavilion of Shanghai Expo

It is necessary to emphasize its visual effects, while innovating, but also stand out its thought and concept, break through conventions, combine modern design with traditional pattern of manifestation, get rid of superficial aesthetic tradition to explore and search in a deeper field, combine with traditional Chinese culture elements, connotations, aesthetic conception and modern design thinking, and present abstract inheritance.

Correlation Analysis of Traditional Culture Elements and Environmental Art Design

The idea of the paper adopts a method of index comprehensive measurement to conduct correlation analysis from the perspective of aesthetics, reasonability, creativity and cultural connotation between traditional culture elements and modern design of environmental art design. After the evaluation method calculates the mean size of every actual picture, the calculation formula is shown as follows:

$$MZ_i = \frac{1}{m-1} \sum_{k=2}^m f(cp_{ik}) \quad (1)$$

Mean size of the traditional culture element i is represented as MZ_i to observe fluctuated frequency of evaluating value of the element i on the stipulated baseline and define it as cp_{ik} ; Accumulated normal function distribution frequency of sample function is defined as $f(cp_{ik})$. The element is rated as the grading size of m by observes;

Due to influences of different rating measurement, the paper adopts a standardized method to complete normalized treatment of measure dimension to realize uniformity of cognition. The calculation is shown as follows:

$$SBE_i = MZ_i / BSDMZ \quad (2)$$

Standard value of traditional culture elements is presented as SBE_i ; and standard deviation of mean baseline is defined as $BSDMZ$.

SPSS 17.0 software is used to do data analysis. Descriptive statistical analysis is used to observe data distribution. Then reliability analysis is used to measure consistency degree between indicators. Validity analysis is utilized to test effective degree of items on variables. Ultimately, correlation analysis and regression analysis are used to verify model assumption. The study adopts the

frequently-used reliability coefficient Alpha coefficient to stand for high-low reliability. The judgment standards of reliability coefficient in the study are shown in Table 1.

Table 1: Judgment Standards of Reliability Coefficient

	Reliability coefficient of the questionnaire	Reliability coefficient of univariate
a	0.7	0.5

Namely the Alpha coefficient of the entire scale is above 0.7 and the Alpha coefficient of every variable is above 0.5, it indicates that the reliability of the scale is good and it can be analyzed continuously.

Through the above-mentioned calculation process and environmental landscape data, after rating and quantizing the traditional culture element SEB, data information can be obtained in Table 2 through regression analysis.

Table 2: Evaluation and Quantization of the Traditional Culture Element SEB

	Aesthetics A	Reasonability B	Creativity C	Cultural Connotation D	(Constant)
Regression Coefficient	-0.027	0.144	0.408	0.241	5.566
Standard Coefficient	-0.024	0.280	0.345	0.215	/
Sig	0.005	0.010	0.012	0.009	0.002
R ² =0.809					

The relation model between environmental art design and aesthetic influence is:

$$SBE=1.342-0.027A+0.144B+0.408C+0.241D (R^2=0.809)$$

It can be observed that Sig is less than 0.05, and R²=0.809, obtaining statistical significance. It can be observed that there is a close relation between traditional culture elements and modern environment art design. In modern landscape design, as an important component of urban landscape culture, traditional culture elements are closely related to our life. Under the background that people have higher requirements for life environment, it is necessary to embody traditional Chinese culture elements in modern landscape design, blend traditional Chinese culture elements into the modern landscape design, and give consideration to different regional and cultural difference.

In order to study the relation between traditional culture elements and environmental art design, correlation analysis is conducted in the paper. The value range of related coefficient is between -1 and +1. When related coefficient is between 0 and 1, it shows that variables have positive related relation. When related coefficient is between -1 and 0, it shows that variables have negative related relation. The specific analysis results are shown as follows: Thus it can be observed that there is positive related relation between traditional culture elements and environmental art design, but it is not significant (P>0.05).

Table 3: Correlation Analysis between Traditional Culture Elements and Environmental Art Design

	Aesthetics	Reasonability	Creativity	Cultural Connotation
Aesthetics	1	-.161	-.337*	-.337*
Reasonability	-.161	1	.032	.000
Creativity	-.337*	.000	.000	.001
Cultural connotation	.132*	-.550**	.000	1

* In the level of 0.05(bilateral), it is significantly related.

The Combined Suggestion on Traditional Culture Elements and Modern Environmental Design

(1) Feasible Traditional Culture Design Elements

In modern environment art design, if we want to use traditional elements with characteristics and originality, it can't do without "feasibility". The so-called feasibility means that we should be free from shape, modality, material, texture or purpose of traditional culture elements, but endow new modality or purpose to traditional culture elements creatively. As shown in Figure 3, light, wall and floor in indoor are filled with various straight lines and broken lines, are full of simple and compact beauty of modern environmental art design, but it sets up the model of partition board and seal

impression with characteristics of traditional culture in the prominent middle position of the wall, endows traditional cultural deposits and style characteristics for the reception room without preamble.



Figure 3 :Inside Landscape of the Philosophers' Art Gallery in Nanjing

As shown in Figure 4, it manifests a kind of traditional philosophy, namely “outwardly gentle but inwardly stern” or “cooper cash theory of life”. Thus, such a model is equipped characteristic of suiting both refined and popular tastes. Ultimately, the round arch displays a kind of beauty of methodicalness to guests. As the saying goes “not a radius of no rules”. Thus, design here can use the sentence, namely “a radius of rules”. In such the design, guests may be possible to experience that the master is a considerable person with rules, affairs and human feelings.



Figure 4 :Television Wall with the Model of the Moon

(2) Good at applying plants with traditional connotations

Plants are indispensable parts in traditional landscape design. Plants are different from other environmental design elements with the biggest characteristics that plants are alive and can move under certain situation. It stands for vitality and is hard to be compared by any “dead” and static environmental design elements. Moreover, in traditional culture of China, many plants have abundant culture connotations. For example, pine tree stands for remain faithful and unyielding, plum blossom stands for pride and stubbornness, chrysanthemum stands for inclination to be a hermit, orchid stands for virtue of gentleman, lotus stands for being free from vulgarity, and Chinese asters stand for firmness and indomitability, and so on. Therefore, a kind of effective means to blend traditional culture elements into modern environmental art design is to apply plants with traditional culture connotations. As shown in Figure 5, the whiteness is regarded as the main color of the wall. Only eaves of wall and house utilize lividity to treat with the edge. Actually, its color selection should be derived from color pattern of Wannan Huizhou traditional dwelling. The main colors of Wannan traditional dwelling include white wall and black tiles.



Figure 5: Exterior of the Fifth Vanke Palace in Shenzhen

(3) Aiming at Combination of Modern Photoelectric Technology

Modern environmental art design is conducted in modern scientific environment and needs to contact with various photoelectric technology facilities. Therefore, environmental art designers need to study the possibility of combining optical equipment and traditional culture elements. Sometimes, there will be strange design effects. As shown in Figure 6, eaves tile modeling adopts original earthy yellow, not only standing out cultural psychology of rooting in fertile soil, but also coordinating with dark brown and red brown of indoor decoration. Eaves tile combines with light and presents three-dimensional shape. As everyone knows that eaves tile is a traditional building attachment placing in the eaves end of ancient palace. Except for decorative functions, its basic practical function is sun block, dewatering and protecting sally from wind and rain erosion.



Fig6:Eaves Tile Modeling Thousand-island Lake



Fig7:Gallery Grating in Repulse Bay Hotel of Zhejiang

(4) Pay attention to “water moon”

Works of environment art design generally are static. If aesthetic subjects can witness tendency from static works and generate various associations, it can say that aesthetic subjects are high-level works with connotations. As shown in Figure 7, such the composition of geometrical pattern enables the entire pattern “harden” the inner spirit, coordinating with three-dimensional pierced form and metal material, so it strengthens sense of space and modern sense effectively. Combination of some lines makes it irregular. In this way, sharpened geometrical lines make a comparison with liquid and soft style characteristics reflected by rigid style characteristics and “soft” lines.

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