A Brief Talk on the Research of Regional Landscape Design Combining Nature and Humanism under Computer Background

Xin Gu1,*
1Xi’an Siyuan University, Shaanxi, China, 710100

*Corresponding author e-mail: 409985507@qq.com

Abstract. The role of landscape design in urban construction has become more and more important, but at the same time as the rapid development of cities, the frequent destruction of traditional landscapes and cultural heritage is not uncommon. Nowadays, the public space landscape in many cities has become blind due to blind construction. The mediocrity loses its characteristics. Regional landscape design is based on the characteristics of the development of the times and the characteristics of regional natural and human conditions. It is proposed that the combination of design and regional should be adhered to in the regional landscape design. This article uses computer technology, integrates the natural and humanistic elements, studies the related issues of applying regional features in landscape design, and takes Hangzhou as an example to conduct practice and analysis. Practice shows that when the design complies with nature, it can better adapt to local conditions and create a benchmark landscape.

Keywords: Regionality, Landscape, Context, Ecological Design

1. Introduction
The role of landscape design in urban construction has become more and more important, but at the same time as the rapid development of cities, the frequent destruction of traditional landscapes and cultural heritage is not uncommon. Today, the public space landscape of many cities has become mediocre due to blind construction. Features [1-3]. The traditional regional landscape is a long historical evolution process, and it is made of natural buildings by residents without almost any artificial planning. It is the result of long-term natural and humanistic choices [4-7]. The traditional landscape is not a consent word for the human landscape. It is a landscape with a long history, slow changes, and a structure that has been formed over the centuries and reflects the harmonious and unified characteristics of natural humanities. None of these sceneries or landscape types exist in isolation but are related to the development and evolution of the surrounding area, and have distinct regional characteristics [8]. Under such group unconscious spontaneous behavior, the landscape formed is often miserable in style, but forms a harmonious whole through a certain rhythm change. The key to the success of the regional landscape is that the landscape design should be integrated into the traditional landscape, and the traditional landscape can rejuvenate new vitality and vitality in modern times. The
basic principle is to fully understand the designed area and be able to carry out a meaningful and scientific interpretation.

The current situation of landscape design is more complicated. This article expounds the connotation of regional landscape design and makes further research on the application of regional features in the current landscape design in my country.

2. Connotation of regional landscape design
With the accelerated development of industrialized mass production and the increasing internationalization of commodity markets, with the worldwide urbanization process, people gradually overlooked the regionality of culture. Nowadays, in the field of landscape, landscapes with no local characteristics have flooded into many corners of the country. In many places, the national style and local characteristics, traditional value systems and aesthetic concepts have gradually been diluted. On the other hand, the development of modern industry has caused the urban population and vehicles to expand infinitely. The city's transportation, energy, public security, housing, etc. have all fallen into a vicious cycle; the city's ecological environment is deteriorating, resulting in the separation between people and people, and nature. All of this forces people to long for leaving the city and return to nature. In this form, landscape design objectively requires emphasis on local nature and humanities. It is required to combine the local climate, geography and materials with natural conditions in design: it is required to absorb the local, ethnic and folk styles and various cultural traces left over from the history of the region, making the work highly identifiable. Such a landscape design author calls it "regional landscape design".

3. Integration of natural ecology and human existence
There is an inherent contradiction between human activities and the natural environment itself. The regional landscape design is exactly in the gap between these contradictions. It is a design method to achieve a balance between man and nature. The regional landscape design is based on fully respecting the site's original ecosystem to transform and construct it so that it is suitable for people's activities. Regional landscape design uses land, water, plants and other natural elements for landscaping, protects and uses the natural territorial landscape, maintains the integrity and typicality of the territorial landscape, and improves the living environment of people in the territorial landscape on this basis. The regional landscape design is based on the site and is integrated into the territorial landscape. The ultimate goal is to improve the living space of human beings.

On the other hand, the environment in which people live not only meets the material needs of human life, but also meets the spiritual needs of humans in terms of psychology, ethics, and aesthetics. Regional landscape design can harmonize material and spirit to create a beautiful home that is conducive to people's life, work and entertainment. The regional landscape design is aimed at different regional development processes, social systems, economic forms, religious beliefs, arts and crafts, ethnic customs, etc., and retains the social context of the region, providing people with a visual image of memory and cognition, which meets People's inner spiritual needs.

Regional landscape design advocates the extraction of natural elements with regional characteristics, in order to shape the landscape space to meet people's needs. Through appropriate transformation and low-interference development methods, people strive to maximize the value of natural elements, and at the same time, provide people with a comfortable living environment. As a mediator, the regional landscape design reduces the contradictory relationship between man and nature, creates a "natural and renaturalized" pleasant environment, and finally expresses the cultural connotation of nature, while also allowing humans to understand nature more naturally. Because of the existence of human beings, it exerts greater value, and the interdependent relationship between man and nature is strengthened. Therefore, regional landscape design is not only a design method to reconcile the contradiction between man and nature, but also a design method to tap the dependence between man and nature.

The Oman Hotel near Hangzhou Yongfu Temple is a good example of the harmonious coexistence
of natural ecology and human existence. Anyone who is familiar with the hotel in Oman knows that Oman’s location has never liked to be in a bustling and lively place, but prefers to choose places that are far from modern civilization, so that guests can get the most thorough quiet enjoyment. This hotel is no exception. It is located within the Lingyin Scenic Area in Hangzhou, west of the West Lake and south of the north peak. Surrounded by scenic spots: the northeast corner is connected to the Lingyin Temple Scenic Area, the east is adjacent to the Linghu Feilai Scenic Area, the northwestern side is Yongfu Temple and Taoguangguan Seaview Area, and the southwestern side is where the future Buddhist training sites are located with very quiet environment and beautiful scenery such as the interweaving smoke and trees, the green mountains and the flowing water. It is very rare that the entire hotel completely adopts the village pattern left over from the relocation of the ancient villages. The grass and trees in the village have been carefully preserved. All the rooms are independent courtyards with mud walls and gray tiles, which make people feel as if they pass through the time tunnel, just like the ancient scholars rushing to capital for exam, staying in the farmhouse by the temple, self-cultivation, good or bad. Needless to say, the luxurious decoration in the guest room, just the designer's care and care for the outdoor environment is enough to make people shocked. From the terrain to the stream, from the woods to the bamboo bushes, and even the small tiles and stone roads are so intimate and natural, it makes people feel as if they have returned to the countryside where they lived in their childhood, and they have returned to their residence bringing about their innermost pleasure and ease. This is the charm of the regional landscape. It unites form and spirit perfectly. There is only form but no spirit. It is only the surface of the regionality. There is only spirit and no form, and the spirit cannot be discussed. Living and enjoying here is a kind of idyllic pleasure of "under the hedge of the chrysanthemum, see the southern mountains leisurely." This is the spiritual mood here, and is the most essential regional feature of this land. The designer uses these woods and streams The external form of thatched house has kept its spirit well. Let people's lives return to the era of integration with nature. We can say that this transformation method is the best choice for land reuse, and it is also the best way to comply with the laws of natural development. The territorial landscape thus achieves harmony with nature in the best land configuration, forming a landscape form with development potential and unique charm.

Figure 1. Oman Hotel (the fusion of humanity and nature)

4. How to apply regional characteristics in landscape design
4.1. Application of regional symbols
Regional symbols are records of human interference with the natural environment in different cultural periods in the historical process, including not only fields such as fields, forest disks, farmhouses, fences, ditches, wetlands, river ponds, water mills, waterwheels, and distinctive residential courtyards, but also include Farmers' labor production, living utensils, furniture, clothing patterns, etc. are the most historically valuable content in the new rural landscape, and they are also abstract signs. People can understand it from the non-verbal intuition, and also from the symbolization of language and historical and cultural factors. The basic purpose of any kind of symbol is to preserve human induction and abstract results, and it is a supplement to human induction and abstraction. It is through symbolization that humanity becomes able to surpass the personal environment and live a social and purposeful life. When designing, we should assume respect for and highlight the regional style characteristics, look for unusual design techniques, and abstract, generalize, refine, and deform the element symbols, such as artistic treatment and processing, and then combine with modern treatment methods Then, the designed works will become interesting, unconventional, novel and unique, giving people a new feeling.

4.2. Concept of human-land symbiosis of regional design
First of all, it emphasizes that landscape design cannot exist independently from the natural, economic, and social human-land systems. Only on the basis of ecological sustainability, economic continuity, and social continuity can the integrity and dynamics of the regional landscape design creation system be guaranteed. Adaptability. In the creative process, first of all, only by maintaining and respecting the natural attributes of landscape design and the environment where the landscape design is located, and using it as one of the creative means and goals throughout the design process, can the long-term coordination and integration of landscape design and environment be promoted, and Therefore, new regional characteristics are produced. Secondly, in the context of the continuous development of human society, we cannot simply rely on the traditional landscape design to adapt to the original environment to solve current problems. Due to the subjective initiative of people, people can continue to create landscape design and environment through the progress of computer technology. A new way to coordinate symbiosis. Third, the regional landscape design must be based on the idea of maintaining ecological balance. It should not only consider that the artificial construction of human society does not exceed the allowable limit of the natural ecological environment, but also consider maintaining humanity in the process of continuous updating and development. The continuation and harmony of social structure and economic structure, protect the diversity and particularity of regional culture, and finally realize the sustainable development of nature, society and economy.

4.3. Urban landscape design should inherit and develop traditional forms dialectically
In modern landscape design, regionality is not equal to the antiques and restoration of local traditional buildings. Regionalism is still an integral part of modern architecture. It follows modern standards and requirements in function and structure, and only partially absorbs tradition in form Motive. It can be to maintain the basic structure and form of traditional and local architecture, strengthen it, highlight cultural characteristics, and delete trivial details; or use traditional and local design typical symbols to emphasize national tradition, local tradition and folk style. Its technique is more symbolic and symbolic, but the structure does not necessarily follow the traditional way.

5. Practice and analysis
Taking a place in Hangzhou as an example, the practice and analysis of landscape design are carried out.

5.1. Vulgarity-enter the custom with the scene
"Vulgarity" refers to folk culture and city customs. The arrangement and layout of the space reflect the grand scene of "step by step platform", which makes Wushan's traditional folk customs and local
customs reflect naturally. The fragrant city, temple fair, tea garden and natural landscape matrix are integrated, and the inheritance of folklore can be fully expressed, and the natural and poetic continuation can be continued with the help of new landscape means and design methods.

By designing the natural development of Hangzhou's customs and customs, it is not rigid preaching, but inadvertently, traditional customs can be renewed and developed. At the same time, through the expression of the landscape, the picture scroll of the millennium of Hangzhou is launched. The traditional city customs and the rhythm of today's life are intertwined. It is held in the hands of today's Hangzhou people and looks forward to a bright future.

In the design process, landscape fragmentation and landscape separation need to be considered. The degree of landscape fragmentation reflects the degree of human interference with the landscape to a certain extent, and its calculation formula is shown in equation (1):

$$C_i = \frac{N_i}{A_i}$$

Among them, $C_i$ is the fragmentation degree of landscape $i$, $N_i$ is the number of patches in landscape $i$, and $A_i$ is the total area of landscape $i$.

The calculation of landscape separation is shown in equation (2):

$$V_i = \frac{D_{ij}}{B_i}$$

In the formula, $V_i$ is the degree of separation of landscape type $i$, $D_{ij}$ is the distance index of landscape type $i$, and $B_i$ is the area index of landscape type $i$.

5.2. Wild Fun Self-contained Design

"Wild" means wild fun and wild game. It protects the fresh and simple wild fun in the scenic area. The added plants are also mainly in natural configuration. The local plants that grow well in the local area are selected. The basis is that these plants can best represent local characteristics and are most suitable for it is grown locally and has the lowest management and maintenance costs. This is the full consideration of local elements and conservation principles in the design. At the same time, through design as much as possible, let nature play its role, emphasizing the symbiosis and cooperation between people and natural processes, and significantly reduce the ecological impact of design.

In the design, the inheritance and development of our gardening theory and gardening art "the garden is skillful in borrowing and borrowing", based on objective conditions and environment, adapting to local conditions and people, and through combining with the characteristics of the Wugong Mountain remediation area, the conditional and selective choices are performed on the scenic elements that contain artistic charm in the scenic area. For the setting of the newly added landscape, the surrounding natural environment is fully used as a background to enrich the design of the external scene, to achieve the internal and external echo of the landscape, and to achieve the effect of natural, realizing the extension of limited space to infinite space.

5.3. Harmonious design

"Harmony" refers to the harmonious symbiosis between man and nature, and the harmonious relationship between people. The harmonious symbiosis between the city of Hangzhou and natural landscapes has continued for thousands of years. "Three sides of the mountain and one side of the city" and "Half of the city and half of the lake" are the portrayal of Hangzhou. The beautiful lakes and mountains have created Hangzhou's paradise on earth. The Wugong Mountain Scenic Area is rooted in Hangzhou and continues the cultural context of Hangzhou. It is accepted and absorbed by the Hangzhou city, and the natural scenery of the West Lake will become a part of the beautiful city of Hangzhou. Therefore, the renovation of the Wugong Mountain Scenic Area will not make people feel trapped in the space, but is full of the vitality of nature, which reflects that the common ecological degree of people treats nature one by one without holding, dominating and dominating. It expresses the good wishes for the harmonious coexistence of man and nature and the sustainable development of cities.
Through the organization and layout of the venues, the custom of large bowls of tea can be continued, providing a place for citizens to relax and enjoy. During the process of tea tasting, viewing, snacking, snacking, visiting the city, and temple fairs, citizens and tourists are peaceful and lively. The atmosphere creates a new Hangzhou humanistic spirit "exquisite harmony, open atmosphere". The bird's eye view renderings are shown in Figure 2.

Computer technology allows designers to see the effect after construction in advance, and the design results can be visually simulated through three-dimensional simulation technology. It is difficult to visually depict various specific elements by hand-painting alone.

First, use CAD to connect multiple environments such as scheme design, graphic drawing and engineering budget into a connected whole. On the one hand, this method can reduce the workload and improve work efficiency. On the other hand, it can provide detailed floor plans, side views, The cross-sectional view, bird's-eye view (as shown in Figure 2) and specific construction drawings, the construction personnel can clearly understand the details that should be paid attention to in every small place, and the final construction results will be closer to the designer's design results.

![Image](image_url)

**Figure 2. Bird's eye view renderings**

6. Conclusion

Regional landscape design is a new concept of modern landscape design based on the current situation of China's national conditions, and it is the embodiment of regional design theory on the level of modern landscape design. Regional landscape design determines the long-term and continuity of urban landscape design characteristics. Landscape design should seek development on the basis of keeping the characteristics! Today, when the culture with strong economic strength erodes the culture with weaker economic strength, advocating landscape design that respects nature and maintains the continuity of regional culture should be highly valued by domestic scholars.

References

[1] Faculty, of, Civil. Vernacular and regional landscape design[J]. Landscape Ecology and Management, 2017,1(2):1-10.
[2] Feng L , Zhou P , He Y . Landscape Design of the University New Campuses Based on Regional Characteristics—Using Fengxian New Campus of East China University of Science and Technology as an Example[J]. E3s Web of Conferences, 2019, 4(3):327-343.
[3] de Waal René, Sven S , Anton V H , et al. Incorporating Renewable Energy Science in Regional Landscape Design: Results from a Competition in The Netherlands[J]. Sustainability, 2015, 7(5):4806-4828.
[4] Young-Ju Jin, Chang-Il Park, Kyung-Ju Kwon. The Establishment of City brand in Regional government through the Improvement of City Landscape Design[J]. Korean Journal of Social Science, 2015, 34(1):5-11.
[5] Kempenaar, Annet, van. Regional designing: A strategic design approach in landscape architecture[J]. Design Studies, 2018, 19(4):655-666.
[6] Lu M , Wen C , Wang C . Landscape Design of River Channels in Small Towns based on
Regional Culture-Case Study of Landscape Design of Duohua River[J]. MATEC Web of Conferences, 2018, 206(4):183-200.

[7] Hassan A S. Evaluating the Marketing Communication Strategy of Volkswagen in Post-Crisis Period: Application of Image Repair Theory[J]. International Journal of Marketing Studies, 2019, 11(2):87-94.

[8] Wang F, Mcshea W J, Li S, et al. Does one size fit all? A multispecies approach to regional landscape corridor planning[J]. Diversity & Distributions, 2017, 5(1):1-8.