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Research Article

Creation Skills of Perspective Effect Drawing of Garden Landscape Based on CAD Technology

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In order to enable more garden landscape design enthusiasts to master the creation skills of perspective renderings, this article introduces CAD computer-aided technology in the creation process of perspective renderings of garden landscapes. In the research, through case analysis, the CAD technology is compared with the commonly used sketch master SketchUp, and the detailed steps of making the garden landscape perspective renderings for small-scale modeling of garden landscapes are compared in detail. Finally, an example analysis shows that the application of CAD technology to the creation of perspective renderings of garden landscape can make the creation process more scientific, reasonable, and more ornamental.

1. Introduction

Traditional garden landscape creation comes from the accumulation of work experience of designers to perfect. If you are faced with the creation of perspective renderings of larger garden landscapes, you will pay special attention to the rich experience of designers, design hours, and artistic accomplishment [1–3]. CAD technology is becoming more and more mature. The use of CAD technology in the creation of garden landscape perspective renderings has the advantages of humanization and intelligence. Compared with the previous design based on work experience, CAD technology appears to be more scientific, accurate, efficient, and more efficient. At present, the design methods for CAD technology are becoming more mature, and the research and design of logical processes has become the main direction in this field. The use of parametric methods for garden landscape selection has given an important source of data [4, 5].

CAD computer-aided technology, as a kind of mathematical logic calculation, is mainly through the decomposition and transformation of the elements of the garden landscape to better solve the complex creation difficulties. The creation process can clearly show the creation in the creation process of the perspective renderings of the garden landscape. Process to find a better design method to make the creation more practical. Based on the detailed introduction of CAD computer-aided technology for the creation of garden landscape perspective renderings, it shows that this technology can effectively improve the creation of garden landscape perspective renderings.

2. Features of Garden Landscape Design

Design can understand people's plans and plans to achieve their goals. The design process usually includes two parts: creation and expression, among which thought and thinking are the most important tools in the creation process (Figure 1).

In this process, each link needs to be expressed in a certain form, for example, using language to express ideas and manuscripts to express the process of design and deliberation. Each link also borrows certain tools, such as computer-aided design, paper and pen to record thinking, and materials to complete design works. Garden landscape is a technology that uses natural factors such as land, water, plants, and sky to create a landscape. It requires the creation

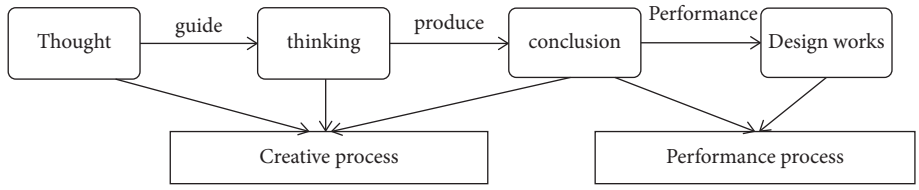

Figure 1: Design process.

of a good natural environment and a beautiful artificial environment. Rich cultural facilities are needed [6–8].

To learn the creation technology of perspective renderings of garden landscape, you must first understand the principle of perspective drawing, understand the relationship between light and light and dark quality inspection, and also need to master the relationship between the modeling ability of flowers and trees and the color theory. Mastering the principle of landscape perspective can effectively solve the problem of housing construction, the types of man-made buildings such as pavilions, pavilions, roads, and the corresponding relationship between flowers, trees, and characters in the garden landscape. The light and shadow do not need to be as detailed as the light, but only need to be able to distinguish the structural drawings. The colors used in creation are mainly divided into marker pens and colored lead: the colors of marker pens can also be subdivided into multiple series, which is more convenient to use, and the color combination is not only professional, but also more beautiful. For most students, the principle of garden landscape perspective and marking pens are mainly used for coloring. The process is systematic and can be learned and mastered in a short time. The real difficulty lies in the modeling of the flowers and trees of the garden landscape. This is also the key point in the creation of perspective renderings of the entire garden landscape. No matter how perfect the house construction and the creation of flowers, plants, and trees, if not handled properly, the entire picture will be discounted. In order to make the creation of garden landscape perspective renderings more reasonable, creators are constantly using CAD technology to create.

3. Creation Techniques of Perspective Renderings of Garden Landscape

3.1. Overall Layout. The entire picture layout created by the garden landscape perspective rendering is an effective combination of different colors in the scene, and the corresponding position and form changes of different shapes are also different. From the perspective of composition, it is necessary to coordinate the relationship between the characters as much as possible to give the viewer a balance There is no need to use other too strong strictness to reduce the visual jump. Ignore that the main design of the garden landscape needs to match the corresponding colors according to the time of the scene at the time. Balance mainly means that the entire garden landscape layout has no problems and should not be. Filling up this part is too prominent to grasp the main elements of the garden landscape.

3.2. Plants. In the postprocessing of PS, the harmony of plants is very important. It can improve the sense of space and perspective of the lawn, such as the projection of shrubs, flowers, and branches.

3.2.1. Shrubs and Flowers. Open the shrub material library, drag the shrubs to the scene, and adjust the size; you can refer to the perspective relationship between the main body of the landscape and the overall environment [9, 10]. There is too much emphasis on the perspective of the lawn and the fusion of shrubs; ignoring the activeness of the color of the picture, the overall greenery of the picture is used too much, and the color of the picture becomes monotonous. It can be decorated with flowers at this time.

3.2.2. Tree Branch Projection. A picture is usually composed of distant, medium, and close range. When dealing with the middle range, you can adjust the blur and saturation to achieve the depth of field effect.

3.2.3. Lawn. There are three lawn treatment methods:

One is gradient. Use the gradient tool to paint the color of the lawn and then imitate the lawn with noise.

The second is the citation method. Directly quote lawn materials. This law is more true. The premise is that the perspective and tone of the lawn must be consistent with the main scene and can be adopted.

The third is the synthesis method. Introduce some lawn materials and synthesize them in layers. The colors are beautiful and varied.

It should be enumerated that details such as auxiliary roads and small shrubs cannot be ignored in the treatment of lawns. The clever application of detailed scenery can create a real living environment. In order to integrate the lawn and the close-up, it is at the junction of the close-up and the long-range. Bending point must be dealt with.

3.3. Day Scene and Night Scene. In the production of bidding projects, the same landscape is often expressed in the two time periods of day scene and night scene. Many people mistakenly think that day scenes are warm colors and night scenes are cold colors, but they are not. The night scene does not have to be cold colors. The cool and warm hue of color is related to light; the inherent color of the main body is directly related to the color of the light source. Sky, tall buildings, trees, scenery trees, lawn, people, street lights, cars, and other materials can be added to the same point of

daylight and night scenes. The difference is that the reflected environmental atmosphere is different.

3.3.1. Day View. For example, add a day space to the scene, adjust the size, create a new layer, check the lawn area with a polygonal cable, set the foreground color RGB parameter to 105116237, and use Alt + Delete to fill the foreground color. In order to improve the effect of the lawn, project branches to enhance perspective. Set the foreground color RGB value: 307834; fill the foreground color; determine the road outline, the foreground color RGB is 188122145, use the Bum Tool to draw two black lines in the middle of the road, and the motion is blurred (Motion Blur). Add light to the side of the lawn processed horizontally. This is the shading effect produced by Eye Candy.

3.3.2. Night View. For example, take a night view of the sky as a background, and introduce auxiliary buildings, lawns, and roads so that the brightness of the layer with lawns and roads is −55. After transferring the character to adjust the brightness −40; use the cable tool to install the floor lamp to select the lampshade part of the lawn lamp, and use PhotoGlow to process the luminous effect of the lamp, parameter setting: stroke width = 18, radiance = 16.3, and opacity = 100%; import car material. Adjust the size and position to make the car coordinate with the whole scene and use the hue/saturation to adjust the brightness to −45; to make the car light effect, use the polygon lasso tool to select the two lights on the front of the car, and the foreground RGB parameter is set to 245,245,241. For unfilled scenery, use PhotoGlow to make shadows. Stroke width = 17, radiance = 16.3, opacity = 80%, moving blur, driving car angle = 4, and distance = 90; in order to make the distance between the street light and the close range, branches are added to reduce the brightness of the branches, the hue = 0, and the chroma = 0, the brightness = −45, to imitate the illumination effect of the street lamp.

4. The Creation Skills of CAD Garden Landscape Perspective Renderings

The study of visual landscape has practical significance only under the premise of landscape space. From the perspective of perspective, the head does not rotate, and the normal observation range with the human eye as the viewpoint is the visual cone composed of 60° angle of view. The visual information received in this visual cone is intuitive and stable. The visual space and material space of the landscape overlap.

The creation of garden landscape perspective renderings is a kind of directional noncircular diagram that illustrates the probability dependence of variables. The creation of perspective renderings of garden landscapes composed of sample learning represents a set of conditional independence assumptions. Any end point is the combined state of the parents independently and not the end of the offspring. The quality of multimedia visual perception can predict the probability distribution of the random vector of each node and decompose it into the product of the marginal distribution of random variables; namely,

$$P(x_1, x_2, \ldots, x_m|B) = \prod_{i=1}^{N} P(x_j|\pi_j) = \frac{\sum_{A-(x_j)\cup\pi_j} P(x_1, x_2, \ldots, x_m)}{\sum_{A\cup x_j} P(x_1, x_2, \ldots, x_m)}, \quad (1)$$

where $x_1, x_2, \ldots, x_m$ are attribute node, $A = \{x_1, \ldots, x_m\}$ is attribute set, $\pi_i{:}i = 1,2, \ldots, m$ represents the parent node set of node x_i.

The key to the creation of garden landscape perspective renderings is to estimate the possibility of producing results based on the events that occur, and the creation of garden landscape perspective renderings is supported by the existing parameters (probability distribution) of the nodes. Statistical knowledge calculations calculate the probability of occurrence of events corresponding to related nodes. In other words, the problem is that the value h of a part of the attribute set H of the attribute set A and the attribute set K of the other parts of the attribute set A are the conditional probability P of the specified value k $(K = kH = h)$. By comparing the perspective renderings of the garden landscape, it is related to the production. The size of $(K = kH = h)$ can infer the most likely result and reason.

The creation of perspective renderings of garden landscapes is mainly based on the assumption of the event under known conditions with the maximum posterior probability. H is the limited hypothesis space defined in the exemplary space D. For each hypothesis h (i.e., the creation of each garden landscape perspective rendering), the postprobability of the network can be expressed in D as

$$P(h|D) = \frac{P(D|h)P(h)}{P(D)}. \quad (2)$$

And the creation of perspective renderings of garden landscapes is to achieve

$$h_{\mathrm{MAP}} = \arg\max_{h\in H} P(h|D). \quad (3)$$

The minimum description length $L(g, D)$ is a measure of the storage structure information of the garden landscape plan under the multimedia background. G represents all possible structure spaces of the Bayesian network, one of which represents the minimum description length L of the network structure g on the data set D.

4.1. Basic Thinking Mode and Its Application Principles

4.1.1. Diamond Thinking Mode. The diamond-shaped thinking mode is a preconvergent and postconvergent thinking mode that includes two stages: divergent thinking and convergent thinking. Figure 2 shows an illustration. Here is an example to illustrate.

At the planned main entrance of a certain site, there is an abandoned metal water tower with a height of about 20 m and a roughly circular shape, covering an area of about 15 m^2. The following is the formal expression of the model.

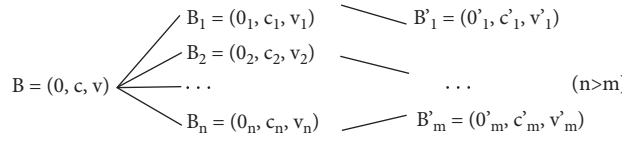

Figure 2: Diamond thinking mode.

Set M = (water tower, location, main entrance of the park), object O_m is "water tower"; feature c_m is "location"; and feature authorization value v_m is "main entrance of the park." Based on the principle of divergence analysis, a divergence tree is obtained (Figure 3). Among them, the symbol " $\dashv$" stands for "divergence," and the mark on the lower-right corner of the matter element M indicates the divergence level.

This divergent tree rationally decomposes design elements, shows many feasible directions for design, and provides ideas for design.

The convergence process requires certain conditions and goals. The convergence method is not unique. Generally speaking, in CAD technology, excellent evaluation, combination chain, and other methods are used to converge the divergent tree. This article introduces CAD technology. Please try to choose easy-to-understand examples. Take the divergence tree in the above article as an example. Taking the economic effect as the guide, the divergence tree can converge. $M' = M1 \oplus M212 \oplus M41 \oplus M42$, the symbol; complete one job a day; representative; combination; the final plan is to transform the water tower into the main entrance of the park. Advertising operators, the basic part can also be developed into shops and paid game facilities.

In general, the diamond-shaped thinking mode helps to collect the potential energy of things and systematically record the entire thinking process, repeated scrutiny, and comparison.

4.1.2. Reverse Thinking Model. From a creative point of view, the frequently used inverse thinking mainly includes the inverse principle, the inverse attribute, the inverse direction, and the inverse method. In the CAD technology, reverse thinking is divided into 4 categories.

The first category is for things; the core idea is to try to solve the problem with the opposite feature of a certain feature of the thing, namely, the "anti-matter-element and "non-matter-element" methods. The "anti-matter-element" thinking model is expressed as matter-element as $M = (O, c, v), M1 = (o1, c, V1)$, when $M = M_1^-$; then M and M_1 have opposite values about the same feature; M and M_1 are the anti-matter elements to each other. For example, the natural number 1 and any number other than the natural number 1 are mutually nonquantity values. If the goal can be achieved after replacing them with nonquantity values, a solution has been found through the "non-matter-element" model. For example, in many old factory renovation projects, the factory building has no purpose or even has an obstructive effect, so it will be demolished, but if the old factory building has a certain purpose, it can be avoided. The CAD technical method is expressed as follows: set the use value to x, then M = (factory, use, $x \le 0$), at this time, the old factory is facing demolition, but there is a matter element M_1 = (factory, use, $x > 0$) so that the old factory building will not face abandonment and demolition, and $M_1 = \overline{M}$; at this time, the contradiction problem is solved through the non-matter-element model.

The second category is through events. The counterevent element; the core idea is to solve the problem with actions opposite to the original event. If one thing is set, $A_1 = (O_1, c, V_1), A_2 = (O_2, c, v_2)$, when A_1 and A_2 are opposite to each other, in this case, A_1 cannot be achieved, and A_2 can be achieved. $A_1 = A_2^{-1}$ reverses the element; the model has found a solution. For example, there is an old residential area with chaotic status quo, in which some cultural relic protection groups that are not allowed to be transformed are scattered. However, there are now several design tasks highlighted by the cultural protection department from the old residential areas. The weakened surrounding environment can also highlight cultural preservation units. Therefore, there is A_2 = (weakening, dominating object, surrounding environment). At this time, $A_1 = A_2^{-1}$; because A_2 is possible, the problem is solved through the counterevent element.

The third category is to find a way to solve the problem through the "inverse transformation" thinking mode. Suppose an object "(pronunciation: gamma, which can be a primitive, a collection of primitives, a universe of discourse, etc.), when a transformation T cannot be found so that $T\Gamma = \Gamma'$ (meaning that under the condition of transformation T, the starting object Γ becomes When the goal $\Gamma\prime$) is realized, if there is an T^{-1} that makes $T^{-1}\Gamma\prime = \Gamma$ (meaning an opposite transformation can make the target object $\Gamma\prime$ become the starting object Γ), then the transformation T can still be achieved. This kind of thinking mode can be implemented through a class of examples explains that, for example, in urban environmental pollution problems, the matter element is expressed as M = (pollutant, state, existence); the purpose is to make the pollutant disappear, and the matter element is expressed as M' = (pollutant, state, nonexistent), due to the fact that many pollutants are difficult to degrade, so it is difficult to convert M to M' by changing T; that is, it is difficult to achieve $T^{-1}M\prime = M$. However, the opposite of "cleaning pollution," "forming pollution" is very easy to achieve; that is, the conversion from M' to M is very easy. It is easy to realize that $T - 1M' = M$ are established. According to the theorem, T also exists, that is, a way to remove pollutants exists, that is, to treat pollution from the source of the pollution. Generally speaking, the "inverse transformation" model is in case A. It is very applicable to the problem that it is difficult to transform into situation B, but situation B is easy to transform into situation A.

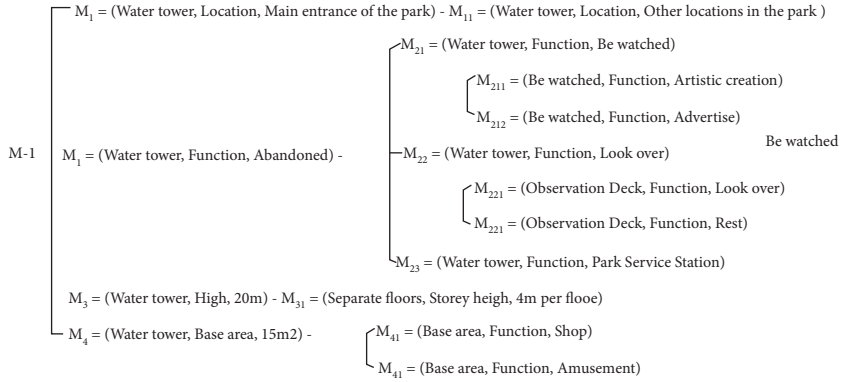

Figure 3: Divergence tree.

The fourth category is the "inverse implication" thinking model. The implication relationship is expressed in a mathematical formula: if A@ (meaning A is realized), then B@ (same as above), then A implies B, denoted as $A \Rightarrow B$; correspondingly, the "inverse implication" of $A \Rightarrow B$ is $B \Rightarrow A$, which is interpreted as if B@, then A@. The modes of implication and inverse implication are easier to understand, and they are more commonly used when analyzing the relationship between things and exploring the transformation and utilization of things. There will be corresponding examples in the following "conduction thinking mode." This conversion channel is not available for all things, but serves as a reminder to the designer.

4.1.3. Conjugate Thinking Model. The basic composition content, composition method, and expression of the conjugate mode are as follows.

Things O_m = real part of things O_m, imaginary part of things O_m.

The hard part of the two things O_m, the soft part of O_m, the soft and hard intermediary part of O_m.

The display part of two things O_m, the hidden part of O_m, the hidden part of O_m.

The positive part of the two things O_m, the negative part of the O_m, the negative positive intermediary part of the thing O_m.

Among them, the intermediary department depends on the actual analysis situation; not all things exist in the intermediary department. Symbolically, this can be expressed as follows:

$$\begin{aligned} O_m &= re(O_m) \oplus im(O_m) \oplus \mathrm{mid}_{im-re}(O_m) \\ &= hr(O_m) \oplus sf(O_m) \oplus \mathrm{mid}_{sf-hr}(O_m) \\ &= ap(O_m) \oplus lt(O_m) \oplus \mathrm{mid}_{lt-ap}(O_m) \\ &= psc(O_m) \oplus ngc(O_m) \oplus \mathrm{mid}_{ng-ps}(O_m) \\ &= re(O\mathrm{m}). \end{aligned} \tag{4}$$

The conjugate mode mainly solves the problem of objects. Here is an example to illustrate. Conjugation analysis of Harbin's urban land use characteristics resulted in the following results (Table 1).

Through analysis, it can be seen that the plan and the plan are affected by various controllable factors, thereby assisting the designer to improve the plan.

4.1.4. Conduct Thinking Mode. Conduction conversion is the conversion of another object after a certain conversion is performed on an object, and the conduction effect is the effect of conduction conversion [11–13]. In CAD technology, when there are objects that cannot be resolved in the conversion of $\phi\Gamma_1 = \Gamma_1'$, if $\Gamma_1 \sim \Gamma_2$ (the meaning of the symbol is related), you can find a conversion. $T_\phi(\phi \Rightarrow T_\phi)T_\phi\Gamma_2 = \Gamma_2'$.

In the process of conduction transformation, there are two basic relations between "association" and "containment."

Taking a river reconstruction project as an example, the key considerations are the ecological benefits of the river and the management of stormwater, and the ornamental nature of the plant landscape should be considered, and the core problems that need to be solved in the design should be explored. Then, a series of analytical substances can be established based on the theoretical and practical knowledge of ecological river design [14, 15]. Assume the following:

(i) M1 = (channel O1, river bed height, V1);

(ii) M2 = (channel O1, water level height, V2);

(iii) M3 = (channel O1, channel function, V3);

(iv) M4 = (channel O1, climate, V4);

(v) M5 two (river O1, surrounding vegetation, V5);

(vi) M6 = (channel O1, river bank line, V6);

(vii) M7 = (channel O1, revetment form, V7).

Then, there is a network of related relationships (Figure 4).

Table 1: Conjugation analysis of urban location characteristics of Tuanjie Town, Daowai District, Harbin.

Research object	Research element	Conjugate pair selection	Conjugation part meaning
Location characteristics of the city	Geographic location	Empty head	Imaginary part im(Om): relative city position Real part re(Om): absolute geographic coordinates
	Traffic condition	Soft and hard	Soft department Sf(Om): traffic organization, flow status Hard part hr (Om): traffic facilities, road construction status
	Greening construction	Soft and hard	Soft part Sf(Om): the activity formed by the use of the crowd Hard part hr (Om): green coverage, construction level
	Regional culture	Empty head	Imaginary part im(Om): folklore, history, and culture Real part re(Om): cultural objects, buildings, and so on
	Land value	Potential display	Potential lt(Om): tourism and other potential unexplored value Display ap(Om): the value of the current development and construction
	Land use nature	Empty head	Imaginary part im(Om): the nature of planned land use Real part re(Om): the nature of the current land use
	Economic revenue and expenditure	Positive and negative	Positive pSC(Om): total production value within the plot Negative part ngc(Om): total consumption value in the plot

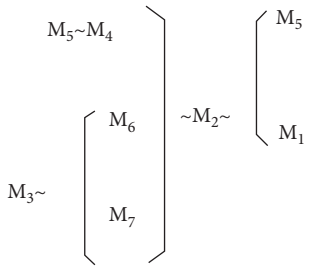

Figure 4: Network of relationships.

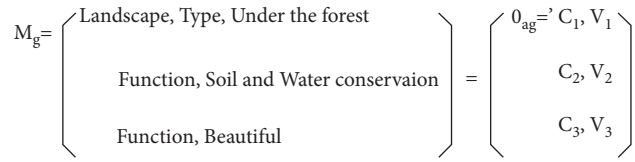

Figure 5: Target matter.

It can be seen that M2, M4, M6, and M7 are the most related to other content, so the impact is the most extensive. According to the actual situation, in-depth analysis is carried out and found that as long as the elements in M6 or M7 are changed, the basis of the relevant network will occur. Therefore, the ecological transformation of the river course focuses on the transformation of the M6 river line and the M7 quay wall.

Logical symbols containing relationships are used to connect causal elements. The framework of the form of the question of containment relationship analysis is called the containment system. If the cause of the internal system is changed, the result will also change, and there will be a conduction effect between cause and effect.

Assuming that the soil is exposed under the forest, it is not clean, and the soil and water are easily lost. A method is needed to solve the lack of problems in the landscape and soil protection under the forest. Display [11] objects by including system methods (Figure 5).

Carry out an inclusive analysis of the target items (Figure 6). The analysis found that through the form composition and plant selection of seeds, it is possible to repair and beautify the space under the forest, while protecting the soil and water resources under the forest. The insourcing system has a causal transmission effect, and changes in treatment measures will lead to changes in the landscape.

5. Use the Unique Standard Basic Body of CAD Technology to Expand the Modeling of the Basic Body: Ontology Modeling

The interface of CAD technology has many instructions. Create basic graphics. The simplest way to make objects can be made directly using the commands of this panel. This is the simplest modeling method so that it can be obtained directly from simple triangular pyramids, cuboids, and cylinders (Figure 7).

5.1. Creative Creation of Perspective Renderings of Garden Landscape. In addition to reflecting rationality, the design of garden landscape plans should also emphasize innovation and must abide by certain artistic rules in the design. One is the relationship between diversity and unity. Diversity means that when designing a landscape garden, when designing the body shape, the amount of the body, the color, the line, the form, the style, and other factors, all the above materials are taken into account so that they are unified and coordinated to form a certain degree of similarity or

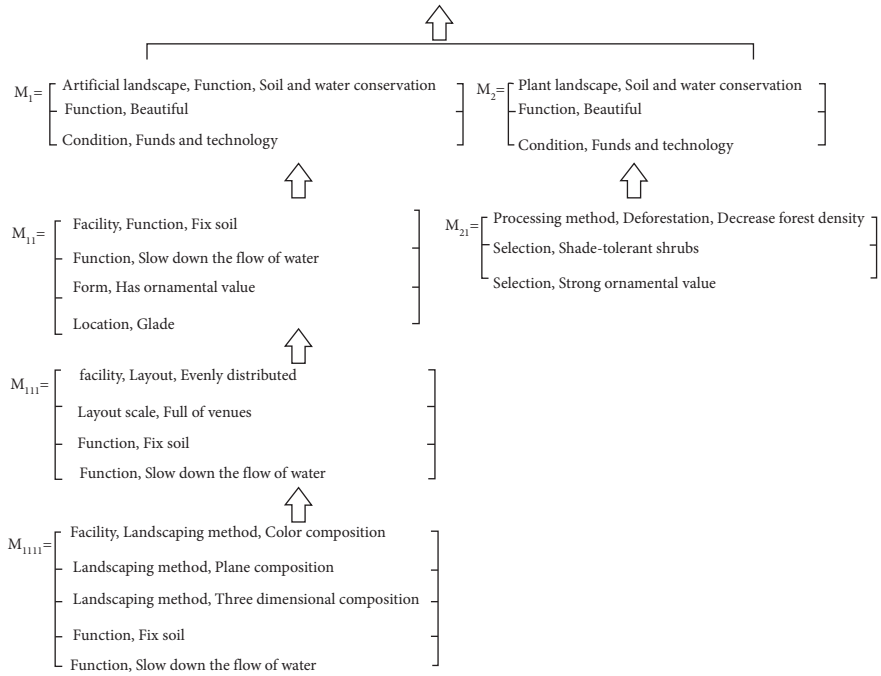

Figure 6: Implication analysis.

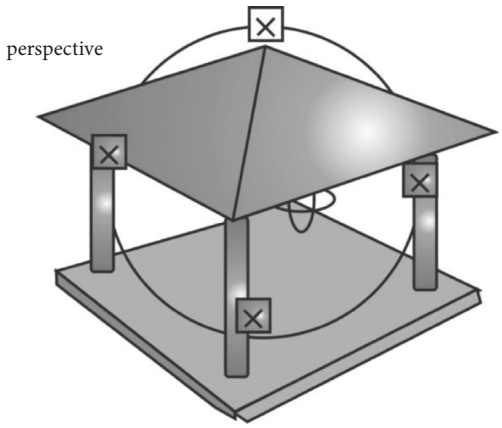

Figure 7: Extended standard primitive modeling.

consistency, which makes people feel that there is a certain change in the unity. If the ideas of the elements in the design are not enough, it means that there is a change. At this time, I felt disorganized and unstructured. Second, grasp the relationship between coordination and comparison. The design of the garden landscape achieves the goal of harmony through the grasp and innovation of body shape, color, line, proportion, virtual reality, and darkness, and so on, forming objects of different forms as a whole related to different sceneries. The third is a balanced and stable relationship. The garden landscape is being designed and it is necessary to consider the issue of color. If it is thick, it will be messy. The issue of quantity must also be considered. If it is too big, it will not be coordinated. According to the principle of balance, only a reasonable combination of plants of various weights can make it stable. Logical symbols containing relationships are used to connect causal elements. The fourth is the relationship between rhythm and rhythm. The shape, color, and texture of plants can express the rhythm and rhythm of the landscape. Willow trees need to be meticulous and funny, taking into account the mood and regularity, the most suitable for the effect of the landscape. The vegetation is arranged alternately to enhance the sense of rhythm and rhythm.

The pavement of the garden landscape is not the main landscape, but the coordination with the unreasonable area so that each area is more clear, shape, and pattern to set off the environment, and increase the thickness of the garden landscape. There are many decorations centered on neutral tones, and the colors are bright and not vulgar, but generally speaking, the luxurious colors should be coordinated with the atmosphere of the garden landscape space, and the sense of sight should be used to enhance the sense of direction and openness of the space. The garden landscape sketch is the decoration after the completion of the garden landscape construction, which is hung through flower bed lighting equipment, flower stand chairs, rocks, vegetation, flower pots, and springs. The embellishment of the sculpture satisfies people's physical and psychological requirements. The garden landscape sketches separate the space and connect the space so that the scenic spots have obvious signs. The landscape passing through the memorial garden is exaggerated by the sketch. The overall atmosphere of the landscape garden shows a unique artistic conception, exploration, longing, and other artistic conceptions.

5.2. Rationality of Creation of Perspective Renderings of Garden Landscape. Living requires a variety of activities. In the design, not only must we consider people's activities for design, but also pay attention to the function. The landscape design of the memorial garden is not limited to the second

dimension, but also needs a three-dimensional display environment space capacity to meet the needs of people's activities. Scientific and detailed investigation and research always follow the basic principles of domestic and foreign garden landscape plans. This mainly depends on the socially reasonable nature of both the discipline of landscape planning. Through reasonable scientific garden landscape planning investigation and research, planning various construction procedures, effectively using the data collected from various aspects to investigate the situation on the spot to understand the public opinion, through the investigation of local humanities and nature, the landscape design of the memorial garden can be made more scientific, and to achieve the unity of history and future. Because the garden landscape is a complex system project, it needs to create scientific and reasonable perspective renderings, constantly analyze the various stages of the intervention of each system, clarify the theme, solve the problems of the investigation through comprehensive research, grasp the main contradictions, and overlook the enemy from a height. Put forward the correct strategic deployment so that the design of the garden landscape plan will develop in the correct direction. In order to commemorate the landscape design plan in the garden, it is necessary to make a plan decision based on the comparative method and the positive method. Through the imagination of the future, if you seek creativity and new ideas, argumentation will play an important role.

6. CAD Technology Modeling Is the Application of Modern Garden Landscape Art Design

6.1. Comparison of CAD Technology and Sketch Master. SketchUp is a new 3D design software used in the field of architecture. It has many unique features and is also one of the development trends of 3D software in the future. The modeling process is simpler and clearer than CAD technology, which enables designers to concentrate on the design itself and make painting more efficient.

Compared with the final effect of SketchUp modeling, CAD rendering 33 is better in terms of fidelity, aesthetics, and sharpness. Although the modeling method is complex, the modeling level is higher.

6.2. Introduction to the Production of CAD Technology Garden Landscape Perspective Renderings. The perspective rendering of the garden landscape is composed of small objects in the garden, Including rockery, garden pavilions, flower stands, garden bridges, plant landscaping, garden sculptures, etc. The modeling of CAD technology is more complicated. Compared with the software of SketchUp, especially in the modeling of complex garden objects, the garden sketches are exquisite and beautiful. The complex structure makes the modeling very difficult. Generally speaking, in the process of making garden landscape perspective renderings, the first step of CAD technology, PHOTOSHOP, AUTOCAD is to import AUTOCAD drawings into CAD technology, which is a few two-dimensional lines. Next, according to the instruction of CAD technology, the two-dimensional line is turned into a three-dimensional body. According to the above modeling instruction, the two-dimensional rotation instruction: extrusion, turning, polygon modeling, and other methods are used to make AUTOCAD garden sketches one by one.

Introduce the AUTOCAD drawing of the villa courtyard into CAD technology. After importing the design drawing, the next step is to use the line drawing tool of CAD technology to draw that two-dimensional line. Use a large number of extrusion commands to turn into a three-dimensional model (complex villa modeling), which includes garden sketches such as flower stands, villas, bridges, and trees. After making the garden sketches one by one using the modeling method explained in the first part, the final renderings are obtained.

7. Conclusions

The use of CAD technology in the creation of perspective renderings of garden landscapes. Through the research on the creation results of the perspective renderings of the garden landscape, the CAD technology is used to improve and a more scientific method is proposed. By applying CAD technology to the creation of perspective renderings of garden landscapes, the creative thought process is more organized in chapters, and the transparency of the entire creative thinking process is also conducive to research and design. This article mainly starts with the basic principles of CAD technology creation so that more garden landscape perspective renderings creators master this technology and provide a basis for the subsequent application of CAD technology in garden landscape design.

Data Availability

The labeled dataset used to support the findings of this study are available from the corresponding author upon request.

Conflicts of Interest

The authors declare no competing interests regarding the publication of this paper.

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