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A Study on the Aesthetic Consciousness of Roads in Door Frame Landscape in Traditional Chinese Gardens

Analyzing the Representational Value of Roads in Door Frame Landscape Through Evolutionary Aesthetics

중국 전통 정원의 문틀 경관으로 감상하는 길의 미의식 연구

진화 미학을 기반으로 분석한 문틀 경관을 통해 감상하는 길의 표상 가치

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Abstract

Door Frame Landscape is a representative design technique of traditional Chinese gardens, which allows people to view the neighboring space through a doorway in the wall of the courtyard. The road serves as an element to guide the viewer to the adjacent space. Door frames are used to frame the landscape around the road, creating a Door Frame Landscape. This Door Frame Landscape style is widely favored, but the reason for this preference is still unclear. This has led to mere imitation of the style in the garden. Of course, the preference for Door Frame Landscape is also influenced by other fields such as politics, economics, and culture. This essay pursues the study of the aesthetic consciousness of road in the Door Frame Landscape from a scientific point of view, using evolutionary aesthetics. First, the paper summarizes the form of roads in the Door Frame Landscape into four categories. Secondly, evolutionary aesthetics theory suggests that people's good feelings towards the environment come from a sense of security and a desire to explore. Based on this theory, this study analyzes the aesthetic structure of the road in the Doorf Frame Landscape and proposes a good feeling vacation theory based on the road form. Finally, the paper experiments on the preferred of road form and concludes that viewers have the highest preferred of multidirectional curved roads. Based on evolutionary aesthetics, this study analyzes the aesthetic consciousness of roads in the Door Frame Landscape.

Keyword

Frame Landscape(틀 경관), Door Frame Landscape(문틀 경관), Road Scenery(길 풍경), Evolutionary aesthetics(진화 미학)

요약

문틀 경관은 중국 전통 정원의 전형적인 디자인 양식으로, 벽의 문틀 창을 통해 다음 공간을 감상하는 방식이다. 길은 관람자가 다음 공간으로 진입하도록 유도하는 요소이다. 문틀은 길 주변의 경치를 틀 안에 넣어 문틀 경관을 구성한다. 이런 양식의 호감은 오랫동안 각광 받아 왔지만, 이를 선호하는 이유에 대한 이해가 부족했고, 그 결과 단순히 양식을 모방하는 것에 그쳤다. 문틀 경관의 선호도는 정치, 문화등의 영향을 받지만, 본 논문은 진화 미학을 통해 미의식을 탐구하였다. 첫째, 문틀 경관에서 길의 형태를 4가지 범주로 요약하였다. 둘째, 환경 선호가 안전성과 탐색에서 비롯된다는 진화 미학의 이론에 따라 문틀경관에서 길의 미적 구조를 분석하였다. 그리고 길 형태에 따른 호감 가설을 정의했다. 마지막으로 길 형태에 따른 선호도 실험에서, 감상자가 다방향 곡선 길에 대한 선호도가 가장 높다는 가설을 검증하였다. 본 연구는 진화 미학을 바탕으로 문틀 경관에서 길의 미의식을 분석하였다.

목차

1. Introduction

1-1. Research Background and Purpose

Frame Landscape is the most representative gardening technique in classical Chinese gardens.[1] The use of doors, windows, and columns in the garden to form the landscape frame, the landscape content of the park is selectively displayed to achieve the role of optimizing the aesthetics of the garden landscape. According to Darwin's (1859) theory of evolution, aesthetic pleasure in a landscape is due to the observer experiencing an environment that satisfies its biological needs. Classical Chinese gardens, whether royal or private gardens are essentially living spaces built by people to meet their psychological and physical needs. Therefore, the design techniques in traditional gardens were designed to meet the survival and aesthetic needs of the garden owners at the time. In the analysis of formal Chinese gardens, we found that Frame Landscape structure was used in many formal Chinese gardens in different periods and regions, indicating that there is aesthetic consciousness in Frame Landscapes to meet people's biological needs.

The Door Frame Landscape in Frame Landscape is built around the road's scenery. A wall is set up in the middle of the road where people will pass, and a part of the road landscape is selectively displayed by punching holes, which is the Door Frame Landscape. People prefer this style, but designers must understand why they like and imitate it. Most existing studies on the aesthetic consciousness of road scape in Door Frame Landscapes stay in the field of human experience and need more research (Wang Jing[2] and Feng Yun[3]'s research) and discussion from a scientific perspective. Therefore, this paper tries to apply the theory of Evolutionary aesthetics to study the aesthetic consciousness of road scape in the Door Frame Landscape. Hopefully, this research can provide a scientific theoretical reference for designing Door Frame Landscapes in future landscape spaces.

1-2. Research Scope and Methods

Firstly, this paper briefly introduces all the manifestations of the Frame Landscape. At the same time, the main object of this paper, the Door Frame Landscape, is analyzed in some detail, and the road scenery in the Door Frame Landscape is divided into four categories: Short Curved Road, One-directional curved road, Multi-directional Curved Road, and Straight

1) 唐鈾鈞,秦華, "框景"在當今國外景觀中的運用, 西南師範大學學報(自然科學版), 2014, pp.143-146.

2)封雲, 園景如畫——古典園林的框景之妙, 同濟大學學報: 社會科學版, 2001, pp.1-4.

3) 王璟, 基於中國繪畫畫幅形式下古典園林框景的研究, 華中農業大學, 2013.

horizontal road. Secondly, this paper examines the preference for Road scenery in Door Frame Landscapes through the human habitat search preference theory in the Evolutionary aesthetics approach. Preference analysis was conducted regarding safety preferences and exploration preferences to analyze people's choice of scenes for the object of study (the Road scenery in the Round Door Frame Landscape). Finally, a questionnaire survey was designed for the road landscape content in the Door Frame scene according to the prediction theory, and the preference experiment was conducted to verify whether people's preference for the research object (the road landscape in the circular Door Frame scene) is consistent with the preference results analyzed by Evolutionary aesthetics theory. The research object of this paper is the Road scenery in the Round Door Frame Landscape in classical Chinese gardens, and the questionnaire survey includes men and women aged 15-55.

2. Analysis of The Expression of Door Frame Landscape in Traditional Chinese Gardens

2-1. Introduction to Frame Landscape

Framing represents one of the traditional techniques of garden landscaping.[4] By using doors, windows, columns, etc., to form the frames and selectively include the garden scenery, the landscape can be embedded in the frame just like a picture, which is known as a Frame Landscape.[5]

Frame Landscape can be divided into four categories according to the type of frames, namely, Leakey Window, Empty Window, Door Frame, and Square Column Frame (Table. 1).

The Leakey Window is formed by two parts, i.e., the "frame" and the "pattern". The frame of Leaky Window takes the form of squares, circles, fans, and other irregular shapes, as well as forms that are stemmed from specific natural things. The creation is quite random while the patterns are rather rich.

[Table. 1] Frame Landscape Type

Type	Content
Leaky Window	
Empty Window	
Door Frame	
Column Square Frame	

Empty Windows are simply window frames. To alleviate the monotony in appearance caused by the absence of "patterns", more complex empty window styles are used in landscape

4) 唐鈾鈞,秦華, "框景"在當今國外景觀中的運用, 西南師範大學學報(自然科學版), 2014, pp.143-146.

5) 謝蘭曼 , 徐彩芬, 蘇州古典園林漏窗的創作特點及應用, 林業科技發展, 2013, pp.128-132.

design.

Additionally, the Door Frame is also an integral part of garden landscaping. As a decoration of the garden itself, the doorway serves to guide the tour and connect the space. And various kinds of Door Frame Landscapes can therefore be formed by constructing relationships between the position of the Door Frame and the scenery. According to the characteristics of the borderline, the Door Frame scenery can be divided into three types, i.e., curved, straight, and mixed. Of the three types, the round doorway is the most common.

The Column Square Frame is constituted by vertical wooden columns and horizontal beams. The wooden structural decorations on the edge of the top and bottom can enrich the details of the pillar frame. And the area of scenery penetrated through the pillar frame is also larger.

Because of the wide variety of patterns of Leakey Window and the local cultural and artistic characteristics conveyed by them, the aesthetic consciousness embodied in Leakey Window frames is all the more complicated and deeply influenced by people's empirical consciousness. As for the Empty Window, it is few intricate patterns, and the sense of beauty stems from the landscape inside the frame. The landscape scenery formed by the Column Square Frame is quite large with complicated landscape elements. On the other hand, the major landscape elements contained in the above types of framing structures are rather uncertain, that is, they could be water, plants, buildings, mountains, rocks, roads, or any of them. Such a phenomenon makes it difficult to explore the general aesthetic consciousness. However, the road is a frequent and common element among all landscape elements of Door Frame Landscape, making it a plausible choice with strong generalizable significance.

As an essential element of the garden space, a road serves as a specialized area for people to move on, motivating people to keep exploring the next destination. In the middle of a road sets a wall; the efforts of perforating the wall and showcasing only a part of it have been widely preferred. The Chinese words for Door Frame Landscape (門框景觀) were searched through Baidu and 50 images were extracted. The final tally revealed that the largest number of circular Door Frame views were available.. (Table. 2). The structures of the Door Frame

[Table. 2] Door Frame Landscape Questionnaire

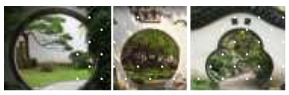
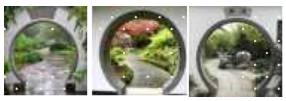
Type	Content
Round ,38 cases	
Other, 12 cases	

Landscape are primarily in the shape of simple geometric figures. Different from Leakey Windows and Empty Windows, the Door Frames do not have complex patterns or designs, and its beauty comes from the road scenery inside the frames. Regarding the aesthetic consciousness embodied in the Door Frames, this research would not bother itself to probe into details. Instead, it focuses on the aesthetic consciousness incorporated in the road scenery inside the Round Door Frame.

2-2. Classification of Road Scenery in Door Frame Landscape

According to the analysis of the collected data about round Door Frame Landscapes in classical Chinese gardens, the roads within the Door Frame Landscape can be divided into four major categories, namely, Short Curved Road, one-way curved road, Multi-directional Curved Road, and Straight Horizontal Road (Table. 3).

[Table. 3] Door Frame Landscape Rod Type

Type	Content	Name
1		Short Curved Road
2		One-directional Curved Road
3		Multi-directional Curved Road
4		Straight Horizontal Road

As to the Short Curved Road in the first category (Fig. 1), the Door Frame is usually set at the corner of the road, and the main ornamental objects are the natural scenery and artificial scenery nearby. When people stand right in front of the Door Frame and observe the inside of the Door Frame, the road scenery inside is less visible because the observer's view is blocked, unable to see the destination or the end of the road.

Concerning the One-way Curved Road in the second category (Fig. 2), when people stand right in front of the Door Frame and observe the inside of the Door Frame, the road scenery inside is more visible, and the observer's view is rather wide, able to see the destination at the end of the road and objects on both sides. In this setting, the main ornamental objects are the natural scenery and artificial scenery, both close and afar.

[Fig. 1] Short Curved Road

[Fig. 2] One-directional Curved Road

Regarding the Multi-directional Curved Road in the third category (Fig. 3), when people stand right in front of the Door Frame and observe the inside of the Door Frame, the road scenery inside is more visible, and the observer's view is rather wide, able to see the end of the road and most of the visual objects on both sides. In this setting, part of the objects is blocked by the road curve, and the main ornamental objects are the natural scenery and artificial scenery both close and afar.

As for the Straight Horizontal Road in the fourth category (Fig. 4), when people stand right in front of the Door Frame and observe, the observer's horizon is perpendicular to the road,

the road scenery inside the Door Frame is relatively less, and his or her view is blocked, unable to see the end of the street. In this setting, the main ornamental objects are the natural scenery and artificial scenery in the road.

[Fig. 3] Multi-directional Curved Road

[Fig. 4] Straight Horizontal Road

By analyzing the road forms in the Frame Landscape, the author proposed the hypothesis that the favorability for One-directional Curved Road and Multi-directional Curved Road was higher than that of the other two road forms. This may be because the first two types have a broader observable view compared to the latter ones. While making comparisons between the One-directional Curved Road and Multi-directional Curved Road, the author proposed another hypothesis that the favorability for Multi-directional Curved Road was higher, since it looks more complicated than the one-directional curved road. In the third chapter, this study, underpinned by evolutionary aesthetic theory, will examine and expound on the aesthetic consciousness embodied in the round Door Frame Landscape.

3. Evolutionary aesthetics Interpretation of the Aesthetic Consciousness of Road scenery in Round Door Frame Landscape

3-1. A Sense of Security Generated by the Prospect and Refuge Symbols in the Road Scope

In 1975 Jay Appleton published his prestigious work The Experience of Landscape, in which he proposed "habitat theory" and "prospect-refuge theory." Steven Bourassa commented, "although there have been aesthetic theories devoted to the field of landscape previously, Appleton's book must be regarded as the first to focus on the landscape as an aesthetic object specifically ."[6)]

According to Appleton (1975), humans and animals actively perceive information about their surroundings and process it as needed so as to ensure their survival. The idea that humans perceive their surroundings the way animals perceive their habitats has been named "habitat theory".[7)] Habitat theory suggests that during the landscape experience, humans spontaneously perceive stimulus symbols in their surroundings. A pleasurable feeling will be derived, provided the positive stimulus satisfies a primordial survival need. Otherwise, the anxiety will be entailed in the event that the motivation is negative and threatens a survival need. That is, the aesthetic pleasure experienced by humans in a particular environment is rooted in the fact that humans

6) Bourassa, Steven C., The aesthetics of landscape, Belhaven press, 1991, p.110

7) Appleton, Jay., The experience of landscape. Chichester: Wiley, 1996, p.65

have fulfilled their primordial biological requirements in their habitat numerous times.[8)]

According to the understanding of Habitat Theory, Road scenery in Round Door Frame Landscape structures has been widely used in classical Chinese gardens and continues to be used today. Indicating that the Road scenery in the Round Door Frame Landscape has the beauty to satisfy human biological needs. The study of evolutionary aesthetics and the investigation of the Road scenery in the Round Door Frame Landscape reveals that the aesthetic consciousness of the Road scenery in the Round Door Frame Landscape can be explained by the Prospect-refuge Theory.

Appleton incorporated the animal behaviorist Conrad Lorenz's concept of "seeing without being seen" as a chief criterion for humans behaviors of seeking an enabling environment. An enabling environment allows humans to safely retreat into without being seen and simultaneously to observe or "see" any potential dangers or resources in the domain. In the primitive period of human life, man emerged in nature with the dual role of "hunter" and "prey". As a hunter, they had to locate and chase after his prey; as the prey, however, men had to be on guard against the "hunter" (beast and men) and escape from danger the moment they perceived it . "Seeing without being seen"therefore became a condition to guarantee the survival of many creatures. From this perspective, when these conditions are available, any experience is endowed with the aesthetic satisfaction. Any feature that facilitates a broader vision is a "Prospect", while any part that provides an escape from danger becomes a "Refuge".[9)] According to Appleton, the appropriate combination of the symbols of "Prospect" and "Refuge" can entail a landscape of positive aesthetics.

The Prospect-Refuge theory divided the symbols of the landscape into three categories: Prospect, Danger, and Refuge. Prospect refers to an environmental condition with an open view; Danger, as an external stimulus, is indispensable to make the existence of Prospect and Refuge meaningful. The danger is an ecological factor that directly or potentially threatens human existence, whereas the refuge is an environmental condition in which one can escape danger. Based on the Prospect-Refuge theory, preference predictions can be made for each type of road scenery in the round Door Frame Landscape mentioned in Chapter 2.

[Table. 4] Short Curved Road Analysis

Short Curved Road	Short Curved Road .Red for "danger" areas.
	

Regarding the Short Curved Road of type 1, the observer's view is blocked because Door Frame itself blocks so much road information that one cannot observe the road condition after the turning. That is, as a "hunter," people cannot tell whether there is a desired "prey" in the scene; meanwhile, a dangerous stimulus is begot simply by the obscured area in the road (Table. 4). On the other hand, as "prey," people cannot detect the "hunter" in time and, as a result, avoid being attacked. Because people canot see the surrounding information on the road, they cannot judge whether there is a refuge that is eschewing danger. From this perspective, people are inevitably nervous or even anxious when entering this type of road and may even resist doing so to avoid any potential danger. And

8) Appleton, Jay., The experience of landscape. Chichester: Wiley, 1996, p.70

9) Appleton, Jay., The experience of landscape. Chichester: Wiley, 1996, p.85

therefore, this study hypothesizes that the favorability for this type of road should be relatively low.

[Table. 5] One-directional Curved Road Analysis

One-directional Curved Road	One-directional Curved Road.Blue represents the " Refuge" area
	

As to the One-directional Curved Road of type 2, the observer has a broad view, able to perceive the visual information on both sides and end of the road by standing at the Door Frame. Men, as the "hunter," can spot the "prey" in the scene. On the other hand, men, as the "prey," can detect the threat or the "hunter" in a timely manner. Due to the single direction of the road, however, there is not enough "Refuge" to hide from danger. Provided that one takes refuge in the plants on either side of the road, he or she may encounter new threats, so it is not a good refuge by nature (Table. 5). This explains why the favorability for this type of road is relatively high, but because of its lack of "Prospect," it fails to achieve an ideal combination of "Prospect" and "Refuge" symbols; therefore, this study hypothesizes that the favorability for this type of road is somewhat deficient.

Concerning the Multi-directional Curved Road of type 3 , the observer has a broad view, able to observe most of the visual information on both sides and the end of the road by standing at the Door Frame. In addition, the curved nature of the road creates a "Refuge" at the corner of the street to avoid hazards (Table.6). Compared to type 2, the Multi-directional Curved Road combines "Prospect" and "Refuge," and hence, this study hypothesizes that the Door Frame Landscape structure is the most preferred type.

[Table. 6] Multi-directional Curved Road Analysis

Multi-directional Curved Road	Multi-directional Curved Road. Blue represents the " Refuge" area
	

[Table. 7] Straight Horizontal Road Analysis

Straight Horizontal Road	Straight Horizontal Road. Red for "danger" areas.
	

As for the Straight Horizontal Road of type 4, its case is quite similar to type 1, where the view is blocked, unable to spot refuge. Because the road is accessible on either side and its situation is obscured by the Door Frame, a stronger sense of danger stimulus is created (Table.7). According to the theory, this study hypothesizes that the favorability for this type is the lowest.

Underpinned by the Prospect-refuge Theory (Appleton, 1975), preferences for various types of road scenery in round Door Frame Landscapes have been thoroughly analyzed. In the following Chapter 4, an experiment will be designed and conducted to investigate the preferences for each type of road scenery in the round Door Frame Landscape and to verify whether the

hypothesis of the preference in this chapter is plausible. Theoretical studies have found a strong relationship between the height of vegetation and “Refuge.” "Any part that provides an escape from danger becomes a Refuge."[10] According to Appleton's Prospect-refuge Theory, vegetation on both sides of the road provides areas for people to take refuge from danger when they encounter it. The vegetation on both sides of the road can be identified as a refuge, and the height and size of the vegetation will inevitably affect people's perceptions of the safety it provides.[11] So a questionnaire on people's preference for vegetation height has also been included in the experiment.

3-2. The Mysterious Visual Elements in the Road Scenery of the Door Frame Landscape Ceate a Desire for Exploration

Orians and Heerwagen (1992) put forth the theory of three stages of habitat selection for habitat selection preferences. Stage 1 can be referred to as the stage of choice. When first encountering a habitat, the critical decision made by people is whether to stay, explore, or leave. Neither an unsheltered and open environment nor a wholly enclosed environment will be chosen.[12] Stage 2 is about gathering information. Kaplan suggested that at this stage, humans prefer environments with mysterious features. For example, they may choose winding roads and partially obscured landscapes, where the resources are potentially rich, but it could be dangerous. Therefore, during this phase, humans vigorously seek out refugees to eschew danger. Environmental factors that can reinforce the desire to explore at this stage can stimulate a preference for the landscape.

The landscape preference matrix (Kaplan, 1989) argued that mystery constituted one of the critical predictors of landscape preference.[13] Mysteries aroused curiosity and encouraged people to delve into the scenery to explore and learn more; on the other hand, mysteries themselves did not imply new information but rather the promise by nature that further information existed. According to Kaplan, path curvature and partial occlusion of the view were essential mysterious properties, and a curved path was more mysterious than a straight one.

Herzog and Miller[14] suggested that environments with more mysteries must be equipped with curved roads. Their findings showcased a significant positive relationship between mystery and road curvature. According to Eriksson and Nordlund[15] curved roads can act as predictors of mystery, eliciting a desire to enter and explore the environment. A survey of urban woodlands[16] revealed that curved roads could enhance aesthetic and recreational preferences; as such, roads provided more opportunities for exploration and recreation. Studies of urban streets[17] also reported that people preferred curved roads to straight ones, for curved roads can arouse people’s curiosity in

10) Appleton, Jay., The experience of landscape. Chichester: Wiley, 1996, p.85

11) Lis A, Pardela Ł., Iwankowski P. Impact of vegetation on perceived safety and preference in city parks, Sustainability, 2019, pp.7-14

12) Buss, David., Evolutionary Psychology: The New Science of the Mind, Psychology Press, 2015, p.104

13) Kaplan S., Perception and landscape: conceptions and misconceptions[J], Proceedings of Our National Landscape.-Berkeley (USDA Forest Service) S, 1979, pp.241-248.

14) Herzog T R, Miller E J., The role of mystery in perceived danger and environmental preference, Environment and behavior, 1998, pp.429-449

15) Eriksson L, Nordlund A., How is setting preference related to intention to engage in forest recreation activities?, Urban Forestry & Urban Greening, 2013, pp.481-489

16) Wang R, Zhao J, Meitner M J., Urban woodland understory characteristics in relation to aesthetic and recreational preference, Urban Forestry & Urban Greening, 2017, pp.55-61.

17) D’Acci L., Aesthetical cognitive perceptions of urban street form. Pedestrian preferences towards straight or curvy route shapes, Journal of Urban Design, 2019, pp.896-912.

the first place. Gimblett et al.[18] indicated that the sense of mystery was influenced by visual access, especially by vegetation. As is known to all, dense vegetation restricts visual access and, therefore, becomes an attribute of the mystery. Stamps[19] argued that occlusion was an attribute to the sense of mystery, suggesting that the purpose of mystery was to create visual perceptions. Among the elements of the landscape, vegetation can block one's view, and the high density of vegetation that partially obstructs one's opinion would increase the mystery of the landscape and encourage people to explore the environment.

The above mystery theories suggest that the curved road and the partial obscuration of the view are essential factors for mystery. In the round Door Frame Landscape, the Multi-directional Curved Road of type 3 is the most mysterious in its form compared to the other types of road, not to mention the vegetation on both sides of the road, which partially obscures the view behind, can enhance the mystery. Such a sense of mystery will inspire people to explore; thus, this study hypothesized that people would preferred the road of type 3 road over the other scenery.

4. Experiment to Investigate The Preference of Road Scenery in a Round Door Frame Landscape

4-1. Experiment Introduction

In Chapter 2, by virtue of the analysis of frame landscape data, the research object, road scenery in round Door Frame Landscape, was summarized by road type as Short Curved Road, One-directional Curved Road, Multi-directional Curved Road, Straight Horizontal Road (Table. 8).

[Table. 8] Door Frame Landscape Rod Type

Type	Content	Name
1		Short Curved Road
2		One-directional Curved Road
3		Multi-directional Curved Road
4		Straight Horizontal Road

In Chapter 3, based on the theory of evolutionary aesthetics, this research examined the preference for each type of road scenery in Round Door Frame Landscape, and proposed the hypothesis that people would have the strongest preference for type 3, i.e., Multi-directional Curved Road. In this section, a preference survey for each type of road scenery in the Round Door Frame Landscape will be performed. Test whether the hypotheses derived in Chapter 3 are consistent with the experimental results.

The survey has been divided into four parts, i.e., the personnel information survey, which investigates the respondent's age and gender with the age ranges between 15 to 55 years old. The second part is the frame landscape preference survey, a total of four questions (T1,

18) Gimblett H R, Itami R M, Fitzgibbon J E., Mystery in an information processing model of landscape preference, Landscape Journal, 1985, pp.87-95.

19) Stamps A E., Mystery of environmental mystery, Environment and Behavior, 2007, pp.165-197.

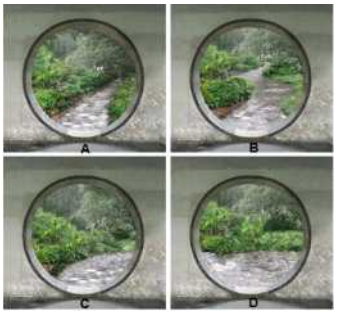
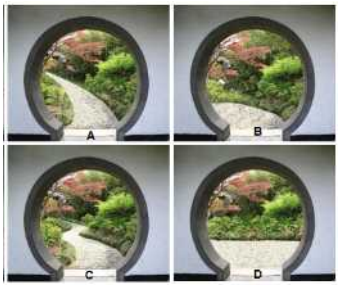
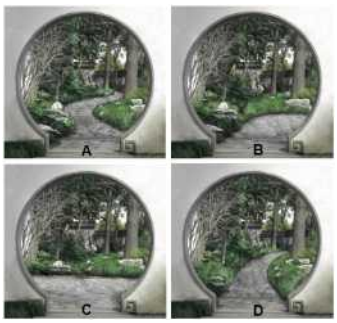
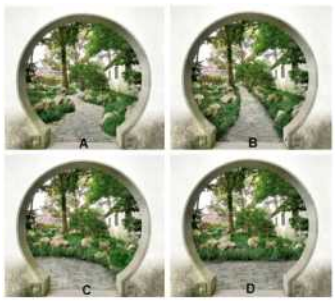
T2, T3, T4) included, showing participants four

[Table. 9] T1-T4 Title

Number	Content
T1	Which of the following two scenes do you like best? 
T2	Which of the following two scenes do you like best? 
T3	Which of the following two scenes do you like best? 
T4	Which of the following two scenes do you like best? 

groups of pictures, and two options for each group; as for the two options, one is a Door Frame Landscape, and the other is a general landscape without a Door Frame. By exploring participants' choice of pictures, this research will investigate whether people would have a preference for a round frame landscape (Table. 9). This third part is the favorability survey on

[Table. 10] T5-T8 Title

Number	Content
T5	Which of the following four scenes would you most like to enter? 
T6	Which of the following four scenes would you most like to enter? 
T7	Which of the following four scenes would you most like to enter? 
T8	Which of the following four scenes would you most like to enter? 

road scenery in a round Door Frame

Landscape (Table. 10), and there are four questions (T5, T6, T7, T8) in this survey, so four sets of pictures are shown to participants, with each representing four road types. This endeavor can verify whether the results will be consistent with the theoretical analysis, i.e., the Multi-directional Curved Road had the highest favorability. The fourth section is a survey on roadside vegetation height preference in the round Door Frame Landscape (Table. 11); in this

[Table. 11] T9-T10 Title

Number	Content
T9	Which of the following two scenes do you like best? 
T10	Which of the following two scenes do you like best? 
T11	Which of the following two scenes do you like best? 

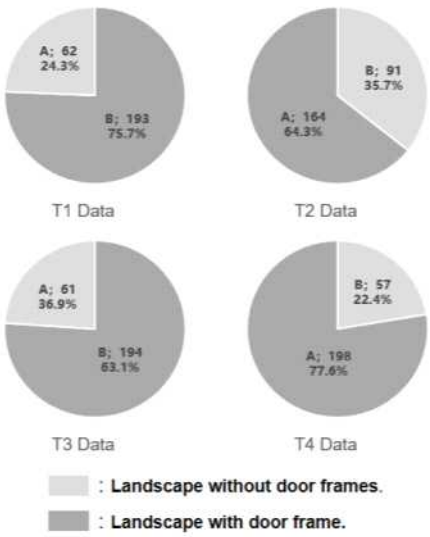
survey, a total of three questions (T9, T10, T11) presented to participants, and three sets of images and two (tall vegetation, short vegetation) for each group. This effort can verify whether people will prefer tall vegetation.

The above experiment is meant to test the consistency of the people's perception of road scenery in a Round Door Frame Landscape with the hypothesis of preference for each type of road in a Round Door Landscape as summarized by evolutionary aesthetic theory.

4-2. Experimental Results

A total of 255 questionnaires were returned. The first part is about the results of the personnel information survey (Fig. 5). Although there were differences in the number of subjects in different age groups, the comparison revealed that in each part of the experiment, the selection data of subjects in each age group had similar proportions to the total population selection data, so there was no effect on the experimental results.

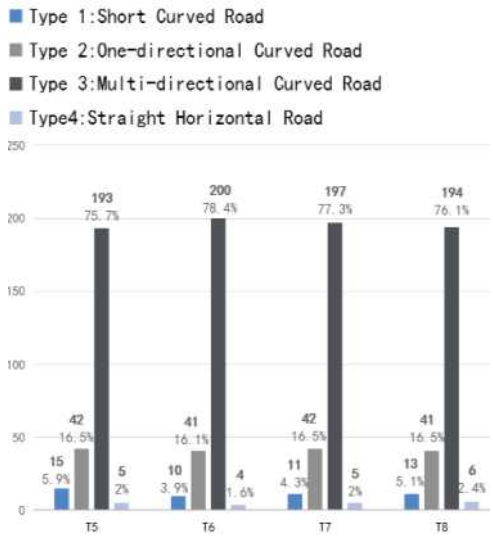
[Fig. 5] Personnel Information Survey Results Chart



[Fig. 6] T1-T4 Experimental Results Graph

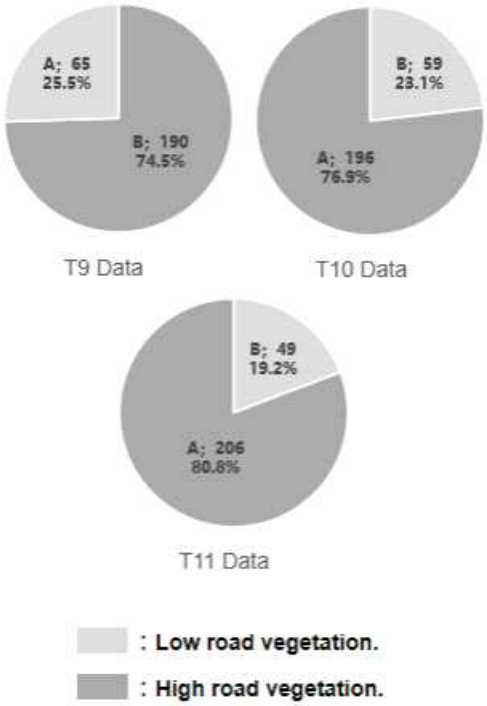
The second part is about the results of survey on the favorability of frames. To ensure the

accuracy of the results, the types of pictures for each option were randomized. And for the convenience of observation, in the following table showing the results (Fig. 6), pictures with frames are represented in dark colors, while pictures without frames are represented in light colors. According to the result, among four options, the tendency to select Door Frame Landscape pictures is significantly higher than unframed ones, i.e., given the same scenery, people prefer landscapes with doorway frame structures over ordinary landscapes.



[Fig. 7] T5-T8 Experimental Results Graph

The third part is about the favorability survey on road scenery in round Door Frame Landscape. To ensure the accuracy of the results, the types of pictures for each option were randomized. Moreover, for the convenience of observation, in the statistical graph (Fig. 7), the order of each road type was adopted rather than the order of options. It is found that the results are consistent with the hypothesis in Chapter 3, with the Multi-directional Curved Road of the third type enjoying the highest favorability, followed by the One-directional Curved Road of the second type, while the Straight Horizontal Road of the fourth type having the lowest favorability.



[Fig. 8] T9-T11 Experimental Results Graph

The fourth part is about the favorability survey on the height of vegetation in the road Door Frame Landscape. For the convenience of observation, the taller vegetation was represented in dark colors while the short vegetation was represented in light colors, as shown in (Fig. 8). The results suggest that in terms of Door Frame Landscape, the road with relatively tall vegetation are significantly more favorably perceived than that with short vegetation.

A summary of the survey results based on the questionnaire found that all age groups, regardless of gender, had a higher preference for road form of Type 3 and roads with taller vegetation. Such results are consistent with the analysis in Chapter 3.

5. Conclusion

By and large, Door Frame Landscape is constructed around road scenery, so the road scenery can be optimized by combining the door frame with it. This style holds a particular fascination for the general public. Designers, however, are insufficient in understanding people's preferences. Based on the theory of evolutionary aesthetics, this study analyzes the aesthetic consciousness embodied in the road scenery in the round DoorFrameLandscape. The study firstly proposes the hypothesis of people's preference for road scenery in the DoorFrameLandscape through theoretical research; on the basis of the efforts, it also verifies whether the hypothesis is consistent with the survey results through the survey on the preference.

According to the survey, people prefer Multi-directionalCurvedRoads and road scenery with tall vegetation in round Door Frame Landscapes. This environment with both open views and shelter from danger is rather important, as per the Prospect-refuge theory. When categorizing the road type in road scenery in Round Door Frame Landscape, it is found that Road type of Multi-directionalCurvedRoad enjoys the highest preference because, in this type of scenery, people not only have a wide vision and are able to access more information but also can take refuge from danger at the corner of the road. According to the Prospect-refuge theory, this scene combines prospect and refugee symbols well. Tall vegetation on the roadside can provide a refuge for people to hide from danger, making it a preferred choice over low vegetation. In addition, the mystery in the landscape preference matrix is positively related to landscape preference. At the same time, the curvature of the road and partial obscuration of the view are deemed predictors of mystery. In this case, the road of type 3 is the most mysterious in terms of road form compared to the other types, so it elicits the most exploration preference among all road types. As tall roadside vegetation conceals the vision behind it, endowing it with more sense of mystery than low vegetation; therefore, people prefer taller vegetation.

From the perspective of evolutionary aesthetics, this study examines the aesthetic consciousness embodied in the road scenery in the round Door Frame Landscape. It analyses the most aesthetically pleasing settings of the existing Round Door Frame and various types of road combinations. Hopefully, the exploration results can serve as a theoretical reference and shed light on the design efforts of the Door Frame Landscape.

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