

# To Explore the Principle of Visual Perception and Its Expression in the Exhibition Building Dynamic Space

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**Abstract**—Visual perception is one of a kind of things outside active exploration and recorded activities, the form feeling and cognition of objective things cannot do without visual perception. Interior design is a "visual arts", spatial morphology is as the basic theory of interior design that has certain significance of guidance in the process of interior design. The construction of indoor space aesthetic shape is inseparable from the interior space form, but also inseparable from the visual perception guidance. From the visual perception and indoor space form two aspects, the paper explore the visual perception that make people obtain the pleasant aesthetic enjoyment from the indoor space form, and how to create a give a person with " beauty "visual experience indoor space.

**Keywords**- Visual perception; Dynamics field; spatial form; Visual perception theory;

## I. INTRODUCTION

The previous research on architectural forms often pay too much attention to the objective laws of building solid visual form, while ignoring the significance of the existence contact between architectural form with people and non-visual perception to architectural form. In order to make the architectural form. This paper takes the phenomenology of architecture and modern psychology related theory as a foundation, contact the presence and perception of real life, and interpret the concept of the architectural form of the deepening understanding.

## II. THE VISUAL PSYCHOLOGY AND VISUAL EXPERIENCE

### A. Visual psychology

When people activities, accept the external world through a variety of sensory stimulation, people think of the causal relations between things by the brain, and accompanied the passions and emotional experience, reflects a series of mental process, which is the process of psychology. Among them, the vision is as a kind of initiative with a strong sense of form, its handy place not only that it can be readily used in consciousness [1]. Visual thinking process indispensable work is a positive physical processes and physiological activity, the corresponding visual psychology is a kind of positive psychological process.

### B. Visual experience

The so-called vision, is actually a general form of structure by nature to create a stimulating materials and corresponding to the original material, make people perceive the immediate activities. Visual information is one of the main information source of human knowledge for the external world, according to the data analysis, the people of 75%-78% information is obtained through visual, while 90% behavior is caused by visual. Visual perception and imagination is not limited range depends on the vision image. The appliance is not mechanical recording visual senses, it is perfect organization, found in the structure, synthesis of specific visual image. The visual activity can be regarded as a kind of human spirit of creative activities. The so-called visual experience, eye evolution of physiological. It becomes to choose, abstract, interpretation and formalization of vision. It takes the psychological mechanism of various visual phenomena, and the psychological role further visual behavior development as the basis, so as to enable people to observe, feel, analysis and cognition of objects, people watching experience from different angles and levels of visual thinking. Visual experience can effectively explain the ability to experience a schema is through the organization way of creating images, can be said to be objective and shape from the discrete image in the mind is extraordinary achievement.

## III. ANALYSIS OF VISUAL PERCEPTUAL DESIGN IN INTERIOR SPACE FORM

People on the sense of order demand first embodied in the visual. In interior design, from the space form of the basic elements of point, line, surface, body formed some constitution change regularity features appear is as the starting point, we study order sense of interior space form design. Interior design has two ultimate goals: on the one hand is to satisfy the demands of people on the function space, on the other hand, is to make people gain a sense of beauty. The sense of order is the necessary way of design goals, but it is not the ultimate aim of design. There is no sense of order there is no beauty, beauty created by a sense of order, the sense of order is an important element of beauty.

### A. Tidiness

Figure 1 is the enclosed circular scattered repeat composition in indoor space, can get the rhythm and sense of rhythm, so as to form a strong sense of order. High order

simply does not have the aesthetic feeling, because of the lack of change in the form of the vision that lets a person feel boring. In this space, breaking the high degree of order, space form with certain change, to make people feel the enjoyment of beauty.



Fig.1 the order sense repeat by formation

In space, the contrast is a main means to form change. It can make the space and form a lively and distinctive, so that the works have a strong expressive force, to stimulate people's demand, in order to highlight and strengthen the personality characteristics that give the impression. The two sides but also make comparison approach each other, plays a coordinating role transition, integrated, so that the space form to produce a strong simple sense and a sense of unity, as shown in figure 2.



Fig.2 the order sense form by contrast

One of the order characteristics showed that is simplify the structure in the form, make it become the geometric shape concise. In interior design, the object according to a certain form of arrangement, will bring a sense of order, reduce the details of the changes, to highlight the basic form is also a common technique, space has a sense of order to give people a strong visual impact, but also to facilitate people's understanding of space structure. Figure 3 this is the indoor space design of a shoe shop.

We design in interior, in order to be unified under the premise and the space form of the creation of rich change. In Figure 4, the characteristics of the store on the wall decoration, decoration order arrangement abundant space, but these decorations in the form and the material is not exactly the same, there is always that the use of one or two

mirror material and the surrounding decoration material contrast, became the visual focus.



Fig.3 Space depth sense



Fig.4 Changes in the order

#### B. Symmetry, dynamic and equilibrium

Symmetry can be divided into the mirror image symmetry, rotary symmetry, symmetry, mobile rotary symmetry. Symmetry has a strict format and rules, with a strong sense of order and the decoration is characterized in structure, stable rules, often gives a sense of balance, stability. Figure 5 is the interior elements and highly repetitive, brought to the central axis, aesthetic characteristics of integral space neat, spectacular while the rich strength. In the indoor space, the symmetry is the form sense of balance is the simplest method.



Fig.5 Highly repetitive of interior elements

Equilibrium is obtained through the correct handling smoothness of visual focus to get beauty, it breaks the symmetry axis of symmetry form required, broke it must be in the axis of the upper and lower, left and right sides of the

body to maintain consistent characteristics, also broke down in the color distribution, this model of objects placed must be symmetrical symmetry. Equilibrium is a relatively free, lively form, Figure 6 shows that equilibrium generated lively feeling and sensation of movement.



Fig.6 Symmetry and balance

Modern indoor space more often in pursuit of dynamic balance, more to consider how to make people from all directions perceived spatial balance. Many designers are using curve and spiral form, is a space with a sense of movement, full of vitality, such as spiral form shown in Figure 7 of the entire space form is the next big small, and one partial to the construction, from the perspective of aesthetics of classical architecture, it is not balanced, but from the viewpoint of dynamic equilibrium of view, its various aspects of mass restrict each other, showing a sense of balance, and make people feel alive.



Fig.7 Dynamic space

### C. Visual expression of "rhythm"

The rhythm is repeated space form elements of the regular and continuous, keep the distance with the constant relationship between the various elements of the. Prosody refers to the space form elements have order changes in rhythm, on the basis of ups and downs, changeful and dynamic beauty beauty. The rhythm is rhythm and purification, it is full of emotion, displays one kind of flavor and taste. Only the rhythmic repetition without rhythm changes, indoor space necessarily tedious; only changes the rhythm and the rhythm is no burden, the indoor space will appear to be, no contact. The relationship between the changes in mutual form of beauty and art space is inseparable with the rhythm.

In Figure 8, the space has a strong sense of structure through the steps of the repetition and arrangement, according to a spiral shape rotating rise to form the visual effect of spatial depth.



Fig.8 Rhythm and rhyme

### D. "Overlap and penetration" of vision

Overlap be in the form, overlapping also can be regarded as a kind of arrangement form. Figure9 is more than one entity of the box, they overlap together, in the visual form "before and after" of spatial relationship, they permeate and integrity of each other, but also showing a contrast.



Fig.9 Composed of more than one entity frame



Fig.10 Effect of permeability

The so-called penetration, when two or more than two elements together, produced a blend and penetration of various forms of fuzzy boundary, each other generate visual effects, it has infiltrated, absorption, extended meaning.

As shown in figure 10. Visual permeability can reach the actual situation, far and near visual extension, space level can fully strengthen the sense of visual permeability.

#### E. The visual illusion

As shown in figure 11. The designer will use linear element pinch lays out a distortion of the picture, but he successfully amplify narrow corridor by this media. Designers use white as the space background, let the long and narrow aisle unapt too depressed, black lines properly outline stereoscopic depth, let a space extension. Near the corridor of the wall is painted yellow green, this treatment not only out of the black and white contrast, more level, also let the space added a little zest. From the five set position, the wire frame image shows the room the real and the imaginary wall.



Fig.11 The perspective of lines

#### IV. CONCLUSIONS

The design of indoor space form involves many aspects, this paper provide the effectiveness of guidance. Through the visual perception of various indoor space form perception, we create a satisfying the indoor space environment and aesthetic requirements for people. At the same time, the indoor space form of contemporary design should also reflect certain ages, not only reflected in the new technology and new materials, to take the common type as the foundation, creates has the overthrow of indoor space form.

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