A Review of White Space Research

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Abstract

The white space in life is everywhere. White space refers to the blank, pages, charms, etc., which are empty, unfilled or undeveloped projects and fields. In this paper, the concept, function, related research of white space are described and discussed, and the research direction and relevant marketing suggestions are put forward, in order to provide useful inspiration for further research in this field.

Keywords

White Space, Imagination, Aesthetic

1. Introduction

White space, that is, nothing, it is a unique way of expression, and is widely used in the fields of painting, calligraphy, literature, drama, film and television, music, and architecture. The collision between the white space and the various fields can be used for different purposes. The scholars at home and abroad have made a great deal of research on the function of the white space from different angles. However, the research in various fields is rather scattered and lack of systematic arrangement of white space related research. In this paper, the relevant definition of the white space is briefly introduced, and then according to the role of white space in different fields and related research, the future research direction and related marketing suggestions are put forward.

2. White Space Concept

White space has broad sense and narrow sense. Generalized "white space" can be found everywhere in our life, such as the ellipsis in linguistics, the rest in music, the hollowed-out of sculpture or the leaking window of garden, etc. The narrow sense of "white space" is used in different fields, such as text in the layout, graphics other than free space [1]. White space is used in different fields with

different definitions. White space, known as "virtual spaces" in paintings, is the remaining spaces arranged by the three elements of a point, line, and surface [2]. Typography refers to the design and arrangement of visual elements such as text, graphics, etc. [3]. A design method makes it somewhat artistic and aesthetic [4]. The white space in layout design is the "virtual" parts of the layout that do not contain any visual elements [3]. With the development of the Internet, printed periodicals, books, posters and soon began to fade out of sight, replaced by electronic device screens, so the definition of white space has undergone a small change. White space is used to describe the space surrounding the object or work of the visual scene [5] [6]. White space is an area on a screen that does not contain text, pictures, or other visual elements. In addition, white space is not necessarily "white" because it can also be described as a "negative space" around a theme or image, so in a combination of foreground content or context called "positive space," It can be any major background color. In summary, scholars at home and abroad have corresponding definitions when they study different fields, but the common part refers to the white space, pages, symbols, etc., which are not filled or undeveloped projects and fields.

White space can be seen everywhere in our life, but most of them are regarded as the symbol of aesthetics, and few scholars study the role of white space from the field of marketing. In addition, scholars at home and abroad are scattered in various fields, unable to systematically explain the role of white space, this paper through the white space in each field of research to sum up, to provide future research direction on white space for scholars and do the groundwork for white space in the field of marketing research.

3. White Space Action and Related Research

White space as a unique means of expression has been widely used in various fields. It not only applies to aesthetics, but also plays an indelible role in every field of daily life. At present, the white space research of domestic and foreign scholars involved in various fields, such as layout design painting, calligraphy, film and television, teaching, consumer perception and so on, the white space in different fields show its unique charm. The purpose of this paper is to sort out and sum up the white space research in various fields, so as to provide more clear research ideas for other scholars. The research about white space in various areas is as follows:

3.1. White Space and Layout Design

The research about white space in layout design is mainly analyzed from the angle of aesthetics and imagination. For example, by combining with other visible visual elements, white space presents a beauty of reality and contrast [4]. By changing the size and proportion of white space, different styles of art can be reflected in the typography to attract readers' attention [4]. In the layout design of sci-tech periodicals, white space can make the layout harmonious and unified as

a whole [7]. The white space in book binding makes reading produce beautiful meaning, make reader's emotion melt into infinite artistic conception, enlighten people daydream, get spiritual aesthetic level [8]. In addition, the white space in layout design can relieve the pressure of visual psychology and visual physiology. It not only accords with the psychological order of people's cognition process and the logical order of thinking development, but also is advantageous to the simplicity and lightness, and emphasizes the information to be conveyed. On the contrary, a jumbled and crowded page will make the audience suffer and dread the reading process, and make the audience at a loss [9].

3.2. White Space and Painting

"White space" plays an important role in Chinese painting art, and literati painting pays particular attention to the pursuit of "empty realm" to deal with the virtual scene and the actual scene very attentively and there are a lot of white spots on the screen. White space art is especially obvious in Chinese landscape painting, which is the key to express artistic conception space. There is no white space, landscape painting will lose the entire picture of the spirit. There are many works using white space art in flower-and-bird paintings. The famous Chinese painter, Mr. Qi Baishi, describes the background of the shrimp as white space. The shrimp swam is shown by the bend of the shrimp's baleen. Although the picture has a large area of white space but gives a full picture of water, making the picture very artistic. In addition, appropriate white space can highlight the subject of display, create an artistic conception to give people imagination, relieve visual fatigue and relax the mood of the viewer [3] [8].

3.3. White Space and Teaching

The art of white space teaching refers to the creative teaching practice of using white space flexibly, following the law of teaching and the law of beauty. The research of teaching white space art provides a new understanding and a new way of thinking on a certain level, endows teachers and students with a richer meaning in teaching and learning, makes teaching full of imagination and poetry, and sublimates the meaning of life of teachers and students. At the same time, the creation of teaching white space art can provide concrete methods and meaningful guidance for teaching, so that it can be put into practice. As in [10], if there is a proper "white space" in classroom teaching, it will receive the effect of "silence is better than sound at this time", and summed up the methods of teaching white space art, such as introduction without saying, finishing the finishing touch, and causing imagination to pay attention to the white space art of teaching. As in [11], since teaching is both a science and an art, students do not like the kind of teaching that is too practical, too revealing, too complicated, too dense and leaves no room for any leeway, and that this artistic technique of cloth white is used in classroom teaching. It can open up students' mind and perfect their personality. When talking about the principle of teaching beauty, hidden

the principle of teaching white space art, he pointed out that the principle of simplicity in teaching is one of the principles of teaching aesthetics. Whether teachers or students, or an ordinary audience, people are happy with concise, accurate, vivid, targeted speeches, reports or lectures. This is the beauty of brevity. On the contrary, long procrastination, nonsense, intransitive speech boring.

3.4. White Space and Calligraphy

The so-called "white space" of calligraphy is not only the contrast and supplement to the form of pen and ink, but also the extension and expansion of ink and pen. The "white space" in calligraphy and ink, a virtual and a real, interaction, forming a huge artistic tension, black and white harmony of the common spectrum played the form of calligraphy. A piece of white paper, when the black lines fall, and then form a certain shape, the resulting white space become a part of the form of calligraphy and exist. The white line and the black line merge into one, and have the obvious influence to the black line. The white space is no longer a simple plane, but a deep space. The feeling of black is not seen as lying flat on paper, but more like suspending in the air, creating a more distant spirit.

3.5. White Space and Film

In film art, white space art has a wide range of expression, the use of lens language, film and television composition, color collocation, sound application and so on. In the film and TV drama, "white space" art technique is an important expression technique of image communication. The virtual environment formed by it complements and complements each other, which forms a complete artistic image system and an attractive artistic conception. The white space in the film and TV drama leaves a large amount of imagination space for the audience. The audience can fully "enter" the work, dig into the connotation of the work, understand the theme of the work, and use the "white space" art technique to analyze the film and television works, greatly expanded the meaning of the work. In film and television art, the application of white space art is various, including the use of empty lens, static field, discoloration, suspense and blur, etc. The thought and content of movies and TV plays are realized through one by one constantly changing lens. Generally speaking, there are people and objects in the lens, using the dialogue, action and behavior between people and objects to promote the development of the plot. But sometimes the lens also uses the missing person and the object, chooses the lens which does not have direct connection with the plot-empty lens. Suspense is a white space in the arrangement of the plot. The proper use of "suspense" can make the work as a whole seem implicative, and at the same time provide the reader with broad room for thinking, for example, "the best is still behind you. Don't stop reading now", stimulate the audience's interest or suspense", to the reader with endless aftertaste and profound enlightenment."

3.6. White Space and Consumer Perception

With the development of the Internet, printed periodicals, books, posters and so on began to fade out of sight, replaced by electronic device screens, so the definition of white space has undergone a small change. White space is used to describe the space surrounding the object or work of the visual scene As in [12] [13]. As in [12], whites pace is an area on the screen that does not contain text, pictures, or other visual elements. White space has not only aesthetic function, but also functional function [13]. White space is one of the principles of web site design. Generally speaking, web page design encourages the effective use of whitespace [14] [15] [16], because proper whitespace can reduce web clutter and improve communication effectiveness [17], achieve higher satisfaction [18]. In addition, if whitespace is used properly, it can be used as an indicative visual signal to draw attention to information [19]. White space in layout design emphasizes and highlights important elements, sharpen the contrast between content and context [12] [20] [21]. Appropriate white space can not only affect consumer trust in the site [22], and it also affects the consumer's perception of the brand's image [23] and the perceived value of web products [24]. In addition to its use in web design, white space is widely used in advertising to convey elegance and prestige. The white space around the product can increase the perception of prestige and value of the product, and then improve the evaluation of the product [25]. In addition, in addition to the impact on the content of the site, the white space around the text information can affect the persuasiveness of the information [26].

4. Conclusion

In this paper, the author narrates the previous research on white space, and finds that scholars mainly understand and study the white space from a broad perspective, and the research related to consumers is mainly focused on the presentation of websites. The reasons for the existence of white space are rarely analyzed from a psychological point of view. In addition to the areas described in this paper, which can be appropriately used, in the field of marketing, white space affects consumers' psychological perception, and then affects the judgment of products, such as product packaging, product picture presentation, advertising design and so on. In the design of product packaging, the proper use of white space can not only make consumers happy, but also improve consumers' awareness of brand, and then enhance consumers' love for products. In the online shopping situation, the product information is usually presented in the form of pictures, leaving a suitable white space between the image and the layout of the website can improve the consumer's imagination of the product and then increase the willingness to buy. The relative area of the product and white space in the picture can improve the consumer's evaluation of the product and make the consumer pay a higher price for the product. Here silence is better than sound, white space can also be widely used in three-dimensional space, such as store

product display needs to set aside the appropriate space, interior decoration needs the right space to give people comfort and so on.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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