

The Application of Digital Multimedia Vision in Graphic Design

Chunhu Shi*

Guangdong University of Science and Technology, Dongguan, Guangdong, China

shichunhu201912@sohu.com

*corresponding author

Keywords: Digital Multimedia Vision; Graphic Design; Graphic Symbols; Image Design

Abstract: Digital multimedia communication forms constantly challenge and enrich the traditional visual communication methods, expand the extension of contemporary graphic design, and have a significant impact on graphic design. This paper analyzes the relationship between digital multimedia and graphic design from the perspective of art design, systematically analyzes the relationship between multimedia and graphic design, and studies the impact of digital multimedia technology on graphic design. Through the systematic analysis and research, the graphic design can get a broader development space under the digital multimedia carrier, so that the designer has a new understanding of multimedia and graphic design, and can design better and more aesthetic flat design works according to the characteristics of its language.

1. Introduction

The future of modern graphic design art will focus on the design of the environment related to graphic design [1], and its relationship is connected, internal, interactive and broad [2]. Of course, it is not easy for designers and entrepreneurs to change their ideas immediately and design works that meet the standards of the future, which will be too difficult. Successful design will be the embodiment of correct values in the future. Design has different definitions and forms [3-4]. Designers play an active role in improving the quality of life and promoting the progress of civilization. Graphic designers play the role of visual culture builders. Across the century, the information transmission of graphic design changes from static to dynamic, from single media to multimedia, from two-dimensional plane to three-dimensional and spatial, from traditional printing design products to virtual information image. The new design culture will integrate traditional culture and modern civilization. In the face of multi-media competition, graphic design should make new contributions to the rejuvenation, development and development of national culture.

2. The Application of Symbolism of Digital Multimedia Visual Language in Graphic Design

Symbol is the external form and material carrier of information, and is an indispensable basic element in information expression and dissemination [5]. Through the object perceived by vision and hearing, it connects the object with something subjectively, so that a certain object represents a certain thing. When the representative is recognized in a certain society or collective and becomes a public agreement, the object becomes a symbol. The concepts contained in design, painting, music, dance, characters and characters, even in people's various life forms and concepts related to people's exchange of knowledge, can be summed up in the category of symbols, that is, everything in the real world is reflected in the spiritual world of people, and may be symbolized. As shown in Figure 1, during the 2006 German football World Cup, many graphic symbols designed with football images were used in many occasions.



Figure 1 Image design of graphic symbols

Graphic design visual language is different from other forms of language [6]. It loads information and uses visual elements to convey information. It aims at information transmission and is a simplified means of characterizing things and understanding things. Simply speaking, it takes the elements and basic means of graphic design as symbols and realizes the purpose of information transmission by processing and integrating these elements. The transmission of visual language symbols in graphic design is in a form of coding, which can be text information, or people, images, and scenery, and it is the object to convey design information. Through the analysis and coding of symbols or symbolic meanings, designers take the design elements and basic means as symbols, form a certain order with specific images to output and transmit them, The meaning of visual language symbols is more concrete, more vivid and more direct than the image of information itself. When the audience analyzes and decodes it in reading, sometimes they can understand it without too much explanation. As shown in Figure 2, the logo of the Olympic games designed by using artistic forms such as Chinese characters and seals with Chinese characteristics makes the audience quickly think that the 2008 Olympic Games will be held in China. It can be said that the visual language of graphic design itself is a way of expression of symbols, which is based on the form and principle of symbols.



Figure 2 Logo design of character symbols

As a perfect graphic design visual language symbol system, it needs to innovate and develop new graphics vocabulary, which is more conducive to editing and combining in creation, forming richer semantic information, and easier to decode and communicate in communication. The continuous emergence of new meaning and new vocabulary is not only the requirement of art creation, but also an important means to enrich the visual language of graphic design. In the process of human history development, we have accumulated a large number of graphic symbol resources. With the all-round development of modern society and the acceleration of communication and integration, we are constantly expanding the scope of human common experience. With the updating of technical means and the increasingly extensive and frequent information exchange, we have created a good form for the further development of visual language beyond the nation, region and culture And foundation.

3. The Application of Digital Multimedia Vision in Graphic Design

With the development of technology, human beings have finally ushered in the era of new media communication represented by digital technology [7]. The new media takes the emerging digital communication technology as the core, its speed, quantity and even the mode of information communication have changed unprecedentedly. Due to the influence of new media digital technology, graphic design visual language has been expanded, such as interactive entertainment design, network structure and interface design, multimedia design, application software, as shown in Figure 3, and digital device display interface design



Figure 3 Interface design of Nero 7.0 software

The design form expands from single perspective two-dimensional space to multi perspective three-dimensional space, or even four-dimensional space, using the graphic design visual language of new media communication shows a broader space and greater superiority. Digital information is easy to transmit, not only fast, but also not prone to errors. Due to the application of data compression and other technologies, the audience can greatly save the time and space needed to occupy the information. Digital information based on computer technology and the storage directory of files are easy to retrieve and query.

The display device directly presents information to the end users, audience members or consumers through a series of technologies, including electronic information devices presenting different formats, such as video, audio, text, database and the mixed formats of the above data, as shown in Figure 4. In addition, some information also uses three-dimensional touchable or perceptible formats, such as touch, taste and so on. The multimedia display device under this technology makes it easier to access a large amount of information in the mobile, which greatly facilitates the reception and transmission of information.



Figure 4 Display interface of player that can play audio and video

In the aspect of communication, the new media shows the infinity of providing information [8]. The nonlinear characteristics of new media technology will change people's traditional sequential reading and writing mode. In the past, most people used to read and write in the framework of chapters, sections and pages to acquire knowledge step by step, while the non-linear technology will present the content to the readers in a more flexible and changeable way with the help of hypertext linking. Due to the development of non-linear technology, the information possessed by new media can not be compared with traditional media in terms of category, form or absolute quantity of information.

The amount of information provided by advertisements on Web sites in the Internet is unlimited and does not need to be limited to this fixed page or time period.



Figure 5 Links between pages

Advertisers or advertising agents can provide thousands of pages of information and instructions to introduce the performance, price, model, appearance and form of products, as shown in Figure 5, which can be understood through page linking to a more detailed description of the product information.

In the aspect of communication, new media shows the interactivity of information transmission. The technology system of new media ensures the real two-way interaction between transmission and reception, and changes the single mode of traditional media communication. People are not passively accepting the same information in a fixed time and space, but tend to interactive mode, that is, the audience can actively and selectively receive information, or can timely feedback information, which is no longer the traditional one-way communication and the passive acceptance of information by the audience in the past. The traditional information dissemination has the characteristics of compulsory viewing, while the information dissemination under the new media can enable the visitors to obtain information such as words, pictures, sounds, images according to their own preferences.

4. Conclusion

In the rapid development of new media of information communication, the development of multimedia technology, satellite technology, optical fiber transmission technology is of great significance to the world's information communication, and computer technology plays a leading role in particular. In new media graphic design, visual language can be expressed from multi-dimensional perspective and multi-faceted techniques, and can be queried and stored in a more convenient way, which helps people to consider graphic design from a new perspective to a certain extent. It combines a variety of visual elements, generates various forms of motion, and uses the light effect generated by color movement. In contrast, the design of traditional media mainly depends on the shape and color of two-dimensional space, and the space in form and expression is relatively small. Therefore, the visual language of new media graphic design has more advantages than traditional media.

References

- [1] Jiyue Tang, Ziniu Yu, Lingfeng Liu. (2019)A delay coupling method to reduce the dynamical degradation of digital chaotic maps and its application for image encryption. *Multimedia Tools and Applications*, 17, 381-394.
- [2] Xixi Yuan, Zhanchuan Cai. (2018)An Adaptive Triangular Partition Algorithm for Digital Images. *IEEE Transactions on Multimedia*, 99, 1-1.
- [3] Mark Morris, Neil Spiller. (2018)The Shadowy Thickening of Space and Time with Chance: An Interview with the Quay Brothers. *Architectural Design*, 2, 72-77.
- [4] Paloma Palaucellicer, Jaime Mena, Olga Egas. (2019)Artsased Educational Research in Museums: 'Art for Learning Art', an Atographic Mediation. *International Journal of Art & Design Education*, 3, 670-680.
- [5] Karen M. Duffy. (2018)Kentucky by Design: The Decorative Arts and American Culture (review). *Journal of American Folklore*, 131, 99-108.
- [6] Luis Miguel Lus Arana. (2019)Architecture Between the Panels: Comics, Cartoons and Graphic Narrative in the (New) Neo Avantarde. *Architectural Design*, 4, 108-113.
- [7] Poggenpohl, Sharon. (2017)Fire Signs, A Semiotic Theory for Graphic Design. *Visible Language*, 35, 51-52.
- [8] Grant Ellmers. (2017)Connecting learning from the graphic design project with thinking about approaches to design practice. *Art Design & Communication in Higher Education*, 16, 69-82.