

# Research on Visual Communication Theory under Digital Technology

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**Abstract:** In today's era, the content and form of visual communication design are influenced by the continuous development of science and technology and the visual culture communication of new media characteristics. In view of the information dissemination characteristics, visual language characteristics and aesthetic features of visual communication design in new media, this paper makes in-depth analysis. Through the study of the new media visual communication design of two-way interaction, cross-media integration and personalized communication of information dissemination, and the new material features of the new media technology, the non-material, multi-dimensional, dynamic, and interactive visual communication, research shows that the application of computer digital technology in visual communication design has once again brought revolutionary changes to art design. It is the perfect blend of technology and art. The design elements and other aspects have the same theoretical basis as traditional visual communication design. At the same time, they have distinct aesthetic and formal characteristics in terms of communication means and visual language.

## 1. Introduction

Today, with the rapid development of science and technology, it is called the multimedia age, the network age and the digital age. Digital technology has penetrated into all fields of visual communication design art [1]. As a part of modern design, visual communication design is bound to be closely related to production and consumption. Its design field also covers all aspects of public life. It is the responsibility of visual communication designers to convey information to audiences with visual images. The goal of visual communication is not only to complete the simple transmission of visual information, but to give people emotional and ideological perception and satisfaction through visual communication [2]. To achieve such a goal, the visual elements in visual communication must be clear and readable and cognitive. In this way, it is possible for the audience to fully understand and accept the intentions and information of the creators embodied in the visual communication, and to actively respond to them [3]. Can be avoided by its impact and impact. The network represented by the Internet and the new society of digital civilization urgently need to innovate design concepts and systems. People are looking forward to the visual communication design in the new spirit, new art, new tools, new space, new media unprecedented development, can show the magical style, to meet the needs of all aspects [4].

In 2014, the views of young people using enhanced and alternative communication on the use of digital technology and social media were put forward by relevant scholars [5]. In the same year, the relationship between the theory of placing images back into frames: simulated visual communication and frame processing was studied [6]. Since 2017, visual and auditory cues in cue response paradigm have been studied by relevant scholars [7]. The responsibility of visual communication designers is to convey information to the audience through visual images. However, our social life has changed with the development of the times. The progress of science and technology has provided more and more broad space for the development of visual communication design. Especially after entering the information society, digital technology represented by computer and network has given visual communication design freedom in manifestation in many forms, but also posed new challenges [8]. With the rapid development of mass media, a rich and colorful visual image environment has been constructed, which makes the viewers accustomed to being surrounded by visual images, and to consuming and living under the influence of visual

images. The audience's lifestyle, consumption needs and values have undergone tremendous changes. The medium is the way to communicate ideas and exchange information. It is the most important communication tool for human beings and the link for human social interaction. The dissemination of information has promoted the progress of social culture and promoted the development of society [9]. The media has made the human social system have a psychological and spiritual connection platform. For the design practitioners in the new era of China, they also play the role of visual culture construction, and independent innovation in various fields has a long way to go. The rise of new media has brought us new challenges. The new design culture will integrate traditional culture and modern civilization. We need to grasp the technological advantages given by this era, fully exploit our imagination, and realize the innovation of design concepts and forms [10].

## 2. Materials and Methods

Creative thinking is based on imagination, while imagination is based on visual imagery. The function of association is to mobilize the visual image related to information to prepare for the next imagination and creative thinking. The number of visual imagery associations per unit time to convey information, the number and types of visual imagery that can be associated per unit time have become the main criteria for judging the quality of creative thinking. Digital technology captures people's eyes with creativity, touches people's mind with emotions, influences people's choices with ideas, and creates an atmosphere with context. This spatially induced spatial intent, the emotional intentions evoked by the mind, and the behavioral intentions that are driven by ideas. The space-time situation constructed by conscious thinking and imagination, etc., is difficult to define with a specific spatial dimension and needs to be presented with special spatial or temporal space. We know that space is a finite and infinite unity.

Media is the product of the times, and all media have their own space-time background and characteristics. The change of environment, the development of technology, the change of consumers' contact habits and so on are the main reasons for the change of media. The characteristics of new media are shown in Table 1. At the same time, digital technology does not exist independently in the process of communication. In terms of visual art design performance, we should not only follow the visual law of art design, but also master the characteristics of digital design language. We should deal with the rules of digital visual language scientifically, find the theoretical roots of digital design language and traditional visual communication design, and combine digital technology with visual communication language perfectly in the design process. In this way, digital art design visual expression language can take advantage of modern technology and develop healthily. The visual expression effect is slightly monotonous and the stereoscopic effect is not strong. Multimedia technology combines language, text, sound, images, images, etc. into one, to process, transfer and store various information. Therefore, the artistic works are enriched in expression means and expression effects, which emphasizes the three-dimensional sense and is more visually impactful.

Table 1 The Characteristics of the New Media

	Convey	Features
Interactive quality	15.63	4.82
Digitization	13.95	5.92
Accuracy	14.72	5.34
timeliness	14.81	5.71

The most important innovation of visual elements or symbols lies in the innovation of three visual elements: graphics, text and color, as well as the innovation of their aesthetic attributes. For creators, they should break through the common visual habits when they are looking for and digging things that conform to their own creative style and conception. In order to express the richest content visual communication design creativity in the form of simplification and symbolization, we must maximize the use of visual initiative. From the perspective of Gestalt

psychology, when the eyes see objects, perception has transformed the objects. The generation of visual image is the product of visual instantaneous “organization” and “construction”. The task of creativity is to find all the ways to expand the viewer's attention and “help” the viewer to understand what the designer wants to convey. Therefore, in the process of visual communication, designers must study, master and actively and consciously use these rules in order to create attractive works. Of course, in different eras, there are different formal and general conclusions and aesthetic concepts. Different visual art categories also have different formal and general conclusions and aesthetic concepts. Visual arts categories also have different forms of expression and their different aesthetic characteristics. The aesthetic characteristics of visual communication are shown in Figure 1.

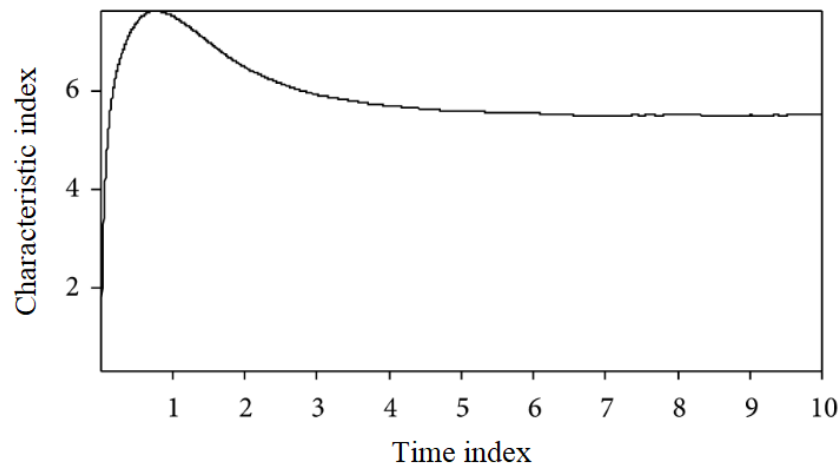


Fig.1. Aesthetic Characteristics of Visual Communication

### 3. Result Analysis and Discussion

The visual communication design of digital technology is integrated with the traditional visual communication design principles in the design theory, visual elements and design principles. Following the visual rules of graphic visual communication design, we should deal with the relationship between visual language rules and visual design elements in digital technology design scientifically. It is also the formal rule to be discussed in the process of digital technology design. On the emerging self-Media platform, each of us is the publisher of information, and also the recipient of information, we can use the media to publish personal views. Or share interesting information with others, which all highlights the personality of contemporary young people. Actively participate in the production of visual images. From the visual sensory satisfaction to become a potential factor in stimulating consumer behavior, design is increasingly inclined to please visual sense. Different from the background of the beginning of the theory of visual thinking, whether we are willing to accept or not, we can no longer avoid the social life surrounded by visual images and influenced by visual images.

Visual communication design is a design art that uses all the technical means that can produce visual image to disseminate information. No matter which form of visual expression is adopted, the audience must ultimately use visual perception to receive information. The influence of different visual forms on the visual perception of viewers is subtle and interesting. Visual thinking intersects throughout the visual communication design process. The so-called “communication” means “giving” and “communicating”, which means that the communicator and the communicant communicate with each other through the way of information transmission, and then cause interactive behavior, so that both sides can be satisfied. “Design” can be said to be a creative act. “Visual Communication Design” is the design of conveying information and expressing opinions in visual language. Today's visual communication has been integrated into many disciplines, forming a new industry with a time and society, and its content and design fields are becoming more and more extensive. Relying on art conservation, discover new media in new technologies. The creators only

actively take the initiative to embrace the baptism of the digital and information age. Starting from the innovation of creative ideas, visual elements and performance carriers, and adhering to the dialectical unity of the three, we can thoroughly promote the development of visual communication in the era of informationization and digitalization.

The so-called digital vision is a visual form with a certain independent aesthetic value, which is created by using digital technology through the media of “digital”. Digital vision broadens the scope of visual communication, expands the field of visual communication, changes the basic methods of design, and brings new visual experience. As far as visual communication media is concerned, tools and technologies are indeed important, but they are neither tool-oriented nor technology-oriented. After the development of technology in the same industry to a considerable extent. Everyone's level of tools and technology has been inextricably high and low. At this time, the key is to give full play to the subjective initiative of the creative subject, and strive to improve the artistic expression of the works, which is what people usually call creativity. Structuralist theory holds that the whole is logically prioritized for some. And pointed out that the viewer's active movement of the eye during the process of feeling. That is, the result of subjective initiative of human visual perception. For the creation of spatial context, the eye has a process of active discovery. The series of static linguistic symbols that are presented according to the time series greatly enrich the vividness and connotation of visual language, and become the most distinctive visual language in digital technology design content. The application of digital technology is shown in Figure 2.

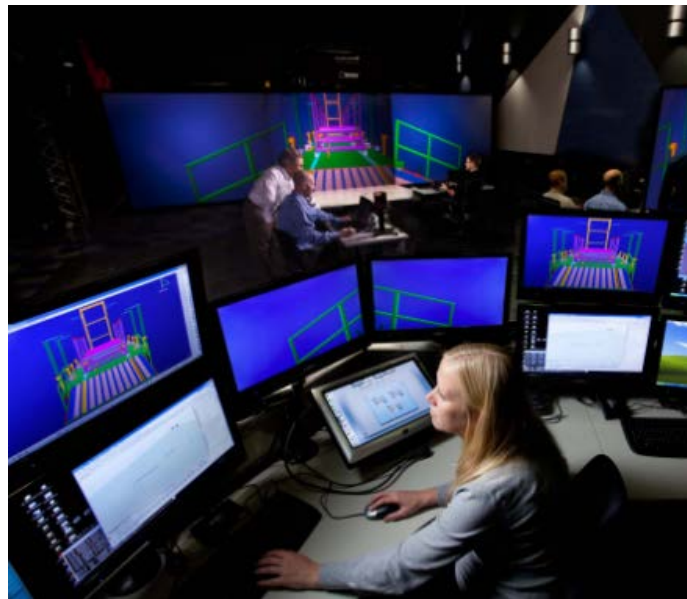


Fig.2. Application of Digital Technology

#### 4. Conclusion

The development and innovation of new media technology has given visual communication a new visual language and form of expression. It integrates text, graphics, images, animation and communication, forming a new creative expression method. It has brought revolutionary changes to art design and is the perfect integration of science, technology and art. Digital design is the inevitable trend of the development of visual communication nowadays. The creation of visual communication involves a large number of graphic design image expression means. The transmission of visual information using computer-aided design has gradually changed from traditional media to emerging digital media. And always affect the way of life and aesthetics of the public. In the future, digital technology in the aspect of design creativity, based on the traditional visual communication theory, will further embody the cross-integration of disciplines, and continue to develop the characteristics of visual language expression in accordance with its own digital technology. Constantly innovate and perfect, tap the human elements, make it continue to develop,

more embody the cultural connotation, and perfectly integrate digital technology and art design. Contemporary art design practitioners need to take advantage of the technological advantages and new creative spaces brought about by the new media era. While continuing the traditional design concepts and expressions, we will seek greater breakthroughs from infinite innovation.

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