

Fashion Design and Aesthetic Embodiment Based on Virtual Reality Technology

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Abstract. With the continuous development and improvement of virtual reality technology, the technology has been widely used to improve the overall level of fashion design, vivid aesthetics to create a good foundation. By giving full play to the advantages of virtual reality technology application, innovating fashion design scheme, optimizing fashion design concept, annotating aesthetic space, enriching aesthetic embodiment, helping fashion design to realize overall innovation. Based on the application of virtual reality technology, this paper puts forward some reasonable suggestions on fashion design and aesthetic embodiment.

Keywords: Virtual reality technology; fashion design; aesthetic embodiment; design innovation

With the development of science and Technology, computer technology has been able to construct virtual reality scenes, and people can experience the sense of being in the scene from visual, auditory and other sensory aspects. The development of virtual reality (VR) technology is greatly promoting the diversity of fashion expression, breaking the traditional limitation, redefining the relationship between the physical clothing and the virtual digital world, and realizing the digitization of the physical.

1 Fashion design theory based on virtual reality technology

Virtual reality technology is based on the premise of computer-supported simulation technology. It forms a virtual environment, virtual process and virtual product through Unified Modeling of design, processing, assembly, maintenance, etc. , it consists of hearing, sight, touch, smell and interaction. Based on virtual reality technology, mechanical products as the object of the design means. Virtual reality is not only a man-machine interactive system based on natural way, but also a virtual environment generated by computer, and through a variety of sensing devices, the user has the feeling of being in the scene.

Virtual design is the virtual realization of the whole process of product from concept design to put into use in the virtual environment constructed on the computer. Its goal is not only to simulate and visualize the material form and manufacturing process of the product, and it is to predict, evaluate and optimize the performance, behavior and function of the product and the implementation plan in each stage of the product realization.

The uniqueness of virtual reality technology lies in that it bridges the distance between reality and art, transcends technology itself and has its own aesthetic value. Starting from the media digital ontology of virtual reality, this paper expounds its non-material aesthetic

characteristics, and starting from the three major characteristics of virtual reality technology: conceiving, immersing and interacting, the characteristics of hyper-real aesthetics, immersion aesthetics and non-linear aesthetics of virtual reality art are summarized. With the coming of digital age, the boundary between virtual network and reality is becoming more and more blurred. Fashion is the epitome of the evolution of the times. Designers use modern technology to fully digitize fashion, creating contactless virtual fashion designed for the Internet age.

2 Fashion design aesthetic system based on virtual reality technology

Artistic Beauty is one of the forms of beauty, which comes from the aesthetic cognition of the artist's subject and is the reflection of realistic beauty in art. The beauty of art originates from the beauty of reality, but at the same time it is higher than the beauty of reality. The beauty of art includes the beauty of artistic content and the beauty of artistic expression. The composition of artistic content contains not only the image of the universe, but also the cultural aesthetic factors. The artistic beauty in the virtual reality system is also created by the designer in the virtual reality system after realizing the true meaning of art, in order to meet the users' Aesthetic Vision, the designer is creating based on real-world data. The so-called multi-perception refers to the perception of hearing, touch, motion, taste, smell, etc. . The beauty of art in the virtual reality system can arouse people's sense organs, it makes you feel like you're in a virtual reality system. Virtual reality art has interactive experience. Virtual reality technology itself is a human-computer interaction technology, and its interactivity requires participants to operate the virtual objects in the virtual environment. Human, as the subject of virtual environment, is the driving force for the continuous improvement of the interaction of virtual reality system. The interaction of virtual reality technology emphasizes the real-time interaction between human and computer. Let people with the help of virtual reality technology from the daily real life, into a more free virtual environment. The artistic transcendence of the virtual reality system is also reflected in its ability to break through the constraints of space-time and material conditions, making people feel what they can not experience in real life.

The beauty of technology is an independent aesthetic applied discipline, which is the product of highly developed modern productive forces. The use of technical beauty can promote the aesthetic creation of products, which is the aesthetic value of technical activities and works of art. The beauty of technology in virtual reality needs the support of computer hardware and software, and should pay attention to the technology of environment modeling, real-time rendering and collision detection. The technology of environment modeling includes geometry modeling, physics modeling and action modeling. Geometric modeling is the foundation of Environment Modeling in virtual environment, which mainly deals with and represents the geometric information of object's shape and mechanism. In the process of geometric modeling, special attention should be paid to the spatial proportion and shape of objects, in order to lay the foundation for the next stage of physical modeling. In addition, the details of things should be properly highlighted in the geometric modeling. Physical modeling is just modeling the material and color of objects in the virtual environment. If we want to reflect the real things in the virtual reality system, we must attach great importance to the material and color of objects, the color of the object is the key factor that affects people's visual feeling, directly affects people's aesthetic psychology and affects people's emotion. Therefore, in the creation of virtual environment, we should pay special attention to the unified effect of color.

Design Technology provides new design thinking for modernization. In the field of traditional art design, design technology is often the most difficult problem to break

through. Many times, the inspiration of good art design is not enough to support the creation of the technical and had to complete expression, this kind of helplessness is the most difficult for every artist to accept. Traditional art design is often hand-written and drawn, and it is easy to create for small-scale design, but for super-large-scale art design, it requires a lot of manpower and material resources, and in the difficult and complicated creative process, any calculation, handwriting, or description of the slightest problem is likely to bring irreparable damage to the art and design. In the new media era, various new technologies and technologies emerge one after another, such as digital technology, Big Data Technology, virtual reality technology, etc.. The invention and innovation of these technologies provide solid technical support for art design, at the same time, artistic creation has broken the traditional single-field design of the pure paper media. The modernization of design technology has promised the grand vision of "nothing is impossible, only unexpected" for the artist, which makes the artist's thinking burst out with rich creative energy and artistic inspiration.

3 Fashion design based on virtual reality technology

Graphic Design, as the most commonly used design method in the new media era, has a high demand on color design. In the new media era, choosing the right, harmonious and distinct color design is the direct means to deepen the audience's understanding of information, which is the basic aesthetic requirement for the creators in the current new media era. The correct and proper use of color matching design aids the entire creative design to enhance the design style, highlight the design theme, and effectively set off the design atmosphere. This type of color design can quickly attract the audience's attention, enhance the attention of the work, at the same time can make users in the influence of color to achieve a more background color with the color design. For example: the original desktop of Microsoft system computer, adopted the color collocation effect of green field and blue sky, this kind of color collocation design makes the feeling that the user opens the computer is tranquil and peaceful, can play the role of soothing mood.

Perfect structural design is the focus of object or space design. For the structural design in the new media age, on the basis of aesthetic creation and practical use, the artistic creator must consider the emotional needs of the audience and optimize the structure of the designed works, ensure that the user can use the work in the simplest, most reasonable and most appropriate way. The media plays a decisive role in the development of human information and the way of thinking, and in the practice of human society, it has produced relevant standards of behavior and ideas, for us to win a technology and humanities complement each other in a larger space-time. The holographic text form, mimicry communication, interactive body narrative and three-dimensional aesthetic transformation of virtual reality art have once again aroused the new thinking of the "Meta-problem" of contemporary art.

Information symbol is the most concise form of information transmission and language expression. The shape and form of the symbol reflect the designer's intention directly. It should be noted that each audience's environment, education, religious beliefs and other elements are different, resulting in different people's understanding of the same symbols and analysis of different answers. Therefore, in the design of information symbols in the new media age, the creator of art must take full account of the audience's contact environment, education level, religious belief and other factors, actively avoid symbolic information that may mislead the audience when designing. Due to the complexity of information in the new media age, many viewers can not devote too much energy and spirit to a single symbol. In order to improve the audience and effect of symbol design, symbol design should be simple and clear, with clear implications, the design must not be too

complex and difficult to understand, otherwise the audience will soon lose interest in watching and understanding, which puts forward higher requirements for designers in the new media age. Designers must draw from the information itself to create a simple and clear symbolic language, and can accurately and clearly express the content and meaning of the information itself, at the same time, we should pay attention to the structure and aesthetics of the design of the symbol itself.

Virtual reality technology has created a powerful "hyper-real" space, in the path of complex link technology, the means of expressing ideas in artistic texts are gradually changing from planar images to multimedia images, non-media images and other media forms, and they embody the distinctive characteristics of post-modern culture, such as immersion, collage and disorder, there is no depth, no center, no meaning. Therefore, some scholars say: "the advent of the image society has reconstructed the Cultural Order of human society: People's Way of life and the way in which people receive information, enter the imaginary world and the spiritual world are gradually filled with and surrounded by images." Indeed, we are in an age when images dominate the media, and the expansion of cultural consumption of digital images has led to the reconstruction of cultural order, the aesthetic turn from "literary figure" to "Figure Shadow" in the visual context can not be ignored.

Virtual reality allows cross-media and cross-cultural integration of digital art and other visual cultures, blurring the line between art and non-art, it also makes the appearance of virtual reality art once again put the "Meta-problem" of the essence of art in front of the audience, "what is art", "how art is created", "what is art?" And so on, it may rekindle interest in the art of virtual reality. In a sense, all arts are languages, but they are only languages in a certain sense. They are not the language of literary symbols, it is the language of perceptual symbols." Images have an intuitive ideographic function, and also belong to a form of language symbols. In contrast, the visual presentation of the plane image in the spiritual dimension and poetic feeling is not as strong as the aesthetic experience of the three-dimensional visualization of the virtual image. Virtual reality art text combines picture, text, sound, image and other media, and presents the external image and internal consciousness of art in harmony. Multi-media fusion has once again deepened the depth and breadth of text aesthetic value.

The rapid development of virtual reality technology has promoted the essence transformation and value derivation of visual art, challenged the traditional aesthetic system structure of art, and also affected people's overall understanding of art, at the same time, it creates the new possibility of "digital existence" and changes the living space and thinking dimension of human beings. As a connecting way of "body-like world" and a new force of constructing and deconstructing social cultural phenomena, virtual reality has become the representative of visual aesthetic culture, supported by a series of new media technologies, the exhibition of virtual reality art aesthetics is more diversified than previous digital images, and expands the boundary of digital visual aesthetic culture. Compared with the one-way graphic film and television art, virtual reality art is more dynamic, attracting more netizens to participate in it, stimulating the enthusiasm of the general public for virtual reality art. The "Internet +" series of image art has completed the challenge to the traditional art, pushing the art creation from the elite to the public, while the virtual reality art has once again challenged the traditional mechanism of art, further deepened the new media art system cognition.

4 Conclusion

If virtual reality art is to maintain the artistic individuality of its aesthetic creation, it is indeed necessary to integrate the positive factors that permeate the traditional artistic

discourse system and artistic aesthetic concepts to a certain extent, at the same time, it emphasizes the quality of its own artistic creation and tries to combine and penetrate the quality of the two artistic systems. As far as virtual reality art is concerned, its imitative "hyper-real" expression and flexible aesthetic participation are more suitable for the public's consumption habits of visual culture, with the help of its tension-rich and flexible artistic elements, to constantly improve their aesthetic quality, so that different art forms in the integration of infiltration to promote the contemporary art sector as a whole sound development.

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