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Research on the Aesthetic Orientation of Artistic Creation in Virtual Reality Scenes

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Abstract: With the advancement of science and technology, virtual reality technology has gradually penetrated into the field of artistic creation, providing artists with a new creative platform and aesthetic experience space. This paper explores the aesthetic orientation of artistic creation in virtual reality scenes and its influencing factors, so as to provide useful reference for researchers and practitioners in related fields. Through the discussion of immersive aesthetic experience, interactive aesthetic participation and diversified aesthetic expression, it reveals how virtual reality technology brings revolutionary changes to artistic creation. This change is not only reflected in the presentation of artworks, but also goes deeper into the audience's aesthetic psychology and the artist's creative concept. There are many factors that affect the aesthetic orientation of artistic creation in virtual reality scenes. Such as technical factors, cultural factors, and the artist's creative intentions. Typical virtual reality art creation cases are selected for analysis, which not only shows the wide application of virtual reality technology in artistic creation, but also reveals the formation process and influencing factors of different aesthetic orientations. With the continuous advancement of technology and the continuous innovation of art, artistic creation in virtual reality scenes will be richer.

Keywords: Virtual Reality Technology; Artistic Creation, and Aesthetic Orientation.

1. Introduction

With the continuous improvement of algorithms, hardware equipment and the continuous advancement of software technology, it has gradually shown its unique charm in the field of artistic creation. Artists use virtual reality technology to not only simulate and reproduce traditional art forms, but also create unprecedented artistic experiences [1]. Nowadays, audiences can enjoy three dimensional paintings, immersive drama performances, and even participate in the creation of works of art in virtual space. This new way of presenting art not only expands the boundaries of art, but also brings richer and more diverse aesthetic enjoyment to the audience.

Researching the aesthetic orientation of artistic creation in virtual reality scenes has far reaching importance and value for understanding the new dynamics of the integration of contemporary art and technology. Virtual reality technology has reshaped the way of artistic creation and appreciation, and its aesthetic orientation directly reflects the cognition and pursuit of the combination of art and technology in contemporary society. By exploring the aesthetic trends of virtual reality art creation, we can not only grasp the new direction of artistic development, but also gain insight into the changes in the audience's aesthetic psychology, thereby providing broader ideas and inspiration for artistic creation [2]. In virtual reality scenes, the aesthetic orientation of artistic creation presents the characteristics of diversity, interactivity, and immersion. This orientation is deeply influenced by technological development. For example, the advancement of hardware equipment provides higher-quality visual and auditory experiences for artistic creation, while innovation in software technology enables artworks to achieve more complex interactive effects. Cultural background and social environment also play an important role in shaping the aesthetic orientation of virtual reality art. Different cultural traditions and aesthetic habits affect the artist's creative ideas and the audience's acceptance. The artist's personal creativity and the audience's participation are also key factors in determining the aesthetic orientation of virtual reality art. Artists realize their unique creativity through virtual reality technology, and the audience's participation and feedback further enrich the connotation and expression of the artwork.

2. Virtual Reality Technology and Artistic Creation

2.1. Virtual Reality Technology

Virtual reality technology creates a three-dimensional virtual environment that allows users to immerse themselves in and interact with it. This technology uses computers to generate realistic audio-visual effects, combined with various sensors and interactive devices, to provide users with an immersive feeling. Its main features include immersion, interactivity, and imagination [3]. In the field of artistic creation, virtual reality technology can be applied in a variety of ways, providing artists with a new creative platform and expression method. For example, artists can use virtual reality technology to create virtual galleries or museums, allowing viewers to visit and appreciate works from a first-person perspective. This presentation method breaks the physical limitations of traditional galleries and allows artworks to be presented to the audience in an unprecedented way. Virtual reality technology can also be used to create interactive artworks. Through programming and sensor technology, artists can allow viewers to interact with their works in virtual space, such as changing colors, shapes, or sounds. This interactive art experience enhances the audience's sense of participation and immersion, making the communication of artworks more popular. Virtual reality technology can also be used to simulate and reproduce historical scenes or cultural phenomena. Artists can recreate ancient cities, civilizations, or historical events by collecting data and creating models. This application method not only allows the audience to feel

the weight of history, but also provides a new way for cultural inheritance and education.

2.2. Artistic Creation

Artistic creation refers to the process by which artists transform emotions, thoughts and ideas into works with unique aesthetic value through creative thinking and skills. It covers a variety of forms of expression such as painting, sculpture, music, dance, drama, literature, etc., and is an important part of human culture. Traditional aesthetic orientation emphasizes the pursuit and appreciation of beauty, and pays attention to the unity of formal beauty, content beauty and artistic conception beauty [4]. In traditional art, aesthetic standards are often influenced by multiple factors such as time, region, culture and social background, forming distinctive artistic styles and schools. In the virtual reality environment, artistic creation and aesthetic orientation are undergoing profound changes. Virtual reality technology, with its unique Immersion and interactivity, provides new means of expression and aesthetic experience for artistic creation.

Virtual reality art breaks the limitations of traditional art forms, allowing artists to create in a more free and diverse way. Through technical means such as three-dimensional modeling, it creates fantasy worlds and virtual images that transcend reality, breaking the imagination and cognitive boundaries of the audience. Traditional art is often static and one way, while virtual reality art encourages the audience to interact with the work, become a part of the work, and even change the form and connotation of the work through the audience's participation. The aesthetic standards of traditional art are often based on the unity of formal beauty and content beauty, while virtual reality art pays more attention to the creativity, interactivity and immersion of works. These factors together constitute the unique charm and aesthetic value of virtual reality art. Artistic creation has been expanded and extended in the virtual reality environment, and traditional aesthetic orientation is also undergoing profound changes. Virtual reality technology provides new means of expression and aesthetic experience for artistic creation, and promotes the integrated development of art and technology.



Fig 1. Designed by the author team of "1757 One Port Trade"

3. Aesthetics of Virtual Reality Scene Art Creation

3.1. Immersive Aesthetic Experience

Virtual reality technology, with its unique Immersion, has brought revolutionary changes to artistic creation and aesthetic experience. This Immersion is not only reflected in the sensory levels such as vision and hearing, but also goes deeper into the psychological and emotional levels, providing artists and audiences with a new way of artistic interaction. Artists can create freely in three dimensional space, making their works more three dimensional and vivid. Through virtual reality technology, artists can simulate various real or surreal scenes and transform their creativity and imagination into a realistic virtual world. This creative method not only enriches the expression of art, but also allows artists to explore their inner emotions and thoughts more deeply [5].

In terms of aesthetic experience, the audience can wear virtual reality helmets and equipment and be completely immersed in the virtual world created by the artwork. This immersive experience makes the audience feel as if they have become part of the work and can freely explore, interact and feel. Compared with traditional art appreciation methods, virtual reality art pays more attention to the audience's participation and experience, allowing the audience to change from passive acceptance to active participation. Virtual reality technology also enhances the sense of immersion by simulating the physical properties and behaviors of the real world. For example, the effects of gravity, collision, light and shadow in virtual reality are similar to those in the real world, making the audience's behavior in the virtual world more natural and realistic. This high degree of realism makes it easier for viewers to immerse themselves in the artwork and resonate emotionally with it.



Fig 2. "Scene Design of Guangzhou Huangpu Ancient Port" Designed by the author team

3.2. Interactive Aesthetics

In VR scenes, the interactivity between audiences and artworks not only changes the way artworks are presented, but also has a profound impact on the audience's aesthetic orientation. Traditional art appreciation is often one way, with audiences standing in front of paintings or sculptures and feeling the charm of the artworks through vision and imagination. However, in VR scenes, audiences are no longer passive recipients, but can actively participate in artworks and interact with them in real time. This interactivity provides audiences with a more diverse and rich aesthetic experience [6]. For example, in VR art exhibitions, audiences can freely explore virtual space and appreciate artworks from different angles through technical means such as gesture recognition and head tracking. They can even change parameters such as lighting and color of the artworks and observe how the artworks change under different environments. This personalized interactive experience allows each audience to gain a unique aesthetic experience.

The interactivity in VR scenes has an impact on the audience's aesthetic orientation. On the one hand, audiences pay more attention to the interactivity and fun of the artworks during the participation process, and prefer artworks that can arouse curiosity and desire for exploration. On the other hand, audiences will have a deeper understanding and feeling of the thoughts and emotions expressed in the artworks during the

interaction, thus establishing a closer emotional connection with the artworks. In a virtual reality scene, artists can guide the audience to appreciate the work in a specific way by setting different interaction methods and parameters, thereby better conveying their creative intentions. This two way interaction between creation and appreciation makes virtual reality art a more open and diverse art form.



Fig 3. "Guanghang No. 1" Designed by the author team

3.3. Diversified Aesthetic Expression

With its unique Immersion and interactivity, virtual reality technology has brought diversified aesthetic expressions to artistic creation, greatly promoting the diversity and innovation of artistic creation. Virtual reality technology breaks the physical limitations of traditional art creation. Artists are no longer limited to traditional media such as canvas and sculpture materials, but can create infinite three dimensional space through virtual reality technology to achieve more free creation. This borderless creative environment provides artists with a broader imagination space and inspires their desire to explore diverse aesthetic expressions. Audiences interact with artworks in real time through virtual reality devices. This interaction not only enhances the audience's sense of immersion, but also provides artists with a channel to obtain audience feedback. Artists can use virtual reality technology to incorporate different cultural, historical and regional elements into their works to create artworks with multicultural backgrounds. This cross cultural creative method helps promote the exchange and integration of different aesthetic concepts and promote the emergence of diversified aesthetic expressions. Through virtual reality devices, audiences can appreciate various works of art around the world. This cross regional communication method allows aesthetic concepts in different regions to collide and communicate with each other, thereby promoting the development of diversified aesthetic expressions.

4. Aesthetic Factors of Artistic Creation in Virtual Reality Scenes

4.1. Technical Factors

The development level of virtual reality technology has a profound impact on the aesthetic orientation of artistic creation. Virtual reality technology provides a broader creative space and expression form for artistic creation, thereby promoting the diversification and innovative development of the aesthetic orientation of artistic creation. The continuous improvement of technology enables artistic creation to simulate and reproduce the real world more realistically, providing artists with a more realistic creative environment. This improvement in realism allows the audience to immerse themselves more deeply in the works of art, enhancing the appeal and aesthetic experience of the works.

The development of virtual reality technology has also promoted the integration of artistic creation and technology. Artists have begun to try to combine virtual reality technology with traditional art forms to create more novel and unique works of art. The use of technology has also brought more possibilities and innovations to artistic creation, promoting the continuous development and evolution of the aesthetic orientation of artistic creation. The development of technology has also changed the way of dissemination and display of artistic works. Through virtual reality technology, audiences can appreciate various works of art around the world. This cross regional dissemination method allows aesthetic concepts in different regions to collide and communicate with each other. New display methods such as virtual reality exhibitions and performances also provide audiences with a more convenient and diverse art appreciation experience. This change not only expands the influence of artworks, but also makes artists' creations closer to the needs and aesthetic preferences of the audience.

4.2. Cultural Factors

Different cultural backgrounds play a vital role in shaping the aesthetic preferences of artistic creation in virtual reality scenes. Cultural background covers many elements such as history, tradition, customs, and beliefs, which together construct the unique aesthetics of a nation or community.

In Eastern culture, virtual reality art creation often focuses on the creation of artistic conception and the expression of emotions. Influenced by Confucianism, Taoism and other philosophical thoughts, artists tend to pursue a harmonious and restrained aesthetic when creating. In virtual reality scenes, this aesthetic orientation is manifested in the exquisite simulation of natural scenery, the in depth exploration of historical culture, and the delicate portrayal of character emotions. When experiencing these works, the audience can often feel a profound and distant artistic charm. In contrast, virtual reality art creation in the context of Western culture pays more attention to the reproduction of realism and personalized expression [7]. Influenced by historical stages such as ancient Greek and Roman culture and the Renaissance, Western artists emphasize the accurate depiction of reality and the expression of personality when creating. In virtual reality scenes, this aesthetic orientation is manifested as a realistic reproduction of modern cities, a bold imagination of a sci fi future, and a passionate praise of personal heroism. When experiencing these works, the audience can feel a strong and direct visual impact and emotional resonance.

4.3. Artist's Creative Intention

In traditional art creation, artists use tools such as brushes and sculpture knives to transform their creative intentions into works with aesthetic value. These works are often limited by physical materials and space, making it difficult to fully realize the artist's imagination [8]. In virtual reality scenes, artists can use computer technology to create infinite three dimensional space and transform their creative intentions into a realistic virtual world. This creative method not only breaks through the limitations of traditional art, but also allows artists to give full play to their imagination.

The realization of the artist's creative intention in virtual reality scenes makes the expression of the works more diverse. Artists can simulate various real or surreal scenes and transform their emotions and thoughts into virtual works with unique aesthetic value. Artists in virtual reality scenes can guide the audience to participate in the work in a specific way by setting different interaction methods and parameters, thereby better conveying their creative intentions. This kind of interaction between the audience and the work not only

enhances the immersion and fun of the work, but also allows the audience to more deeply understand the artist's creative intentions and aesthetic pursuits during the participation process.

5. Case Analysis

5.1. Case 1: Tilt Brush

Aesthetic Orientation: freedom, creativity and expression.

Influencing Factors:

(1) Technical tools: Google's Tilt Brush provides artists with a three dimensional canvas. Unlike traditional two dimensional canvases, it encourages artists to freely apply paint in three dimensional space to create three dimensional paintings.

(2) Interactivity: Audiences can wear VR helmets to immerse themselves in these three dimensional paintings, appreciate them from different angles, and even interact with them.

(3) Cultural background: Although the tools are universal, the cultural background of the artist will still affect their creation. For example, Eastern artists may be more inclined to create themes related to nature and harmony, while Western artists may focus more on depicting reality or surrealism.



Fig 4. Google Tilt Brush https://www.tiltbrush.com/

5.2. Case 2: Dear Angelica

Aesthetic Orientation: emotion, narrative and immersion.

Influencing Factors:

(1) Storyline: This work is a VR narrative experience about the deep emotions between a girl named Angelica and her mother. It brings the audience into a world full of emotions through the form of letters.

(2) Visual design: The visual style of the work is soft and dreamy, which complements the storyline and creates an immersive virtual world.

(3) Cultural background: This work may be influenced by the values of family and affection in Western culture, emphasizing the deep emotions between mother and daughter.



Fig 5. Dear Angelica
https://www.meta.com/experiences/pcvr/1174445049267874/#?

5.3. Case 3: Traveling on the Bian River in Bianjing, Northern Song Dynasty

Aesthetic Orientation: history, culture and reproduction.

Influencing Factors:

(1) Historical culture: This work is based on the ancient Chinese painting "Along the River During the Qingming Festival", which reproduces the scenery of the Bian River and the life of citizens in the Northern Song Dynasty. It is deeply influenced by Chinese traditional culture and focuses on the inheritance of history and culture.

(2) Technical details: By using high precision scanning and modeling technology, the artist successfully transformed this ancient painting into a realistic three dimensional world.

(3) Audience experience: The audience can personally walk into this ancient world and experience life in the Northern Song Dynasty as if traveling through time and space. This immersive experience allows the audience to feel the historical and cultural value of the work more deeply.



Fig 6. Dreaming of Bianjing in the Northern Song Dynasty (https://mp.weixin.qq.com/)

6. Conclusion

Virtual reality technology provides unprecedented creative tools and expression methods for artistic creation. Through 3D modeling, real time rendering and interactive design, artists can break the physical limitations of traditional art and achieve more free and diverse creation. Technological innovation not only expands the boundaries of art, but also brings richer aesthetic experience to the audience. The aesthetic orientation of artistic creation in virtual reality scenes is affected by many factors. The artist's creative intention, cultural background, technical tools and audience experience are all important factors in shaping aesthetic orientation. The artist's creative intention is more fully realized in the virtual reality scene, and the cultural background provides a unique aesthetic perspective and elements for artistic creation. Through analysis, artists from different cultural backgrounds express their unique aesthetic concepts through virtual reality technology, forming a variety of artistic styles. With the continuous advancement of technology and the expansion of application fields, artistic creation in virtual reality scenes will pay more attention to the audience's immersion and interactivity, and promote the development of aesthetic orientation in a more diversified, open and personalized direction.

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