Exploring the Enhancement of Emotional Interaction Experience in Digital Public Art

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Abstract

With the rapid development of the 21st-century technological revolution, digital interactive art has gradually manifested its cultural value and aesthetic significance globally. It specifically focuses on the research status and challenges faced by the Chinese academic community regarding the emotionalization of digital public art interaction experiences. Departing from both theoretical and practical dimensions, it elucidates the concept, foundational theories, and relevant research status of emotionalized interactive experiences. As the core of digital public art, emotionalized interaction aims to forge a closer emotional connection between artworks and audiences through digital media and technology, thereby enhancing the expressive power of artworks and the experiential satisfaction of audiences. The paper further identifies the challenges confronting current practices in the creation of digital art and proposes strategies and directions for enhancing emotionalized interactive experiences. Its objective is to promote the emotionalization level of Chinese digital public art, providing a foundation and direction for future development. Ultimately, it seeks to better cater to the aesthetic needs of audiences, foster the dissemination and development of digital art, and offer crucial theoretical support for the integration of Chinese digital art into the international arena.

Keywords

Digitization, artistic emotion, interactive experience

Introduction

With the rapid development of modern technology, digital interactive art has become an indispensable part of life, albeit still in its nascent stages in China. Currently, within the academic community in China, there remains considerable debate regarding the emotionalization of artistic works and the quality of experiential engagement. People are placing higher demands on modes of emotional expression within digital environments. This paper explores this phenomenon from both theoretical and practical perspectives, elucidating relevant concepts and foundational theories, assessing the current state of research and the challenges it faces, and proposing improvement strategies. This endeavor aims not only to advance the cultural dissemination and application level of digital public art in China but also to provide a foundation and direction for its future in-depth development.

1. Review of Research on Emotional Interaction Experience in Digital Public Art

As digital media evolves, interactive modes undergo fundamental transformations, leading to an increasingly heightened public interest in interactive experiences. Affective interactive experiences in digital public art represent a creative approach mediated by multimedia technologies, involving the processing and expression of works, audio, video,
and other forms of information (Liu, 2023). Within virtual reality environments, various devices are utilized to transform the content intended by the artist into images. Sound equipment is employed to capture relevant audiovisual data, which is then analyzed, organized, and presented to users. Digital interactive artworks possess a certain artistic quality, emerging from the comprehensive application of diverse carriers, media, and methodologies.

The rapid advancement of technology and the public’s pursuit of enhancing the quality of life have increasingly emphasized the importance of expressing and sharing emotional experiences of artistic works through digital networks. The progress in technology and the elevation of societal cultural standards have profoundly influenced digital art, to the extent of supplanting certain traditional artistic forms.

Affective interactive experiences entail users' emotional responses when engaging with digital artworks, reflecting upon their relationships with nature, environment, and society (Liu, 2023). Emotion is a subjective experience encompassing not only attitudes towards external entities but also involving individuals' awareness of their internal mental and physical states and the internalization of external information. As a critical component of digital art, affective interactive experiences evolve in response to technological advancements and user demands, transitioning from linear dissemination to nonlinear communication, significantly impacting the interaction between humans and objects (Wu, 2020). The development of virtual reality technology provides new possibilities for interactive design, enabling artistic creation through simulated environments and digital installations, while interactive design utilizes network and software tools to achieve the affective expression of works.

From the perspective of interactive experience, emotional design in China has not been developed for a long time, but many scholars have already conducted research on it. However, there are currently issues in the creation of digital artworks in China. There is a lack of interaction between artists and users, resulting in insufficiently nuanced, accurate, and precise emotional expressions in the works. Interactive participants are unable to directly engage with the works to perceive the true thoughts and emotions of the artists, leading to emotional deficiencies or biases that affect the aesthetic effects of the art. The absence of artistic aesthetics and emotional communication results in some users excessively relying on the convenient information services provided by digital creation platforms, neglecting their own aesthetic abilities and emotional communication functions, thus affecting the effectiveness of user experience.

Emotional interactive experiences, facilitated by users' interaction with elements such as characters and environments in digital public artworks, foster understanding and emotional responses to the life events conveyed by art (Li, 2020). In virtual spaces, artists have the capability to create interactive works based on the emotional needs of the audience. These works not only evoke resonance but also have the potential to influence shifts in audience attitudes. This experience integrates traditional art with modern digital media, with interaction at its core, allowing for creation and sharing within virtual reality. It meets the demand for emotional expression while enhancing the creativity and aesthetic standards of artists. Emotional interactive experiences merge digital creation with artistic practice, providing audiences with a more authentic and vivid artistic experience.

The implementation of effective interactive experiences may encounter obstacles in emotional communication. Therefore, enhancing individual and societal understanding of emotional expression and improving emotional communication skills are crucial for promoting harmonious interaction between humans and nature, as well as optimizing user experiences.

2. A Summary of Affective Interactive Experiences in Digital Public Art

The integration of digital technology with the internet introduces novel dimensions to interactive experiences. For instance, during the process of viewing videos, users can directly engage with the virtual world through interactive means such as sound and text. Additionally, when artworks incorporate emotional expressions, they can evoke a sense of immersion, allowing audiences to more deeply comprehend the messages conveyed by the artists (Went, 2019). This immersive experience aids viewers in perception and imagination, thereby facilitating the dissemination of artistic and cultural knowledge.

The establishment of effective interactive experiences requires a foundation in emotions. Modern technological advancements and societal progress have propelled personalized demands, shifting artistic creation from artist-centric to more inclusive user participation, thereby giving rise to affective experiences. This type of experience satisfies the need for emotional expression and intellectual communication through user involvement, constituting an analytical process that integrates theory and practice. At the theoretical level, it draws upon concepts of emotion from psychology and sociology, while at the practical level, it focuses on analyzing the impact of emotional elements in digital art and virtual spaces. Moreover, it integrates user experience research to propose innovative human-computer
interaction design solutions.

Emotional expression relies on media, and interactive art achieves it by listening to, understanding, and communicating with users’ emotional responses to the artwork. To attain high-quality psychological experiences, autonomy in thinking, creativity, imagination, and independent thinking abilities are required, as these are critical elements of human mental disposition (Wei & Zhao, 2017). Emotion is a key influencing factor in user experience. In the age of the internet, the pursuit of personalization and fashion makes people more attentive to individual psychological changes and emotional responses. In digital interactive art, users not only convey information and emotions but also convey the artist’s connotations, requiring media to grasp and adjust the audience’s psychological states and emotional changes. Art creators need to possess design capabilities to create touching emotional atmospheres and spiritual qualities in their works, catering to the needs of specific user groups (Wu, 2016).

In the digital environment, the essence and dissemination of interactive experiences mainly involve three aspects: emotional design, usability, and interactivity. Emotional design aims to evoke positive emotional responses from users through the artwork. In virtual spaces, users select specific content to experience based on their personal preferences and interests. Interactive experiences require media to facilitate bidirectional communication between users and artworks, thereby achieving the goals of emotional design. At this stage, it should be considered as a system to effectively convey and implement emotional design. Additionally, attention should be paid to the cultural connotations, ideological values, and spiritual aspects carried by the artwork itself. Understanding the content behind the artwork and its potential impact on users, and proposing corresponding measures based on specific circumstances, are necessary.

3. Designing Affective Interactive Experiences in Digital Public Art

Emotion does indeed play a central role in interactive design, with artworks leveraging sensory pathways such as vision and hearing to express their expressiveness. In the process of creating digital art, the interaction between the artist and the audience may trigger emotional responses, making emotional communication particularly crucial during peak moments of interactive experience. Emotional design focuses on the subjective experiences of users, utilizing artistic techniques to authentically reflect the relationship between individuals and their environment, while also considering geographical and cultural differences during the virtual creation and appreciation process. Interactive art pieces should leverage digital technology for innovative emotional expression while integrating into societal and cultural life, meeting the demands of the times, thus bringing about broader benefits and value.

The concept of affective interactive experiences emphasizes interaction between users and art creators, facilitating the exchange of emotions to promote the communication of knowledge, skills, and values. In China, digital public media is still in its early stages of development, and audience enthusiasm for art creation varies due to individual differences. Introducing the concept of affective interaction into digital media design can effectively enhance user engagement and desire for experience, thereby increasing satisfaction with works and the quality of art.

Affective and interactive experiences complement each other, and the creation of digital art needs to convey deep emotions. Despite the abundance of information channels in the digital environment, the limitations of traditional media technologies may hinder audiences from accessing timely and accurate information. Through interactive experiences, emotional and cognitive communication can be strengthened, enhancing audience interest in the works and helping them to better understand the author's intentions and the themes of the works.

User demand indeed forms the foundation of digital public art creation, and meeting consumers' needs for artistic forms and emotional expression is crucial for enhancing aesthetic experiences. Interactive technology plays a supportive role in this process (Zhuang, 2015). Artists must consider the characteristics of different audience groups and engage in interactive communication with viewers during the creative process. In the field of art design, the influence of emotional experiences on artworks is significant. Designers must deeply understand users’ real feelings and integrate them into the creation process of artwork as well as daily life. They should carefully observe people’s emotional responses and behavioral expressions in different situations. Users express their thoughts and emotions through digital interactive artworks. This process is not only the purpose of artistic creation but also the fundamental driving force behind the continuous advancement of emotional art creation.

In the process of designing and implementing interactive works, artists indeed utilize their personal emotional experiences to inspire creative inspiration, emphasizing the originality and information-sharing value of the works. Through this approach, artists can express their inner world in the most direct and authentic manner. Interactive design makes life more convenient and humanized, providing emotional support for artistic creation.
In virtual reality interactive design, users should tailor the works based on emotional goals. Designers need to utilize multimedia and network technologies to convey emotions, allowing viewers to understand the artist's emotional expression through experience, and achieve the ideal communication effect of the works. Affective interactive design is at the core of the digital art experience and directly influences users' experiential feelings. Therefore, the creation of works should start from the perspective of emotional interaction.

4. Implementation of Enhancing Affective Interactive Experiences in Digital Public Art

The enhancement of affective interactive experiences primarily relies on the emotions expressed by artists in their works, aiming to evoke resonance among audiences. The integration of literature and virtual reality technology provides a novel display method to satisfy readers' demands for three-dimensional and visual worlds (Cal, 2015). When incorporating emotional factors into artistic creation, artists often rely on technological means to enhance the expressiveness of their works and the interactive experience of the audience. Artists utilize professional equipment and multimedia software to transform artistic connotations and moods into images, audio, or video formats, and leverage online platforms and social media to enhance interactive experiences.

Indeed, the core of affective experiences lies in the interactive platform, which serves as a crucial medium for information and emotional communication between artists, users, and audiences. It plays a vital role in the effective dissemination and deep expression of artistic works. Through the interactive platform, the emotional content of artistic works is displayed and can be disseminated to a wider audience through multiple channels. User feedback and interaction not only enrich the acceptance of the works but also provide valuable creative references for artists, thus facilitating the smooth progress of the artistic creation process.

In the field of digital public art, the combination of digital art and network technology not only expands the possibilities of creation but also enriches the forms of expression of works. Artistic works are disseminated through various digital platforms, and affective experiences, as a key part of interactive design, establish deep connections with users through emotional resonance and mood creation (Tao & Tan, 2004). The application of virtual reality technology greatly simplifies the process of artistic creation, enhances efficiency, and enriches the user's exploration experience. Affective interactive design guided by user experience aims to establish spiritual resonance with the audience, stimulate deep emotions through the multidimensional expression of digital artworks, and transform the artist's personal understanding and identification into unique experiences in the works. This rich transmission of emotional content through online platforms brings pleasure and satisfaction to the audience, forming a two-way interactive experience. Affective interaction is the key to digital art creation, requiring the organic combination of artistry and technology to ensure that works demonstrate technological innovation while conveying emotions. Compared to traditional art appreciation, interactive art environments enhance the dissemination of works through information exchange and emotional feedback, requiring artistic creators to focus on improving the interactivity and emotional depth of works in secondary creation.

Emotional expression is at the core of interactive experiences, serving not only as the foundation for user interaction with artistic works but also as the key to conveying artists' emotional understanding. Designers should interpret artistic works from multiple perspectives to meet the aesthetic and emotional needs of audiences. Virtual reality technology and user experience analysis reveal potential emotional deficiencies and distortions in the interactive process, which require a combination of user self-reflection and external support for resolution. Through this approach, sensory effects and user experiences of virtual art pieces can be enhanced, realizing a more humane and emotionally profound interactive experience. The enhancement of affective interactive experiences is an ongoing process that requires continuous reflection and summarization.

5. Conclusion

The analysis of interactive experiences reveals a positive correlation between frequent user interaction with interactive art pieces, the richness of emotional expression in the works, and the ease of realizing content value. Digital creation emphasizes a human-centric approach, whereas traditional art may excessively focus on form and overlook deeper spiritual meanings. With the rapid development of technology and society, people are gradually realizing the unique role of artists and their irreplaceable importance in creation, thereby raising higher demands for interactive art pieces.

For example, the references (Lu, 2020; Liu, 2023; Wei & Zhao, 2017; Wu & Zhang, 2016; Tao & Tan, 2004) are

References


