

Exploring the “Self-referential” and “Transcendent” States in Immersive Interactive Art: A Case Study of TeamLab Borderless

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Abstract:

This paper delves into the concept of “Self-referential” and “Transcendent” states in immersive interactive art, with a specific focus on the case study of TeamLab Borderless. Immersive interactive art, as an art form rooted in human-computer interaction, portrays the process of human engagement with virtual entities. Through the utilization of immersive interactive technology, the constraints of physical environments can be transcended, allowing for the construction of novel spatial relationships and experiences. The content presented in interactive art encompasses the emotional expressions of the artists, while the interactive components generated by the audience contribute an additional layer beyond the artist’s intentions, thus embodying the notion of “Self-referential” and “Transcendent” states. TeamLab Borderless, a digital art museum, exhibits characteristics of both “self-observation” and “re-observation of the observed objects through oneself”.

Keywords:

Immersive Interactive Art, Self-Referential, Transcendent, Teamlab Borderless

1. Introduction

1.1. Wang Guowei’s Theory of “Self-referential” and “Transcendent” States

The theory of artistic conception, initially prevalent in literary creation and criticism, introduced the concepts of “artistic conception” and “realm” long before Wang Guowei [1]. In late Qing Dynasty and early Republican era, Wang Guowei not only consolidated the ancient theories of artistic conception but also provided a precise definition and innovative interpretations, giving it a mature theoretical framework [2]. Wang Guowei’s significant contribution lies in his profound theoretical knowledge and broad perspective influenced by both Chinese and Western cultures. He distinguished “artistic conception” as a distinct category within aesthetics, elevating it

to the pinnacle of classical Chinese aesthetics, thus enriching its aesthetic connotations [3].

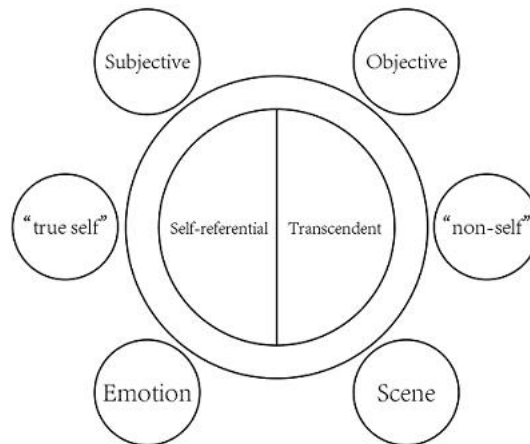


Figure 1. “Self-referential” and “Transcendent” analysis.

The introduction of the Western concept of the “two selves” was fundamental to Wang Guowei's formulation [4]. Given the early stage of Western knowledge diffusion during the late Qing Dynasty, the concept was localized for better comprehension. Specifically, the Buddhist concepts of “true self” (true self) and “non-self” (non-self) were adopted to correspond to the two “selves”. Consequently, “Self-referential” refers to the subjective realm with the “true self”, while “Transcendent” signifies the objective realm with the “non-self”.

1.2. Immersive Interactive Art

In the early 18th century, inspired by film special effects, avant-garde artists began incorporating sound and light into their artistic creations. This gradually led to the emergence of immersive experiential art as a significant medium of communication between artists and audiences. By the early 20th century, artists had already begun exploring immersive sensory experiences in non-narrative films [5]. With the evolution of technology, interactive elements were introduced into immersive experiential projects, paving the way for contemporary immersive interactive design.

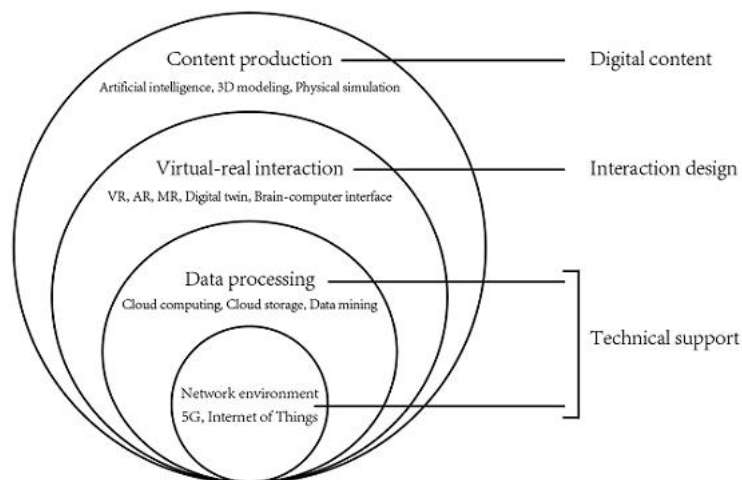


Figure 2. Immersive interactive art.

As virtual reality technology and multi-channel interaction continued to advance, immersive interactive art embraced more natural and harmonious interaction methods

and presented innovative artistic forms [6]. It has thus become the predominant direction in the development of digital media art in our technology-driven society and global culture [7].

2. Research Status

Through an analysis of relevant literature on Wang Guowei's theory of "Self-referential" and "Transcendent" states, it is evident that the main source of these concepts in Chinese scholarship can be traced back to Immanuel Kant. The relationship between "Self-referential" and "Transcendent" states and Kant's notions of the "sublime" and the "beautiful" as presented in his "Critique of Judgment" is emphasized [8]. Scholars have interpreted "Self-referential" as referring to the subjective realm with the "true self", while "Transcendent" denotes the objective realm with the "non-self". By surveying relevant literature on immersive interactive art, scholars have focused on studying its creation and development through the lenses of creative space, expressive forms, narrative approaches, and audience engagement.

Within the realm of interactive art, most scholars view it as an art form where artworks engage with viewers through computer-mediated interactions, aligning with the concept of digital interactive art discussed in this paper. Zhang Zhe, in his work "On the Development Trends of Digital Art", highlights one of the contributions of digital art as the emergence of interactive art as a new art form [9]. Scholars such as Dai Zhiqiang have offered their unique insights and research perspectives on the core concepts of interactive art. In the article "What Exactly is Interactive Art," scholars stress the close relationship between the concept of interactivity and the aesthetics of reception that emerged in the early 20th century [10].

The combination of Wang Guowei's theory of "Self-referential" and "Transcendent" states with immersive interactive art, using TeamLab Borderless as a case study, holds significant research value and warrants further exploration and analysis in this research project.

3. Immersive Interactive Art and the "Self-referential" and "Transcendent" States

3.1. Immersive Interactive Art in TeamLab Borderless

TeamLab is dedicated to the perfect integration of technology and art, utilizing digital technology to expand the forms of artistic expression. Through immersive experiences and multi-channel interactive modes, they guide audiences to immerse themselves in a boundaryless art world that merges technology and art, virtual and reality, sensibility and rationality, spectators and artworks, humans and nature, and individuals and society [11]. TeamLab Borderless is an art world without boundaries, where audiences step into the art and the art extends beyond physical rooms, facilitating communication, blending, and mutual influence between people and artworks. The creative team of TeamLab consists of interdisciplinary experts, including artists, programmers, engineers, CG animators, mathematicians, and architects [12]. Therefore, the distinct features of their art exhibitions lie in the incorporation of multidimensional technologies, as well as the immersive, interactive, and real-time dynamics.

Upon entering the exhibition space, visitors experience a variety of elements such as colors, sounds, visuals, and lighting that change in response to their movements.

These effects constantly evolve, forming new experiences. This breaks away from traditional creative and experiential patterns, utilizing digital technology to stimulate participants' senses and immerse them in an environment where virtual and real scenes overlap, providing new immersive experiences and spatial interactions[13].

3.2. "Self-referential" and "Transcendent" States in TeamLab Borderless

Wang Guowei's understanding of the "self-referential" state defines it as "viewing objects from a personal perspective, thus imbuing objects with one's own colors". The aesthetic subject appreciates the aesthetic object, and the object of appreciation is inevitably within the subject's capacity for appreciation. Based on the emotional aesthetics framework of immersive interactive art, this paper divides TeamLab Borderless into two stages: the establishment of immersive environments and the awakening of emotions, in order to discuss the "self-referential" and "transcendent" states.

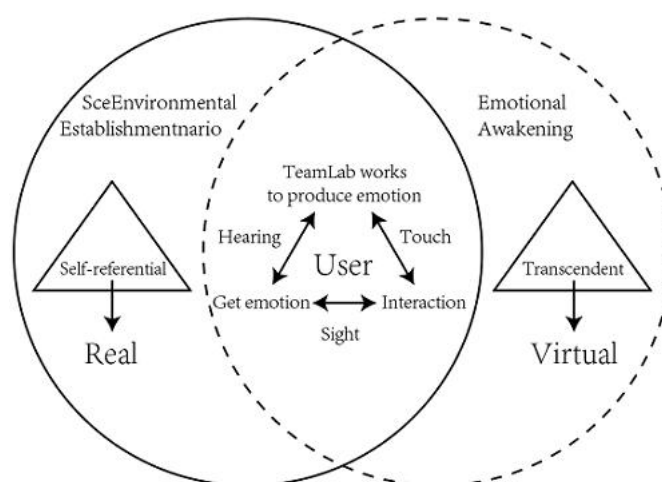


Figure 3. TeamLab's immersive interactive artwork "Self-referential" and "Transcendent".

3.2.1. Environmental Establishment and the "Self-referential" State

The creation of an immersive atmosphere is crucial for expressing emotional aesthetics and obtaining emotional aesthetic experiences within the context. This stage plays a guiding and suggestive role in the experience of emotional aesthetics [14].

The artwork "Graffiti Nature - Mountains and Valleys" is a large-scale three-dimensional space built on a steep slope with significant elevation differences. It represents a world where creatures, depicted by visitors, inhabit. Within this ecosystem, there are mountains and valleys, and all creatures traverse the high mountains and pass through the low valleys as they search for food, grow, and continuously reproduce. Visitors can pleasantly surprise themselves by discovering the creatures they have drawn in certain areas. By actively participating in the creation of the artwork, the participants and the designer jointly create the "self-referential" state. The designer's emotions and personal journey are presented in a visible and perceptible form. The designer's understanding of life in the natural world serves as the foundation of the concept of "object" in their mind, and the comprehension of "one's own colors" must be based on a rational concept of "objects". Thus, within the ecosystem of "Graffiti Nature - Mountains and Valleys", there exist plants and animals, tall trees and small grass, flowers and butterflies. The content that participants draw and add to the artwork represents their understanding of "one's own

colors” based on a rational concept of “objects”. The resulting artwork is a collaborative creation of the designer and the participants, embodying the “self-referential” state.

3.2.2. Emotional Awakening and the “Transcendent” State

The aesthetic concept of the “self-referential” state emphasizes the expression of the creator's individual emotions and ultimately reveals the unique artistic spirit and taste of the creator. It acknowledges and admires the artistic representation of “self” and emotions, providing a deeply moving aesthetic experience for appreciators [15].

In the artwork “Forest of Resonating Lamps”, when someone stands near a lamp, it emits light. The light from the lamp spreads to the two nearest lamps, and each lamp depicts a line of light that connects all the lamps and ultimately returns to the starting point. When the propagated light intersects with light transmitted by others, it emits a more intense brightness at the intersection. Thus, viewers become aware of the presence of others in the same space. The artist's realization of the relationship between space, time, and people serves as the foundation of the concept of “object” in their mind. Although the establishment of a rational concept relationship between the aesthetic subject and the object cannot completely exclude sensual factors, it is based on a grasp of the initial existence of rational concepts. Participants engage in interactive experiences within the artwork, and the sensual factors they generate represent their understanding of “one's own colors” based on a rational concept of “objects”. It represents a new era of space that accommodates changes and dynamics resulting from human behavior.

The trajectory of the pursued Eight-Headed Bird and the pursuing Eight-Headed Bird transcends boundaries. The flight of the Eight-Headed Bird is not a pre-recorded and repeatedly looped animation; it is generated in real-time by computer programs. Therefore, the artwork does not repeat past trajectories. This unique exhibition method, combined with the captivating light and shadow atmosphere on-site and the immersive sound effects, embodies the aesthetic activity of “viewing objects from a personal perspective”, as proposed by Wang Guowei. Viewers “observe other objects based on the objects they observe”, generating an understanding of time, space, and life through the observed abstract world, which aligns with Kant's notion of a positive and pleasurable feeling that harmonizes with life.

In an ideal sense, the sensation of “beauty” does not involve rational concepts. However, in the “transcendent” state, it precisely arises from the rational conceptual understanding obtained through the “self-referential” state.

4. Conclusions

Immersive interactive art, rooted in thematic content, integrates visual space and expressive forms with digital technology, presenting scenarios and emotions in a multi-dimensional manner. Through the exploration of the “Self-referential” and “Transcendent” states in immersive interactive art, it is hoped that a deeper understanding of the allure of interactive art can be achieved, enabling individuals to gain more meaningful emotional experiences within interactive art.

Conflicts of Interest

The author declares that there is no conflict of interest regarding the publication of this article.

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