Research on the "Theatricality" Mechanism of Digital Public Art

Shiqi Yi

College of Liberal Arts, Yangzhou University, Yangzhou 225009, Jiangsu, China
yishiqisally@outkook.com

Fengyun Yang*

School of Communication, Soochow University, Suzhou 215000, Jiangsu, China
felixmedium@163.com

Abstract: With the advent of the digital age, technology has empowered the interactive potential inherent in digital public art. Digital public art breaks the traditional aesthetic contemplation of public art, blurring the boundaries of the aesthetic subject-object duality. The artistic effect it presents allows the aesthetic subject to demonstrate initiative, participation, and interactivity, aligning with the concept of "theatricality" directed towards the audience. Derived from the field of drama, "theatricality" refers to the relationship between the audience and the performance, emphasizing the projection, interactivity, and level of audience participation in the artwork. This resonates with the perspective of the aesthetic subject participating in the aesthetic object in digital public art. This paper attempts to explore the theoretical roots behind the interactivity of viewers in digital public art and combine it with the theory of "theatricality" to understand the representational tendency of digital public art. Based on the theory of "interstitial" dialogue, optimizing Abrams' "four elements" theoretical framework, constructing an internal semantic paradigm with "audience" as the core, in order to explain the aesthetic significance generation mechanism of the "theatricality" of digital public art.

Keywords: Digital Public Art; Audience; Participation; Theatricality; Interstitial

1. INTRODUCTION

With the rapid development of science and technology, especially the emergence of virtual space, new opportunities have been provided for the development of public art. Public art based on global networks and digital technology transcends physical spaces. Participants can enter the digital space for virtual experiences through online portals, or engage in interactive behaviors with the artwork at the event site. The emergence of new fields allows participants to interact in a world that combines the physical and virtual realms, using multiple senses to experience the fantastic and poetic world. The digital environment breaks the traditional one-way relationship between public art works and the audience, injecting a higher degree of interactivity and participation into public art.

Through digital technology, audiences can interact in real time with art works, participating in the process of art creation and presentation. The artistic effects presented by digital public art allow the aesthetic subject to demonstrate initiative, participation, and interactivity, aligning with the concept of "theatricality" oriented towards the audience. Originating from the field of drama, "theatricality" refers to the relationship between the audience and the performance. In art, it emphasizes the projection, interactivity, and level of audience participation in the work, which resonates with the perspective of the aesthetic subject participating in the aesthetic object in digital public art. This study first summarizes the concept and characteristics of digital public art, discovering its potential and characteristics of interactive subjectivity. Secondly, based on the active, interventionist, and embodied behavioral characteristics of the audience towards aesthetic objects in digital public art, this study explores the connection between these characteristics and "theatricality", and explains in which aspects the "theatricality" tendency of digital public art is manifested. Finally, starting from the issue of "theatricality", this study seeks to discover the ways in which meanings are generated that are hidden beneath the formal expressions of "theatricality" in digital public art, and to explore the roots of the unique perceptual experiences it brings us. By combining and optimizing Abrams' "four elements" theory, an internal semantic paradigm centered on the "audience" is attempted to be constructed, in order to explain the aesthetic significance generation mechanism of "theatricality" in digital public art.

2. LITERATURE REVIEW ABOUT RESEARCH ON "DIGITAL PUBLIC ART"

Thanks to the support of advanced digital technology and devices, a large number of excellent digital public art works have emerged in recent years, generating positive impacts in society. In terms of academic research, theoretical achievements have also emerged, including:

2.1 On the level of audience experience

The article Editors' Statement: Hybrid Space and Digital Public Art (Freeman & Sheller, 2015) focuses on the hybrid space created by digital public art in the process of spatial display, as well as the sensory

experience of the audience in the heterogeneous space of multimedia mix. In the book Digital Public Art: Engaging Audiences through Interactive and Immersive Experiences, the intersection of digital technology and public art is explored, with a focus on how to enhance audience participation through interactive and immersive installations. This is also an important reference for studying the interaction between digital public art and the audience. The article Media Art and the Urban Environment: Engendering Public Engagement with Urban Ecology (Marchese, 2015) discusses the application of media art in urban environments, including digital public art projects, and analyzes how these projects interact with public spaces.

2.2 On the level of public space

The article Digital Art/Public Art: Governance and Agency in the Networked Commons (Paul, 2008) systematically elaborates on digital public art as a networked space created by digital art, providing a profound analysis of the spatiality of digital public art.

2.3 On the level of artistic creation and design

Although the book Urban Interventions : Personal Projects in Public Spaces (JOOSTEN, 2010) covers a wide range, it also includes some digital public art projects, demonstrating how artists engage in digital creation in public spaces. Although this book Public Art: Theory, Practice and Populism (Knight, 2011) mainly discusses traditional and site-specific public art, it also involves digital art. Knight believes that digital technology provides new media and forms of expression for public art, enabling it to interact with audiences in interactive and immersive ways, expanding the influence and participation of public art.

2.4 Connected to the city

The book Urban Screens Reader (McQuire, Martin, & Niederer, 2009), published by the Institute of Network Cultures, explores the intersections of digital media, cultural practices, and urban spaces, with a particular focus on the crucial role of urban screens in contemporary debates on public culture and public space. Street Art, Public City: Law, Crime and the Urban Imagination (Young, 2013) explores the relationship between street art and public urban spaces, including digital public art projects, analyzing how these projects impact the legal and cultural landscape of cities. As can be seen from the above, the current

research directions on digital public art are diverse. However, there is still a lack of research and interpretation of digital public art from an aesthetic perspective in academia, and even less theoretical exploration and analysis of the extension representation of audience participation in interactive works. Therefore, this article takes a different approach, starting from the aesthetic significance of "theatricality", following the research path from artistic phenomena to the principles of artistic phenomena, and studying the "theatricality" dimension of digital public art and its internal semantic paradigm.

3. OVERVIEW OF DIGITAL PUBLIC ART

3.1 The Origin of Digital Public Art

Digital public art originated in a few Western countries in the mid-1980s. Its birth and development are the inevitable result of the traditional public art with many years of development history entering the digital technology era, evolving with the development and application of digital technology, materials, and equipment. In the 1960s, the United States implemented the "Arts in Public Place Program" in the name of the National Endowment for the Arts, which marked the beginning of the concept of "public art". Public art is an art form with people (the public) as the core value, urban public environment and facilities as the objects, and comprehensive media forms as the carriers. However, due to the lack of fixed art forms and art genres, public art changes its forms and boundaries along with the development of the times, public demands, and the evolution of creators' thinking. The rise of digital media technology is gradually changing the artistic and public characteristics of traditional public art itself. Public art integrates new technologies and digital elements, using techniques such as sound, light, virtual reality, directional tracking, remote sensing, interactive images, etc., making the works have a certain level of audience participation and interactivity. Joshua Meyrowitz once said, "When a new factor is added to an old environment, we do not get the old environment plus the new factor, we get a new environment." (Meyrowitz, 1986). Today, relying on advanced digital technology, public art has entered a new stage of development—digital public art based on digital information technology breaks the traditional one-way transmission of public art information, making its art possess characteristics such as technology, interactivity, and experiential nature.

3.2 Concept and Category of Digital Public Art

Like "public art", there is currently no unified definition of "digital public art" in the academic community, but it can be confirmed that digital public art belongs to the category of public art. In general, digital public art refers to a form of public art that uses digital technology as a tool and medium, characterized by multimedia integration and real-time interaction to convey artistic ideas and humanistic information in various public spaces. Digital public art has a wide range of manifestations, typically using text, images, 3D models, sound, video, and various composite materials as media, integrating various creative materials through digital technology to form a composite, multimedia art form, such as multimedia image art, CNC water feature art, CNC light feature art, digital kinetic sculpture, interactive installation art involving audience participation in virtual public spaces, and more. These forms of digital public art often overlap and exhibit characteristics of cross-fusion and plural coexistence as a whole. The artistic forms presented using digital technology serve the general public in real and virtual public spaces, conforming to the universality laws of public art, and can be referred to as "digital public art".

3.3 Characteristics of Digital Public Art

The intervention of digital technology has brought unique changes to digital public art compared to traditional public art in terms of creation, display, and viewing methods. Firstly, in terms of artwork creation, digital public art is more of a collaborative effort compared to the singular nature of traditional public art creation. Digital public art typically combines the professional wisdom of artists, designers, architects, and software engineers, integrating knowledge and perspectives from various fields such as art design, computer technology, network technology, and communication studies, thus generating multidimensional expressive and interpretive capabilities. Secondly, in terms of artwork presentation, it has created an interactive display method. Traditional public art is mostly static, with its interactivity mainly manifested in the viewing process after the artwork is completed, while the creation process of digital public art highly embodies interactive thinking, with interactive thinking running through the entire process from the conception of the artwork to its final presentation, even allowing the audience to participate in the artwork creation. This breaks the traditional one-way, point-to-point way of art viewing and receiving. The audience of digital public art can participate

in the creation of the work together, using a mouse, keyboard, touch screen, and various sensor devices to manipulate and control objects in the virtual environment. Finally, in terms of audience experience, create a physically immersive sensory experience. Digital public art uses virtual reality technology and the application of auxiliary devices, such as three-dimensional images, tracking technology, tactile/force feedback, etc., to stimulate the aesthetic audience's visual, auditory, tactile, and other senses, allowing them to generate rich associations and immersive experiences. Overall, diversity of forms, high audience participation, and interactive creative thinking have become important features of digital public art. Digital public art, with its technological affordance, reconstructs the "elemental" logic of public art, leading it towards a new form of integration of virtual and real, intertwining of time and space.

4. THEATRICALITY: REPRESENTATION TENDENCY OF DIGITAL PUBLIC ART

With the emergence of digital media, the boundary between reality and virtuality is becoming increasingly blurred. Digital public art transcends physical spaces, expanding material art expressions into informational visual means, creating a new type of public space for immersive experiences for the audience. Driven by digital technology, this public space extends the center of power to the hands of the audience, allowing them to immerse themselves in a combined physical and virtual space, engaging in mechanical, virtual, or creative interactive processes with the artwork using sensory and operating systems. Technological empowerment breaks the traditional constraints of time and space in public art, activating the potential for interactive subjectivity inherent in digital public art, reconstructing the audience's ways of appreciating art: moving from passive viewing to experiential engagement, participating in the creation of the artwork, and even becoming a part of the artwork. It can be said that digital public art transforms the originally static art into dynamic interaction between people and art, breaking the traditional characteristic of "aesthetic contemplation" of public art, blurring the boundary of the dualism between aesthetic subject and object, and highlighting the audience's initiative, involvement, and physicality towards the aesthetic object. The artistic effect presented by digital public art - enabling the aesthetic subject to exert initiative, participation, and interactivity, aligns with the concept of "theatricality" oriented

towards the audience. Theatricality, as a universal paradigm, is not primarily tied to drama but a new aesthetic perspective shared by contemporary art. In order to better reflect and interpret each other, we first need to clarify the concept of "theatricality". From the perspective of linguistic genealogy, the prefix "thea" (Greek) in theatricality refers to the act of seeing things, including watching performances and contemplation. The Greek word theatron means "place for viewing," referring to a place for viewing spectacles or performances, whether in a theater, auditorium, or elsewhere (Van Eck & Bussels, 2010). Therefore, the concept of "theatricality" in linguistics is closely related to the place and act of viewing. From a theatrical theory perspective, "theatricality" as a term refers to the dialectical relationship between the viewer and the artistic form. Starting from Hegel's exploration of the "relationship between the theatrical artwork and the audience" to the focus on the "audience" issue in theatrical theory since the mid-20th century. From the perspective of art criticism, "theatricality" is a type of viewing relationship. Ragnhild Tronstad asserts that "theatricality is a relationship concept" (Gran & Oatley, 2002). Josette Féral holds the view that "Theatricality cannot be, it must be for someone. In other words, it is for the Other" (Féral, 1982). With Michael Fried the understanding of theatricality is based on the relationship between the work of art and the beholder. In his essay "Art and Objecthood", Micheal Fried expressed that theatricality "is basically a theatrical effect or quality—a kind of *stage* presence" (Fried, 1967),whose essence is the dialectical relationship between the work and the audience. In his view, "the more a work of art addresses, first with, or involves the beholder, the greater its theatricality. The relationship between the form of the artwork and the beholder creates different degrees of theatricality" (Fried, 1988). In addition, Jacques Ranciere mentioned the "paradox of the spectator" in his essay "The Emancipated Spectator" (Rancière, 2021): the act of watching a play always contradicts the actions or knowledge that the play appeals to. He believes that there is no theater without spectators, but the act of watching itself is opposed to cognition and action. In general, "theatricality" is related to the audience, pointing to a situation between subject and object. It is a concept based on the understanding of the relationship between the artwork and the viewer, focusing on the attention to the act of viewing and the audience, emphasizing the subjective agency of the audience and the projection, interactivity, and degree of audience participation in the work. As a universal structure of art, theatricality implies a shift in our

understanding of art from the work to the experience, from the author to the audience. It is essential to pay attention to the concept of "theatricality" in relation to the focus on "theatre". The theatre is a space waiting to be filled, and only through performance can a certain art "exist". However, as pointed out by Gadamer, it is not enough for everything to be performed; it must also be "performed for someone", even if there is no one present, "for someone" is the inherent structure of the work. In this sense, all elements of the theatre, including the script (dialogue), actors, props, stage, audience... are a kind of "arrangement", collectively forming a potential energy waiting to be unleashed, anticipating the opening of the curtain to transform it into "reality" through an activity called "performance/appreciation" in order to attain existence. Of course, digital public art is not the performance of specific plays, but rather the creation of an art space that anyone can directly enter and participate in through the free form, orderly or disorderly extension of media materials. This space gives people a sense of intimate and surrounding presence, but it is not homogeneous with living space, but forms a theater effect of mutual influence between people and art. The artistic power of digital public art is jointly constructed by artists, artworks, audiences, and society. We can aggregate these four elements as a theater, where the audience"s viewing activates a performance, and the true artwork can then appear. In this regard, the "theatricality" of digital public art is reflected in the following aspects: Firstly, "encounter" becomes the premise of the behavioral event of "seeing" and "being seen." British dramatist Peter Brook suggested that "I CAN take any empty space and call it a bare stage. A man walks across this empty space whilst someone else is watching him, and this is all that is needed for an act of theatre to be engaged" (Brook, 1996). According to Brook, the reason why drama is born is that people "gather" in the same space, which constructs the behaviors of "seeing" and "being seen." In specific contexts, the encounter between subjects in artworks creates new perceptual mechanisms between artists and audiences, as well as among audiences. Encounter is the most important meta-concept in theatrical arts, implying that the activity relationship of seeing and being seen is constructed within a space, marking the beginning of theatrical activities. Therefore, the gathering of "audiences" in digital public art forms the basis of theatricality. Secondly, the dynamic presentation of digital art provides an interactive stage for audiences. The performative aspect is one of the main characteristics of theatricality, where the

8

conveyance of content or spontaneous expression in theatrical activities provides visual impact for audiences, constantly generating new variables through ongoing feedback, leading to continuous changes in the situation. Audiences do not passively receive content, but interact with artistic works on an equal footing. In traditional public art, viewers are positioned outside the art, while digital public art breaks the passive appreciation mode, stimulating the subjectivity and participation of the "audience." Thirdly, the embodied immersive experience of digital public art returns a complete theatrical experience to the audience. In theatrical aesthetic activities, because the audience and actors are in the same space, the audience can feel the atmosphere created by the actors' movements in the space during the theatrical performance. The experiential aspect returns perceptual activities to the audience, reflecting the theatrical characteristics at the level of aesthetic modes. Digital media uses various technologies such as virtual reality, augmented reality, mixed reality, and extended reality to connect with the audience's tactile, visual, auditory, and even holographic senses, expanding the forms and spatial existence of art, greatly enhancing the audience's sense of simultaneous embodiment. With the support of technologies like virtual reality, digital public art creates embodied immersive experiential environments for the audience. When viewing digital public art works, it fully engages the body's senses, integrating the body completely into the aesthetic appreciation activity in a synesthetic form.

5. AUDIENCE-LED INTERSTITIAL DIALOGUE: THE "THEATRICALITY" INTERNAL SEMANTIC PARADIGM OF DIGITAL PUBLIC ART

Although traditional public art starts from "publicness," most of them are in a static state in terms of form presentation. It places the artwork at the center of aesthetic activities, presenting a closed and self-sufficient state for the audience and the artist, as Stephen Willats explains the relationship between the artist and the audience in traditional art works (Firgue 1): with the artwork as the center, both the artist and the audience are independent individuals with their own pre-existing experiential systems. Whether it is the artist's creative process or the audience's aesthetic process, they can only return to themselves through the artwork, rather than achieve dialogue between the artist and the

audience through the artwork. The creation of artists and the aesthetics of audiences present two "discrete loops" (Kester, 2004). In the linear closed creation and aesthetic paths, most traditional public art artists encode the objective world or subjective spiritual world to create works, and audiences decode the works through imagination in a single-threaded, non-participatory manner, with no intersection between the two, suspending the "theatricality" of the works.
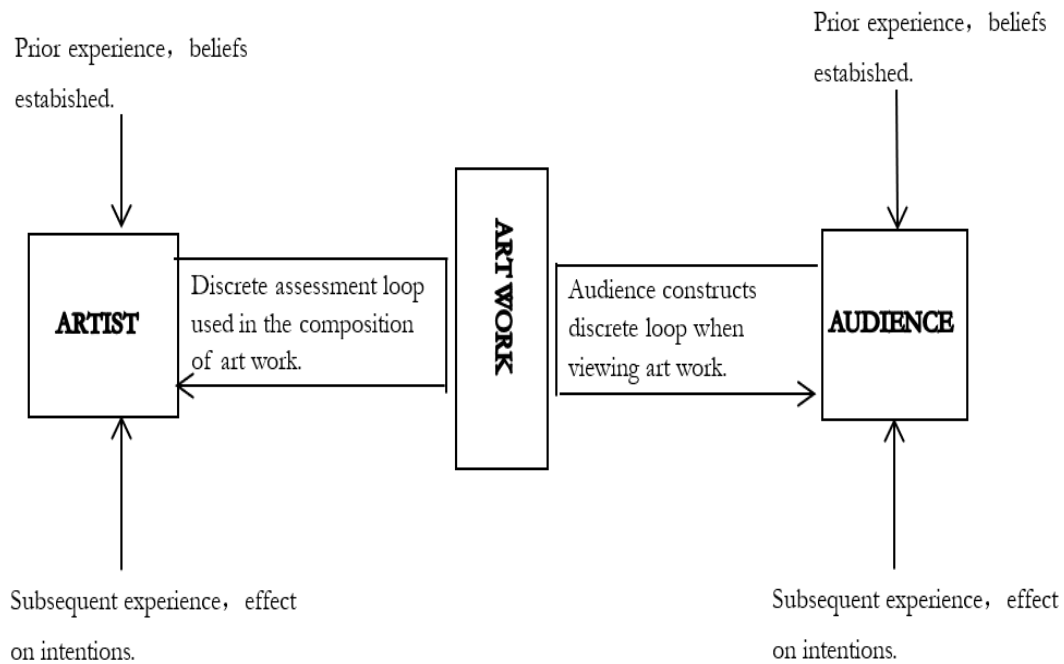

Figure 1 : Model of an Existing Artist-Audience Relationship

However, digital public art enhances the accessibility of art through technological means, reconstructing the subjectivity of the audience—"the moment the body is envisioned as a practico-sensory totality, a decentring and recentring of knowledge occurs". Rebentish pointed out that "theatricality" as an aesthetic issue is a new structural problem that accompanies the emergence of contemporary art (far more than just theatrical art) (Rebentisch, 2003). Abrams proposed four elements of artistic creation in his book"The Mirror and the Lamp"——work、artist、universe、audience.According to Abrams, this is"a frame of reference"because it constructs a necessary model for art criticism, art theory, and aesthetic research of specific artistic phenomena (Abrams, 1971). Because it provides a necessary model for the construction of art criticism, art theory, and aesthetic research of specific artistic phenomena. By applying digital media and software code, a virtual-real intertwined space of "multiple hybrids" is constructed, and the digital public art works generated based on this also promote multiple interactions between

people, people and objects, people and the environment, as well as the connection and transformation of social systems. The meaning expression of the works moves towards ambiguity, and the work itself is no longer the personal expression of the artist's representation of the objective world, but an open, ambiguous, interactive field formed by the interaction of the "audience," "work," "artist," and "society" four elements. Foucault believes that "discourse is always crossing and interrelating in a continuous movement of interfaces, "while Castoriadis proposes "conversation becomes an integral part of the work itself. It is reframed as an active, generative process" (Kester, 2004). Digital public art is a site for discourse interaction, specifically, it is a dialogical relationship based on the "audience" as the core. The so-called "inter-subjectivity" refers to the relevance and correlation of individuals as subjects in the objectified mode of activity, which includes various ways and modes of interaction among multiple subjects. This relationship transcends the relationship pattern between subject and object and forms the pattern of relationship between subjects. Digital public art not only emphasizes the superficial interaction between the audience and the artwork (performance), but also regards the audience as the subject of the performance, emphasizing their ontological status in relation to the work. The physical participation of the "audience" is an important dimension of the "theatricality" attribute presented by digital public art. It is through the audience's "participation" that the interconnected virtual and real space of digital public art is established, enabling dialogues between the audience and the work, the audience and the artist, and the audience and society to be constructed (Figure 2, self-drawn by the author). This also means that the "audience participation" in digital public art deconstructs the linear model of "encoding-decoding" in traditional public art and constructs a "theatricality" model. Nicolas Bourrique suggested that "Art is a state of encounter, it produces special kinds of social relationships"(Bourriaud, 2002). "The form of contemporary art is expanding beyond its material form: it is a linking element, a dynamic principle of cohesion" (Bourriaud, 2002). Therefore, we consider the "audience" as the core position of the "theatricality" of digital public art, and analyze three forms of interaction generated by the aesthetic mechanism within digital public art through specific cases: dialogue between the audience and the artist, dialogue between the audience and the work, and dialogue between the audience and society.
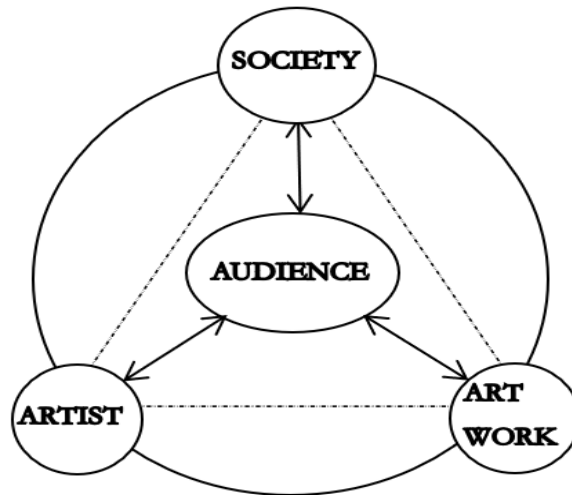
Figure 2: Audience-led Interstitial Dialogue (self-drawn by the author)

6. DIALOGUE BETWEEN AUDIENCE AND ARTISTS

In today's prevalence of computer graphics, digital images, and virtual reality, digital technology has changed the way artists express their thoughts and create art, leading to a transformation in the way public art is displayed, especially in terms of how audiences engage with it. Digital public art is not meant to be a solitary exhibit, but rather an invitation for audiences to participate in the meaning conveyed by the artwork through various senses such as vision, hearing, touch, and smell. Therefore, when creating digital public art, artists need to consider how the work presents the intended concepts, what behaviors audiences might engage in, how the artwork interacts with the audience, and what kind of thoughts these interactions may provoke in the audience. These are aspects that traditional public art creators would not deeply consider. It is precisely because artists have a preconceived dialogue with the audience that the presentation of digital public art is more interactive, guiding the display of digital public art towards a "people-oriented" and "audience-oriented" approach. For example, Domino Park in Brooklyn has launched a socially distanced outdoor public facility conceived and named Reflect (Photo 1) by American new media artist Jen Lewin. The installation aims to encourage people in the new city to take appropriate breaks and relax, with Jen Lewin stating, "I hope people can find answers in this vibrant work at this stage." Therefore, Jen Lewin created a multi-sensory experience for the audience by using dynamic patterns created by organic systems in nature during the design process. The entire facility covers 2,400 square feet and consists of three concentric rings, each with interactive platforms that respond to

visitors' footsteps, triggering dynamic animations and light, resulting in constantly changing compositions. From the inception of the design, the artist has connected with the audience, as Jen Lewin attempts to encourage people to take appropriate breaks as the city enters a new era, a goal that is achieved the moment the audience touches the circular rings and moves their bodies. The interactivity in digital public art not only enhances the artistic value and appreciation of the works, but more importantly, it promotes deep communication and integration between art and audience. Through interaction, the audience can gain a deeper understanding of the connotations and meanings of the works, and feel the creative ideas and emotional expressions of the artists.
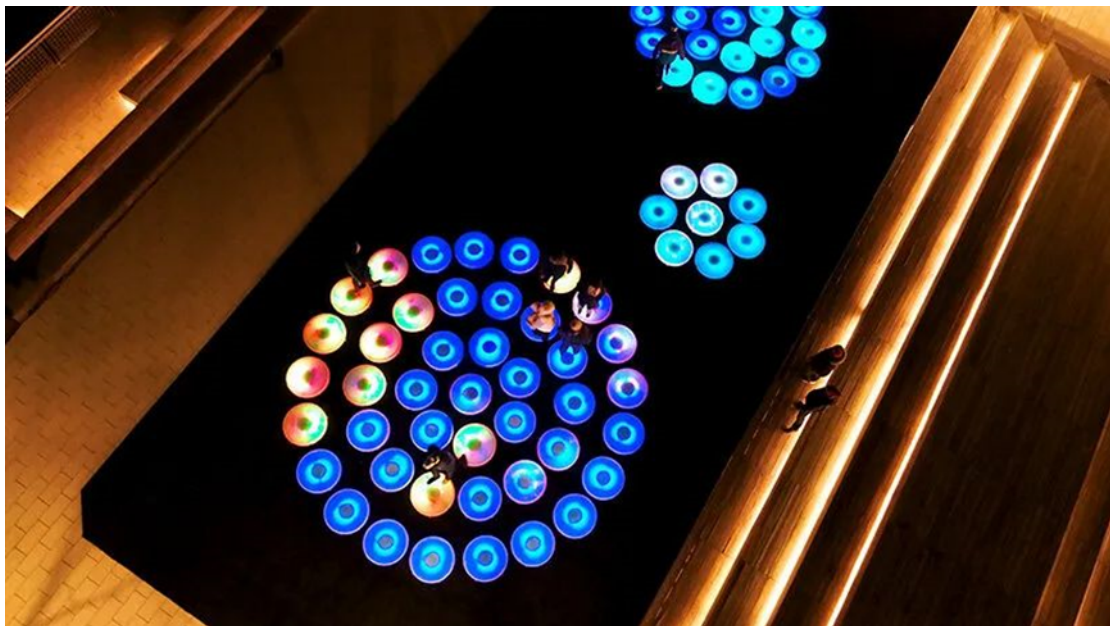

Photo 1: An Outdoor Public Facility —"Reflect"

In addition, technologies such as motion capture and VR create the identity of virtual artists, allowing participants to directly interact with artists in virtual space during the process of appreciating digital art. Marina Abramovió collaborated with the Acute Art studio to create a VR work called "Rising" (Photo 2). The work is displayed using VR headsets provided by HTC Vive and the VR all-in-one machine Vive Focus. AcuteArt studio uses motion capture technology to capture the artist's unique facial expressions, creating a lifelike incarnation of Abramovió. The presence of the artist is brought into a virtual space, allowing viewers from around the world to interact directly with the artist without the constraints of time and space. The virtual Abramovió invites viewers to interact with her, leading them to instantly teleport to a stunning scene surrounded by icebergs. Viewers, wearing the highly immersive Vive headset, witness the

rising sea water from the artist's waist to her neck, hear the artist's cries trapped in a glass water tank, listen to the artist's call for people to reflect on their impact on the environment, and make choices on whether to support environmental protection—different choices affect the water level in the tank, determining whether the artist can be saved from drowning.
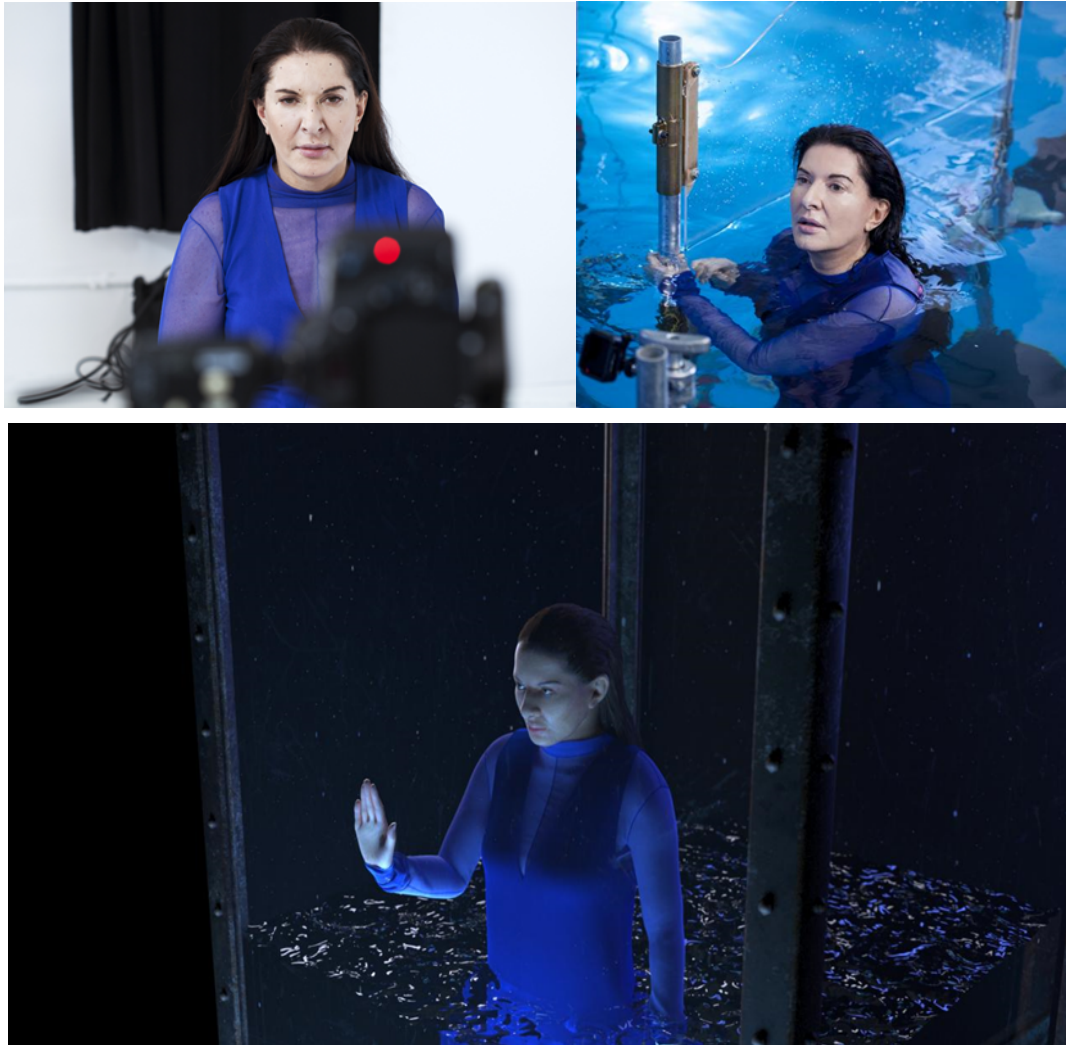

Photo 2: Marina Abramovió's VR Work—"Rising"

In addition to the artist's connection with the audience through design concepts and dialogue, audience participation and feedback can provide valuable creative inspiration and improvement direction for the artist, driving the continuous development and innovation of digital public art. Audience participation in digital public art is not only reflected in real-time interaction with the artwork on site, but also includes the process of online audiences sharing, commenting, and participating in discussions about the artwork through social media and other platforms. Furthermore, digital public art can achieve remote interaction with the audience through social

media and other online platforms. Artists can post their works on social media, and audiences can view, comment, and share them online. This interactive approach not only expands the reach of the artwork but also allows audiences to communicate and discuss with artists and other viewers across geographical boundaries.

7. DIALOGUE BETWEEN THE AUDIENCE AND THE ARTWORK

In digital public art, the audience maintains a sense of "theatricality" on the scene through a "dialogue" with the artwork. On the one hand, the audience shares the creative task of the artist, participates in the artistic creation process, and becomes the creator of the meaning of the work, while the artist is more like the planner, organizer, coordinator, educator, director, and other roles of the work. On the other hand, the audience actively participates in artistic creation, designs the scene on the spot, and establishes a brand new theater. In this mode of interactive dialogue between the audience and the artwork, the audience's strong presence is stimulated. In traditional public art, artworks are often presented to the audience in a one-way manner, and the audience can only passively accept and appreciate them. Digital public art breaks through this limitation by introducing digital technology, allowing the artwork to interact with the audience in real time. The audience can participate in the creation and display process of the artwork, engaging in dialogue and communication with the artwork. With the application of digital technology, artworks react to the audience's behavior through various interactive interfaces such as CommandLineInterface, GraphicUserInterface, multimedia, and natural three-dimensional interfaces. For example, the digital public art installation "Dune" in Rotterdam, Netherlands, consists of hundreds of optical fibers that respond to the audience's body movements or sounds. This interaction transforms the artwork from a static display into a dynamic exchange and dialogue with the audience. Another example is the Japanese new media art group teamLab's presentation of their significant work "FlowerForest, Lost and Immersed" (Photo 3) at the Pace Beijing Gallery in 798 Art Zone in 2017 (see image). In this virtual reality immersive public art piece, the flowers continuously change according to the audience's behavior, experiencing the process from blooming to withering, just like the cycle of life and time. At this moment, the audience becomes a part of the artwork. They can smell the faint floral fragrance and touch the flowers with their

fingers. When their fingers touch the flowers, they will start to wither, while in crowded areas, the flowers will bloom together. In the dark space around, the colorful flowers and the audience are the protagonists. In this immersive experience, participants' visual, auditory, olfactory, and tactile senses are all satisfied, and the interactive dialogue with the artwork is like taking a walk in a forest fairyland full of flowers.

Photo 3: TeamLab's Work— "FlowerForest, Lost and Immersed"

In the post-human era, the widespread application of digital technology has led to the blurring of boundaries between virtual and reality. This immersive interactive aesthetic experience allows the audience to have a deeper understanding and recognition of the meaning conveyed by digital public art. The immersive interactive art piece "The Treachery of Sanctuary" (Photo 4) created by American new media artist Chris Milk uses Microsoft Kinect motion-sensing cameras and infrared detectors to provide participants with a three-stage experience resembling birds flying. The artwork consists of three white screens and a pool representing the creator's concept, with the screens placed in the center of still water acting as mirrors. Participants stand in front of the mirror, and when they try to touch the birds on the screens, their shadows transform into numerous birds that fly into the flock. After moving a few times, the outline of the shadow completely disappears. The Kinect motion-sensing cameras and infrared detectors create conditions for real-time interaction and feedback between the artwork and participants. "The Treachery of Sanctuary" explores themes such as free will, power dynamics, and shifts in power, creating an immersive art experience that allows the audience to physically

engage with the emotions and ideas conveyed by the artwork.

Photo 4: The Immersive Interactive Art Piece—— "The Treachery of Sanctuary"

Digital technology enhances the interactivity and participation of public art. "The audience, previously conceived as a "viewer"or "beholder", is now repositioned as a co-producer or participant" (Bishop, 2023). Audiences are no longer passive recipients, but can actively participate in the creation and appreciation of public art. Through interactive devices such as touch screens and sensors, audiences can interact in real time with public art works, experiencing unprecedented sense of participation and immersion. This enhanced interactivity not only makes public art more vivid and interesting, but also strengthens the connection between audiences and art.

8. AUDIENCES ENGAGING IN DIALOGUE WITH SOCIETY

Fehar believes that "theatricality" is not only related to art and aesthetics, but also to social issues (Féral, 2002). In the contemporary cultural context, the cultural and historical mission of public art is no longer just about transforming aesthetic forms in the traditional sense and preaching elite aesthetic experiences, but more about serving the needs of public social life. With the participation of digital media, public art pays more attention to harmoniously integrating into public spaces and environmental landscapes. The use of digital technology promotes the effective expression and dissemination of social and cultural common values in artworks, achieving effective dialogue between the audience and society. The public value of public art itself includes attention and exploration of various social issues. The multi-perceptual nature of technology can help digital public art interpret and express social issues. Effectively enhancing the audience's perception of social issues enables experiencers to have a good dialogue

with society. For example, in the era when ecological civilization construction and ecological issues are highly concerned, some digital public art presents an ecological theme orientation due to its focus on ecological issues and reflections. The visual language and immersive environmental effects of digital technology act on the cognitive system of individuals, evoking emotional resonance among the audience towards ecological and environmental issues. For example, in Marina Abramović's VR work "Rising" mentioned above, the audience's choice in the virtual space of whether to save the trapped artist is a dialogue with social and ecological issues. In addition, the more life-like use of AR technology makes dialogue with society more convenient. It can be part of a broader sense of digital public art, as well as express the audience's understanding and reinterpretation of artworks. For example, artist Olafur Eliasson's public art project "EarthSpeakr" (Photo 5) created with AR technology directly addresses ecological issues. The project invites young people aged 7 to 17 worldwide to speak for the Earth's ecological environment, and the videos are recorded into a mobile AR application. The system generates a digital face corresponding to the real person, and when this digital face is aligned with surrounding objects using the camera function, whether it's a building or a tree, the digital face will overlay on it and speak. Through the voices of young people on ecological issues, the work conveys concerns for the future of the Earth's ecology and environmental protection. AR technology allows virtual and real worlds to overlap, enhancing the expressive power, narrative power, and audience perception experience of digital public art, enabling people to immerse themselves more in the interaction with the artwork, leading to a more engaging state and deeper reflection on social issues.

Photo 5: Olafur Eliasson's Public Art Project— "EarthSpeakr"

Through digital technology, artists not only express social phenomena and issues in a more intuitive and vivid way, but also showcase the charm and characteristics of different cultures. Mexican-Canadian artist Rafael Lozano-Hemmer placed his interactive sculpture Speaking Willow (Photo 6) at the Planet Word Museum. This is an 18-foot-tall electronic tree equipped with lights and recordings in various languages, designed to interact in real-time with visitors entering the museum. When visitors pass under the branches of the tree, they activate the bell-shaped speakers hanging above their heads. Each speaker stores sample recordings of different languages, covering the native languages of over 99% of the world's population. Walking around SpeakingWillow is like traveling around the world. This digital public artwork celebrates the diversity of world languages and connects the audience with the world. The interaction between the audience and the willow tree is actually a dialogue with the diverse cultures of the world.

Photo 6: Interactive Sculpture ——"Speaking Willow"

In conclusion, digital public art is audience-centered and encodes a "theatrical" internal semantic paradigm. It is the inherent theatricality of digital public art that allows us to perceive the depth and breadth of human experience in a holographic way that is embodied and present. Digital public art promotes embodied interactions of audiences in public spaces, transforming under-utilized spaces into new public art spaces with multiple attributes such as functionality, aesthetics, interaction, and leisure, and

remains open to more participants and agents of action in a networked form, creating a spatial form of "communicability".

9. CONCLUSION

The emergence and development of digital public art have innovated the existing styles of traditional public art, with the integration of multiple media, real-time human-machine interaction, high audience participation, and diversification of forms of public art presentation, allowing public art to have a more diverse expressive power. Digital public art, with its intuitive and dynamic images, interactive and participatory forms, and the real sense of presence that brings audiences a comprehensive sensory experience of sight, sound, touch, etc., aligns with the concept of "theatricality" that emphasizes the relationship between the audience and the work, the interactivity of the work, and the degree of audience participation. Digital public art presents a tendency towards "theatricality". From the internal semantic paradigm of its "theatricality", digital public art is centered around the "audience", forming an "intermediary" interactive aesthetic mechanism of dialogue between the "audience" and the "work", the "artist", and the "society", encoding the internal semantic paradigm of "theatricality". In the space of "communicability" constructed by "theatricality", digital public art is increasingly becoming a new expression of contemporary social values and cultural concepts. In digital public art, individuals project their self-awareness into the public domain through interaction, pointing to the possible path of realizing common ideals through interaction and inspiring digital communication. The production and flow of meaning are completed instantly, and concepts break free from material constraints, engaging directly with the audience's minds in an equal stance. The "theatricality" attribute of digital public art creates a space for free writing by the subject and a new ecology of communicability dissemination.

References

Abrams, M. H. (1971). *The mirror and the lamp: Romantic theory and the critical tradition* (Vol. 360). New York: Oxford University Press.

Bishop, C. (2023). *Artificial hells: Participatory art and the politics of spectatorship.* Verso books.

Bourriaud, N. (2002). Relational aesthetics, trans. *Simon Pleasance and Fronza Woods with Mathieu Copeland (Dijon: Presses du reel).*

Brook, P. (1996). *The empty space: A book about the theatre: Deadly, holy, rough, immediate* (Vol. 11). Simon and Schuster.

Féral, J. (1982). Performance and theatricality: The subject demystified. *Modern Drama,*

25(1), 170-181.

Féral, J. (2002). Special Issue: Theatricality,"Foreword". *SubStance*, *31*(2&3), 3-13.

Freeman, J. C., & Sheller, M. (2015). Editors' statement: Hybrid space and digital public art. In (Vol. 5, pp. 1-8): Taylor & Francis.

Fried, M. (1967). Art and objecthood. *Visual Culture: Experiences in Visual Culture*, 12-23.

Fried, M. (1988). *Absorption and theatricality: painting and beholder in the age of Diderot.* University of Chicago Press.

Gran, A.-B., & Oatley, D. (2002). The fall of theatricality in the age of modernity. *SubStance*, *31*(2), 251-264.

JOOSTEN, M. (2010). Urban Interventions: Personal projects in public spaces. In: JSTOR.

Kester, G. H. (2004). *Conversation Pieces: Community and communication in modern art.* University of California Press.

Knight, C. K. (2011). *Public art: Theory, practice and populism.* John Wiley & Sons.

Marchese, F. T. (2015). *Media art and the urban environment: Engendering public engagement with urban ecology* (Vol. 5). Springer.

McQuire, S., Martin, M., & Niederer, S. (2009). *Urban screens reader* (Vol. 5). Institute of Network Cultures.

Meyrowitz, J. (1986). *No sense of place: The impact of electronic media on social behavior.* Oxford University Press.

Paul, C. (2008). Digital art/public art: governance and agency in the networked commons. In *The art and science of interface and interaction design* (pp. 163-185). Springer.

Rancière, J. (2021). *The emancipated spectator.* Verso Books.

Rebentisch, J. (2003). *Ästhetik der installation.* Suhrkamp.

Van Eck, C., & Bussels, S. (2010). The Visual Arts and the Theatre in Early Modern Europe. *Art History*, *33*(2), 208-223.

Young, A. (2013). *Street art, public city: Law, crime and the urban imagination.* Routledge.