

# VR Intelligent Technology in Public Art for Healing Research

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**Abstract:** With the process of urban technology, artificial intelligence technology has brought new thinking and opportunities to all walks of life. VR intelligent design in urban public art construction and design has been transformed from a cutting-edge concept into an applied technology. Since the 1970s and 1980s, the emergence of sound and light interactive public art in the United States has opened the curtain of virtual reality technology in early urban public art. VR intelligent design has changed all aspects of people's lives, and digital interaction has provided more possibilities for art. This paper conducts research on the healing of VR smart technology placed in public art through qualitative data of existing cases. Through VR works such as "Room in the Sand" created by Xinjian Huang in collaboration with Laurie Anderson, VR smart technology placed in public art works are qualitatively studied to explore the digital interaction provides more possibilities for art, public art and all people, especially the elderly and the disabled. The interaction of public art with all people, especially the elderly and the disabled, and the help of art healing in more and more states.

**Keywords:** VR Intelligence; Public Art; Healing.

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## 1. Overview

### 1.1. Research Background and Current Status of Research

The combination of public art and parametric design will produce an artistic logic that matches the digital context. Parametric design will bring more freedom and opportunities to contemporary public art; at the same time, it is likely to propose new artistic concepts, measurements and linguistic standards as people's lifestyles and lifestyles change dramatically. Using parametric design, a new language of beauty can be generated in the structural composition of contemporary public art, expressed in terms of form and expression in the design of structures and surfaces. We can see the application of digital technology and parametric design methods in many new art forms, such as the series of practical examples of public art cited in this paper. At the same time, new digital intelligent manufacturing technologies, such as 3D printing, span the conventional wisdom of the traditional art model centered on the artist, making the process of art creation more rational and logical to operate, and providing us with the possibility of enriching public art by satisfying the needs of artists and art participants while further exploring society and all things in objective nature.

### 1.2. Purpose of the Study and Significance of the Study

This project is a study of the current art hotspot of vr technology and art integration, and to explore the current state of human healing in its context, laying a certain foundation for future research. With the contemporary development of the concept of technology and design for people, it is worthwhile to explore the integration of vr technology and art and the exploration of art healing in the context of the current hotspots and to draw reference to future design. We explore and summarize the current state of healing in public art with VR smart technology and explore the development of future design research.

### 1.3. Research Methodology and Research Ideas

This paper conducts a qualitative study of the healing of VR smart technology placed in public art through existing case qualitative data to explore the possibilities that digital interaction offers for art to interact with all people, especially the elderly and disabled, etc. and help heal art in more and more states.

A qualitative research method using qualitative data from existing cases to analyze the healing status of VR intelligence technology in public art can provide a faster and more practical analysis of the current situation.

### 1.4. Innovations

The object of this research is the current art hotspot, and the current situation is studied in the context of the human mind and healing needs. The research can be conducted through existing classical cases, combining art with current virtual technology hotspots, combining art with the healing needs of people, studying its current situation and carrying out divergent design practices, so that public art combined with technology and art can bring warmth to people. The research on this topic combines current art hotspots with human thoughts and healing needs to study the current situation. Through case studies, we explore the combination of technology and art in public art to bring emotional healing to people.

## 2. The Current Situation of the Use of VR Intelligent Technology in Public Art

### 2.1. The Concept and Characteristics of Digital Art

The integration of digital art development is the use of multimedia integrated composition, as well as the combination of digital technology and digital media. It mainly refers to the unique art form formed by using digital technology as the base, compatible with photography, video,

sound, video, installation and the integrated means of hypertext links on the Internet. The rapid development of digital technology has rapidly pushed the process of multimedia art development and provided the necessary conditions for the development of multimedia art. Roy Ascott, a pioneer of multimedia art, said, "The most distinctive qualities of multimedia art are connectivity and interactivity." Multimedia art is dependent on the development of digital technology and is contemporary and effective. The creation of multimedia art has led to significant changes in human visual experience, cognitive experience, and cognitive structure. Now and in the future, in terms of artistic expression, the individual expression of the artist is no longer sufficient and must extend to the viewer. The viewer's demand for the artist is no longer limited to the content, but rather the establishment of a participatory relationship that relies on the construction of the design environment and space, where the artist is not able to simply express his or her personal views, but rather constructs the conditions in which the concept moves and participates in the experience and cognition with the viewer.

## 2.2. The Direction of Public Art Development is Interlinked with Digital Intelligence

The combination of public art and parametric design is bound to produce an artistic logic that matches the digital context. Parametric design will bring more freedom and opportunities for contemporary public art; at the same time, it is likely to propose new artistic concepts, measurements and linguistic standards as people's lifestyles and lifestyles change dramatically. Using parametric design, a new language of beauty can be generated in the structural composition of contemporary public art, expressed in terms of form and expression in the design of structures and surfaces. We can see the application of digital technology and parametric design methods in many new art forms. At the same time, new digital intelligent manufacturing technologies, such as 3D printing, span the conventional wisdom of the traditional art model centered on the artist, making the process of art creation more rational and logical to operate, and providing us with the possibility of enriching public art by further exploring society and all things in objective nature while meeting the needs of artists and art participants.

### 2.2.1. Concept Formulation

Through virtual reality technology, we use lasers, 3D special effects, sound and light effects to bring vibrant colors to the static urban buildings and public facilities. It even changes the inherent visual model, allowing public art to expand from the physical to the virtual. From "things" that can be touched and perceived to "realities" that can be imagined. Urban public art is not limited to the aesthetic carrier of life, but has become a space where the imagination can run wild. Like a dream, it has changed from a cultural transmission to an emotional resonance.

### 2.2.2. Case Study

The multimedia installation is no longer an aesthetic object stripped of its functionality, but a high degree of unity between artistry and functionality. Its aesthetic form incorporates elements of humanistic design and contains a general concern for the basic needs of the public. The following is an example of the public art work "Blooming Flowers" (Figure 1) designed by HQ Architects. Blooming Flowers is located in Valero Square in the heart of Jerusalem,

near the large open-air market and tram stop. The area was once known for its chaotic graffiti and ugly street furniture, with facilities such as garbage composting and electricity distribution stations dotted around the square, and tram tracks dividing the city into two parts, HQ Architects took on the project and decided to improve the clutter of Valero Square by increasing the density of spatial connections in a non-confrontational way. Four giant installations were designed and carefully erected in prominent locations in an attempt to reconnect the square, the tram stop and the open-air bazaar into a complete public space through the public eye. Each installation is 9 meters tall and in the form of a flower with bright red petals, and is a striking and magical landscape sculpture in Valero Square. The public can view them from the square, the nearby tram stops or the open-air market. This formerly chaotic public space seems to have been revived by the presence of these giant flowers. It is not only this installation that is perfectly combined with sound and light technology, but also more and more perfect combination of technology will become a major trend in the development of public art.



Figure 1. Blooming Flowers

## 3. Public Art and Human Interaction and Healing

### 3.1. Interaction between People and Public Art

There are two ways in which people and public art interact: the first is the psychological interaction triggered by the sensory level, which occurs on the psychological side of people, and the second is the physical interaction caused by the psychological level, which is reflected in people's physical actions, both of which are indispensable and play an equally important interactive role. "Reuniting material and spiritual needs into a whole through the design process can contribute to a large extent to the quality of life and purpose of urban society." The interaction between urban public artworks and human behavior is reflected in human behavior in response to urban public artworks, and behavior is a visual reflection of human psychology. Any emotion can have a direct or indirect



and establish the association between unconscious behaviors and metaphors, which can provide a strong theoretical basis for future research on unconscious design.

### 3.3.2. Case Study

The ReNew Vision online performing arts platform's VR video "The Venice Stone Story" (Figure 4) and the virtual panoramic experience "Ode to Air" lead the audience to roam and open new horizons for interactive and healing purposes. "The Stones of Venice" is an adaptation of "The Invisible City", a theatrical dance work co-produced by Manchester International Festival, Lambert Dance, 59 Productions (which animated and choreographed the familiar stage show "War Horse") and Karl Strohm. Selections from The Invisible City were used to create The Venice Stone Story in VR, allowing the audience to follow Kublai and Marco Polo as they explore the city. On top of the real images, the viewer is guided through the city by Marco Polo; the real scenes will be deconstructed, even appearing to defy the principle of gravity; shifting between reality and reality for a fantastical visual experience. Unlike the more narrative Stones of Venice, the work Ode to Air is more intentional and experimental; "air" conveys the object depicted in the work, while "ode" implies the musical nature of the work. Set at night in Hong Kong Park's Forsythia Conservatory, the viewer roams the conservatory while listening to the nocturne, amidst electronic music, the Hong Kong Children's Choir and the Danish Theatre of Voices. The "air", a substance we are not aware of but cannot live without, slowly soaks into your senses and renews your understanding of your surroundings over the course of 80 minutes.



Figure 3. The Stone of Venice

### 3.3.3. Development and Integration

The rapid development of technology has led to more and more urban public art that integrates VR and intelligent design into people's lives. After spanning visual, perceptual, and interactive design, public art incorporates new energy, information interaction, and intelligent feedback to optimize the function of the city in a more complex form. For example, Singapore's Super Tree converts natural energy into electrical energy and water energy through an intelligent system. All systems of wind, sound, light, electricity and temperature form a complex three-dimensional recyclable ecological space. The trajectory of human life runs through it, which

makes people think, "Is it humans who give power to the city? Or is it the city that gives life to human beings."

## 4. Conclusion

With the process of urban technology, artificial intelligence technology has brought new thinking and opportunities to public art design, and VR intelligent design has been transformed from a cutting-edge concept to an applied technology in urban public art construction and design. Since the 1970s and 1980s, the emergence of sound and light interactive public art in the United States has opened the curtain of virtual reality technology in early urban public art, and VR intelligent design has changed every aspect of people's lives. The new era of public design retains the original interactive and healing nature of people, and integrates virtual technology, localization, and humanism to optimize the function of the city in a better form to achieve interactive design across visual and perception.

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