

The Cross-Media and Cross-Cultural Communication of Art—Using Video Games as the Carrier

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Abstract

With the development of society, traditional and single art forms can no longer meet people's needs, and different art forms have gradually broken down barriers. Just as different art forms combined to give birth to new forms of art, such as the combination of literature, dance, and music creating theater art. The combination of film and musical theater during the era of movies gave birth to musical films, which is a new branch in the field of art. Video games are an interactive and participatory digital medium, which not only allows players to enjoy the entertainment and interactive experience of the game itself but also provides them with a rich artistic experience. Through video games, players can come into contact with and understand different types of art, enhancing their recognition and understanding of art. With the development of the video game industry and the advancement of technology, video games have gradually integrated and carried other forms of art, enabling cross-media and cross-cultural dissemination of art through video games as a carrier.

This study explores the essence and connotation of video games, providing support for their position and development in the field of art, promoting the diversification of the art field and cultural exchange. It can also provide useful ideas and references for professionals, scholars, and enthusiasts in the fields of culture and art.

Keywords: video games, cross-cultural, cross-media, art, AI, interactive

1. Development and Advantages of Video Games

As a form of media that transcends cultures and mediums, video games are characterized by interactivity and participation, which sets them apart from other art forms like movies, theater, and books that prioritize observation. In video games, players can actively engage with the game world and interact with its characters and environments. This interactivity involves not only simple button pushing, but also the

player's thinking and decision-making, which affects the game's progress and outcome. Furthermore, game scenes often incorporate other art forms. Different types and forms of video games have different ways of interaction, which showcase and convey various art forms and works to players. An open-world video game can easily encompass 6-7 types of art forms, or even be made up of several art forms as its scenes. With such a premise, video games can easily become a carrier of art or exhibit different forms of art, culture, stories, and

legends through game plot and scenes.

The origin of games can be traced back to ancient times, such as chess, dice, and so on. However, modern video games emerged in the 1950s when computer scientists began exploring how to apply electronic computer technology to the entertainment industry. The first video game was invented by American physicist William Higinbotham in 1958, called "Tennis for Two." This was a tennis game based on an oscilloscope display, where two players could play against each other on a screen. At the outset of video game creation, due to the limitations of chip technology, games could only be simple and entertaining. But as technology evolved with time, chip and AI technologies enabled video games to break free from basic entertainment and produce more artistic and cultural value.

Unlike other forms of media and art, video games require active participation and investment from players to fully realize their maximum fun and challenge. Players can immerse themselves in a virtual world, interact with other players, explore unknown areas, and experience different cultures and histories. This interaction is not just one-way, as players' behavior can also affect the game, thereby forming a more realistic virtual world. Therefore, video games are not just a form of entertainment but can also be used for education, art, culture, and other fields. Through games, people can better understand scientific principles, historical events, social phenomena, and more. Additionally, video games can also be used for team building and training. Through scenarios simulated in the virtual world and interaction among team members, players can improve their teamwork and crisis management skills.

2. The Specific Ways and Significance of the Interaction Between Video Games and Other Art Forms

As a medium, video games not only provide entertainment and leisure functions but can also be used to disseminate various content, including art, culture, and education. Games have rich forms of expression and interactivity, making content more vivid and interesting. At the same time, games have the characteristics of cross-platform and global reach. Combining with other art forms can enable various art content to spread more widely across traditional media and provide new opportunities and platforms for the dissemination of various arts.

(1) Painting art: Video games can display painting art through beautiful graphics, such as scenes, characters, props, and various art designs and special effects. Different painting styles can present artists' unique creativity and visual impact, all built upon the foundation of painting art.

(2) Sculpture art: The character modeling and architectural scenes in video games can be presented through the game's 3D modeling technology or through VR sculpture display technology to display the form of sculpture art. Compared to the visual image, through VR technology, players can enjoy highly artistic sculptures in a 360° immersive manner and learn about the history and cultural background of the sculpture through interactive means.

(3) Architectural art: The architectural design and scene setting in video games can also be used to create architectural art. Unlike traditional appreciation, in video games, ordinary people can also create their own architectural art, while in reality, only designers and LEGO enthusiasts can meet our needs to create architectural art.

(4) Music art: Most video games rely on music and sound, in addition to music, character dialogue, sound effects, etc. Music games are also one of the main ways that video games carry music art. This is a game that focuses on music elements. Players need to manipulate game elements according to the melody of the music to achieve the game's goal. This game form not only allows players to enjoy the beauty of music but also cultivates players' music perception and operational ability.

(5) Literary art: The character dialogue, plot, and textual information in video games can be used to express literary art. For example, the literary elements and storylines in role-playing games, players can not only read other people's stories but also complete their own stories through role-playing, presenting the storylines and emotional expressions that are originally only present in literary works through the game form.

(6) Dramatic art: The plot and storyline in video games are the most basic form of drama. By combining game mechanisms and drama scripts, game mechanisms are embedded into the drama script to promote the development of the plot and the interaction of characters. This makes video games not only entertaining and

interactive but also have cultural connotations and artistic expression of drama. Finally, the storylines and plot development are presented to players through the game's plot design and character dialogue.

(7) Film art: When video games are combined with film art, a new type of game is produced—cinematic games. This is a type of game that combines film and game elements. It adopts a cinematic narrative style to provide players with a movie-like immersive experience while maintaining interactive gameplay. Cinematic games are a significant breakthrough in the interaction between video games and film art.

3. The Fusion of Video Game Industry and Art

On November 11, 2021, at the Alexandra Palace Theatre in London, the London Symphony Orchestra and the London Voices Choir performed a concert featuring all the music composed specifically for the video game, *The Elder Scrolls V: Skyrim*, on its 10th anniversary. Some fans of the game who attended the concert expressed that it was the first live performance they have ever attended in their lives, specifically because of their love for the game.

When it comes to the combination of gaming and architectural art, one cannot fail to mention Ubisoft, a French video game company known for its emphasis on history and culture. They also place great importance on accuracy and realism when it comes to modeling historical buildings and landmarks.

On April 15, 2019, the famous French building, Notre-Dame Cathedral, suffered a devastating fire that caused severe damage. Ubisoft's video game, *Assassin's Creed: Unity*, takes place in Paris, France, and includes Notre-Dame Cathedral as a major scene. During the early stages of the game's development, Ubisoft meticulously modeled Notre-Dame Cathedral. The development team researched numerous historical documents, images, and measurement data to ensure accuracy. They examined detailed drawings, photos, paintings, and sculptures from the historical documents of Notre-Dame Cathedral.

However, due to technological limitations during the game's development (which began in 2010), copyright issues (some of Notre-Dame Cathedral's structures are protected by the French Intellectual Property Code), and changes made for technical and gameplay reasons, the

in-game model of the Cathedral is not a 100% accurate representation of the actual modern-day structure. Instead, it contains architectural details from the 18th century and elements of creative imagination. Despite this, the game's detailed recreation of both the interior and exterior of the Cathedral, including carvings, paintings, stained glass, and other details, is very realistic. Ubisoft made every effort to combine the game's content with historical events, aiming to help players gain a deeper understanding of the history and culture of Notre-Dame Cathedral.

While the game's model cannot directly assist researchers in restoring the damaged Cathedral in real life, Ubisoft's research materials on Notre-Dame Cathedral are still well-preserved. After the fire, Ubisoft stated that they are willing to work with cultural heritage experts, historians, and architects to help with the Cathedral's restoration.

4. Cross-Cultural Communication and the Application of AI Technology

In addition to existing historical buildings, video game designers can use AI modeling to create virtual scenes that are closer to historical reality, such as modeling the architecture, painting, and culture of the Cleopatra VII era of ancient Egypt, combined with AI deep learning and historical data. Through the use of deep learning algorithms, AI can replace the development team to process a large amount of historical data, including text, graphics, digital models of legacy buildings, and even cultural relics, to generate highly realistic virtual scenes. For example, using historical maps, architectural drawings, photos, and other data, a city or building from a historical period can be modeled. In this virtual scene, people can experience life and culture in ancient Egypt during the Cleopatra VII period through computer games or VR, which is an experience that cannot be experienced by visiting museums and ruins.

In terms of cross-cultural communication, video games as digital media can easily cross language and geographical barriers. They do not require elaborate plot design, just scanning and modeling of existing scenes and objects, and placing them in virtual space for players to explore and tour. People do not need to travel around the world by plane, but can watch humanities and natural arts from all over the world at home through computers or smart

devices such as VR. This allows players to experience the beauty of art in different cultural backgrounds.

For example, if the story background of a video game is the Three Kingdoms period of China, then players of this video game will experience Chinese culture during the Three Kingdoms period while playing. At the same time, the video game can also present the architecture, painting, music, literature, dance, and other arts of the Three Kingdoms period in China to players. Because of the long history and language differences, people from different cultural backgrounds may not be able to understand and understand the history of other countries through literary materials alone. Watching simulated movies cannot satisfy everyone's desire for exploration. This requires some cultural exploration software or games, which can run and be used worldwide through the combination with AI technology, thereby achieving cross-cultural communication of art.

5. Conclusion

The cross-media and cross-cultural communication of video games and art has become an important phenomenon. This cross-border integration not only promotes the development of the game and art industries but also promotes communication and dissemination between different cultures. The combination of games and art has created rich game content, and game production has become more exquisite, complex, and artistic. At the same time, as a global entertainment form, video games can also allow players from different cultures to communicate and understand each other through games. Video games have become a composite product that covers multiple fields such as art, culture, technology, and AI. The artistic trend of games is inevitable, and this cross-border integration not only enriches game content and experience but also expands the expression and dissemination channels of art. Game developers often invite well-known artists and musicians to provide original music and art design for games to enhance their artistic value and cultural connotation. This cross-media and cross-cultural communication is beneficial to both the game and art industries, as well as the communication and understanding between different cultures.

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