Redefining Audience Participation: The Immersive Interaction in "Wolf and Spices VR" and the Enlightenment of Journalism and Communication

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Abstract

In this article, we examine the impact of immersive interactions in "wolf and spice VR" on audience engagement and their impact on messaging. We delve into the immersive interactive elements of film and explore their potential applications in messaging to increase audience engagement and emotion resonance. Immersive interactions and virtual reality technologies serve as innovative information and communication tools that provide viewers with more immersive experiences and increase their participation and attention. The article examines the evolution of audience engagement theory, from the influence of traditional media to the empowerment of digital technology and new media, with a focus on interactive entertainment and audience autonomy, and discusses the application specification of immersive interaction in the practice of information communication, highlighting the potential of immersive Experiences aimed at increasing public participation and attention to reporting. "Wolf and Spice VR" focuses on environment design, character interaction, visual effects, tactile feedback, interactive storytelling, social interaction and other aspects have been developed to strengthen the educational role of immersive interaction in journalism and communication. Finally, the challenges and opportunities of immersive interactive experiences are discussed, highlighting the need for quality content creation, technological advances and audience acceptance creation.

Key Words: Immersive Interaction, "Wolf and Spices", Virtual Reality, Journalism and Communication .

I. INTRODUCTION

Immersive cinema and virtual reality technologies have become an important innovative medium in the field of information communication, providing viewers with a more immersive experience that improves their participation and attention. Many typical cases show that virtual reality technology has developed into an important tool in the information sector in recent years. According to the results of research on virtual reality in global news, news agencies' investment in virtual reality technology is increasing by units every year, and the number of clicks and viewing time of virtual reality news projects are also higher than those of traditional news. In "wolf and spices VR", viewers can wear virtual reality glasses and glasses holders, immerse themselves in the virtual world of the films and interact with characters from the films. While using immersive video and virtual reality in messaging comes with high costs and technical challenges, the immersive interaction experience can increase audience engagement and attention. Therefore, the aim of this study is to analyze the immersive interaction between "wolf and spices VR", examine its significance and enlightenment in the field of journalism and communication, and examine in depth the applications and development prospects of VR technology virtual reality in the field of Journalism and Communication to provide new ideas and methods for the development of journalism and communication.

II. LITERATURE REVIEW

2.1. Immersive Film and Virtual Reality Technology

Current research results show that immersive cinema and virtual reality technologies have broad application prospects, especially in the field of media and communication. While their growth leads to new opportunities for expression and interaction, it also presents challenges to traditional media and communication methods.

The systematic explanation of "immersion" was first proposed by Hungarian-American psychologist Mihail Mi-

khail also known as "cardiac flow theory". He defined "immersion" as "an uplifting state of mind that focuses solely on the state of the activity itself" and "people are fully absorbed in the situation, filtering out any irrelevant perceptions." Therefore, much of the research in the field of immersive cinema has focused on examining how technology can be used to improve audience engagement and experience. Petersen analyzes the experience characteristics and technical elements of immersive films with regard to audiovisual, ecological and interactive aspects. Visch VT, Tan ES and Molnar D also discussed the impact of immersive films on emotional experiences and cognitive outcomes and believe that immersive videos can improve audience participation and emotional input through emotional resonance and immersive experiences. With the development of virtual reality technology, Steer J, Bianca F, Levy M R and others have presented immersive cinema experiences based on head-mounted display and surround sound technology. The results show that viewers are more satisfied with the immersive experience. Matter J. in 2019, they explored immersive filmmaking and production methods, looking for ways to achieve greater immersion in technology and storytelling. The latest research and developments have pushed the boundaries of technology. Canon's Free Viewpoint video system, combined with Cinema EOS 4K cameras, allows filmmakers to create 3D models from multiple perspectives, significantly improving the viewing experience. This technique was developed in M. Night Shyamalan's film Knock at the Cabin and allows the audience to experience the scene from the perspective of four different characters. In addition, the system is also used in the sports industry, for example, the is installed in basketball stadiums and offers live 3D video streaming and playback as well as an immersive live experience for fans. In addition, immersive films are widely used in education, entertainment and psychotherapy.

Like immersive films, virtual reality technology has gradually developed into a promising application technology. Researchers are using VR technology to create remarkable VR experiences such as panoramic newscasts, virtual news event replays, a virtual news studio, and more. De la Peña N, Was P, Lower J et al. mention in the article that the feeling of presence achieved thanks to immersive systems, be it a cave or a head tracking display [HMD] and an online virtual world, offers participants unprecedented access to images and sounds as well as the feelings and emotions that can accompany current events. Recent research on the application of virtual reality through 3D modeling tools controlled by user gestures, as well as a new telepresence robot capable of responding in real time to user movements and gestures in virtual reality, have increased the interactivity and responsiveness of the Virtual reality significantly improves reality technology. De la Pena N. and Weil P discuss

the use of virtual reality in panoramic reporting and emphasize that panoramic videos can better convey the sense of reality and urgency of news events. Virtual reality technology is now also widely used in documentary film production.

On a technical level, virtual reality and immersive films use advanced image processing and computer graphics techniques. Immersive films use specialized photography, post-production and surround sound technologies to give viewers a deeper integration into the film and a more immersive viewing experience. Virtual reality uses real-time rendering, 3D modeling and head-mounted displays to enable new immersive experiences in the virtual world.

In terms of narrative style, immersive films and virtual reality technology are no different. Immersive films typically use non-linear narratives, allowing the viewer to select different scenes and perspectives, providing a rich viewing experience; However, virtual reality technology focuses on audience participation and interaction by advancing the story through interactive means and changing the direction of the story through one's choices, making it more personal and subjective.

From an application perspective, immersive films are mainly used in entertainment and provide viewers with a rich video experience. However, virtual reality technology is used not only in entertainment but also in education, medical care and architectural design. It is noteworthy that virtual reality technology is gradually being used in the field of film production. Since traditional film production requires shooting real scenes, while virtual reality technology can create virtual scenes through computer simulation, this method can reduce production costs and provide directors and photographers with more freedom and creativity, pushing the boundaries of traditional film production, the rapid development of virtual reality technology in the future, will make immersive videos a new way of entertainment.

2.2. Audience Participation Theory

Public participation is one of the important areas of journalism and communication research and includes the interaction between the public and the media as well as the attitudes and behavior of recipients in the process of media use. Early research on public participation relied on traditional media, such as television and radio. In the 1940s, Katz and Lagerfeld proposed the "two-step flow" model, in which the public's influence on communication is transmitted to the public through opinion leaders in social relationships. Then, in the 1970s, McComb and Shaw proposed agenda-setting theory, arguing that the media had an important influence on public attention and perception. The emergence of these theories encourages public participation.

As digital technology and the Internet evolves, so does the way we engage our audiences. The Reuters Institute's

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2023 Digital Journalism Report shows that viewers tend to avoid news that is considered "emotionally disturbing" and prefer uplifting content. This suggests that audiences' emotional response to news content significantly influences their engagement and news consumption behavior. Additionally, the study found that while audiences prefer less negative messages, they are naturally drawn to negative, emotional messages, suggesting a complex connection between audience emotions and engagement. A study published in Emerald Insight examined users' emotional responses to information available online on social media. The study highlights the important role of emotions in shaping users' interactions with information content and confirms that emotional contagion is also possible through text-based communication. This finding highlights the importance of understanding emotional responses in the context of digital journalism for audience engagement and engagement.

With the development of digital technology and the Internet, public participation research is increasingly relying on new media. In 2006, Jenkins introduced the theory of "interactive entertainment," emphasizing that audiences were no longer mere consumers, but participants and creators. At the same time, the development of the Internet and social media gives recipients more autonomy and control. In the field of information communication, the use of immersive cinema and virtual reality technology with the participation of viewers is causing a stir. Slate and Sanchez-Vives believe immersive videos can increase their emotional resonance and increase their engagement and cognitive depth. In addition, Uh Wait, Liu Y, Duo D, Zhang Z and other researchers found in 2021 that the use of virtual reality technology in the information field can improve public participation and understanding of current events. The immersive and interactive experience of immersive cinema and virtual reality technology in the field of information communication gives viewers a greater sense of participation, this interactive experience encourages a reconsideration of the concept and connotations of public participation. At the same time, emotion theory is becoming an important part of public participation research. As a universal human emotional state, people respond to things through feelings, experiences, judgments, and decisions. In the field of information communication, emotion theory is often used to study emotional reactions and audience emotional engagement. The intensity and characteristics of the emotional response can influence the audience's memory, attitude and behavior, which in turn influences audience participation and attention. Therefore, emotion theory is an indispensable part of audience participation and attention research in the field of information communication, providing a deep understanding of audience acceptance and comprehension of information, which can improve their reception, participation and attention.

2.3. Application of Immersive Interaction in News Communication Practice

As a new way of conveying information, immersive interaction has become an important element of reporting and communication. By using advanced technologies, immersive experiences give viewers the opportunity to delve deeper into the news and increase their engagement and attention.

In panoramic news reporting, the application of virtual reality technology provides a new viewing experience for the audience. Through the head-mounted display, viewers can perceive the real situation and atmosphere of the news scene, and better convey the sense of reality and urgency of news to increase audience attention and participation. The captivating interaction also shows the enormous potential of data messaging. Data News presents complex information to audiences through visualization, enabling a more intuitive understanding of the phenomena and trends behind the data. Immersive interactive technology is also commonly used in live-streaming. By combining VR, AR and other technologies, live broadcast allows viewers to participate in news events in new ways, improving the sense of reality and reporting in the scene. At the same time, immersive interactive technology also creates opportunities in the area of information transfer. By simulating a news website, students can carry out practical operations in the virtual environment, improve their ability to interview, edit and disseminate information, promote the deep integration of new technology and practical teaching, and promote the reform of the concept and mode of teaching the transmission of Information. As immersive interactive technology continues to develop and mature, the field of information communication will face further innovations and changes, such as mixed reality (MR) technology, which will further expand the form and content of messages and provide viewers with immersive experiences. The integration of 5G, artificial intelligence, big data and other technologies will also provide more powerful technical support for immersive news.

III. "WOLF AND SPICES VR" IMMERSIVE INTERACTIVE ANALYSIS

3.1. Overview of the Film and Its Immersive Features

"Wolf and spices VR" is a virtual reality (VR) film based on the famous light novel "wolf and spices." The work focuses on immersive interaction and uses virtual reality technology to provide viewers with an immersive experience. In this work, viewers will follow the story of the heroic

businessman Lawrence and the personification of the wolf goddess Hero as they travel together full of adventure and adventure. The use of immersive interactive technology in these films is mainly reflected in the following aspects:

Visual experience: viewers can fully experience the virtual world via a head-mounted display (HMD). The film's set design and character model are carefully processed to make the visual effect of the virtual world more realistic. Interaction with the environment: viewers can interact with elements of the virtual world environment, such as: opening doors, moving objects, etc. allowing viewers to better immerse themselves in the virtual world and experience a sense of immersion. Three-character interaction: through the use of advanced motion capture technology and artificial intelligence algorithms, the characters in the films can show more realistic and natural behavior, and viewers can talk to the characters, ask or answer questions to understand the character background and storyline. Four story choices: the film uses interactive story design, and the audience's choices and behavior will influence the development of the plot to increase audience participation and emotional resonance in the story. Sound experience: the film uses audio stereo and surround sound technology, this allows viewers to hear the sound change from different angles and directions, further enhancing the feeling of immersion, especially in films, music and sound are closely linked to the plot and give the viewer rich emotional experiences. Social interaction: viewers can invite friends to watch the film together and share their viewing experience in real time, which helps strengthen the bond between viewers and increase interest and immersion in the viewing process. Personalized experience: films allow viewers to customize the appearance and characteristics of virtual characters based on the interests and preferences of different audiences. Additionally, the film features multiple endings based on the viewer's behavior and choices, making the viewing experience more personalized and replayable.

3.2. Immersive Interactive Elements in "Wolf and Spices VR"

"Wolf and spices VR" is a successful virtual reality film that takes full advantage of immersive interactive technology to provide viewers with greater emotional and cognitive immersion, helping them better understand and engage with the plot to interact with the characters and virtual environments.

The first is environmental design. The film features intricate interior scenes and spectacular exterior landscapes such as ancient cities, markets and jungles. These scenes are rich in detail, including lighting, shadows and textures, to enhance the viewer's perception of the story's background and increase immersion. Secondly, the interaction of the roles. Viewers can interact with the main characters Hero

and Lawrence, in various ways, such as through dialogue, helping them solve problems, or exploring the world together. These characters feature rich expressions and movements that allow viewers to build an emotional connection with the characters in an immersive environment and strengthen the sense of substitution. The third is the visual effect. The film uses advanced rendering technology to achieve realistic ray tracing and fine texture mapping, making the audience feel more immersed. Tactile feedback is the fourth element. Using special devices, visitors interact with objects in the virtual world and experience tactile sensations similar to those in the real world. The fifth is interactive storytelling. Viewer behavior and choices can influence the development of a story in a film, such as helping characters complete tasks or building deeper relationships with characters, making the viewer feel more personal. Social interaction is the sixth element. The multiplayer game model used in the film allows viewers to interact with other viewers or characters, explore virtual worlds, solve puzzles and share experiences. This social interaction increases viewer's immersion and sense of belonging. Sound design is the seventh element. Surround sound technology and stereo sound effects allow viewers to experience realistic sound environments such as animal sounds, wind sounds and character dialogue. This sound design increases the audience's presence in the virtual world and improves immersion. The eighth element is a personalized experience. Viewers can adjust the perspective, focus and distance of the virtual reality device according to their personal preferences to achieve a more comfortable and satisfying viewing experience, further strengthen the interaction between the audience and the virtual world and increasing the sense of immersion and interactivity strengthen. The dynamic perspective is the ninth element. In "wolf and spices VR," viewers can freely change perspective and view scenes and characters from different angles, this freedom allows viewers to explore the virtual world more deeply and enhances the immersive experience. Finally, plot threads. The film contains many branches and hidden quests, allowing viewers to find new clues to the plot based on their interests and choices, this exploratory narrative structure allows viewers to become more immersed in's story and encourages their involvement and immersion.

3.2.1. Interaction between the Virtual Characters and the Audience

An important feature of "wolf and spices VR" is the interaction between the virtual characters and the audience, providing viewers with a rich and deep participatory experience. Using virtual reality technology and interactive devices, viewers can interact with the film's virtual characters, solve puzzles, explore together, and perform other activities. This interaction not only increases the viewer's immersion,

but also allows them to go deeper into the world of the film.

First, the rich behavior and emotional expression of the virtual characters provide the audience with more layers of participation. Through advanced animation design and performance technology, virtual characters clearly display personality traits and rich emotional states, allowing viewers to build emotional resonance with virtual characters, deeply understand the inner world characters, and then interact with them on a deeper level.

Second, virtual characters respond to the viewer's behavior and dialogue in real time, reinforcing the sense of reality of the interaction. Using intelligent algorithms and emotion recognition technologies, virtual characters can respond to viewers' words and actions in a personalized way, making them feel that their participation has a significant impact on the characters' development and stories and that they will become more engaged in the virtual world of the film.

Additionally, by collaborating with virtual characters to solve puzzles and explore together, viewers can experience real interaction with virtual characters, overcome challenges together, and share the joy of success together. Through joint efforts, viewers can experience real interaction with a virtual character and increase the depth of interactivity. On the other hand, the interaction between virtual characters and the audience also provides a lot of room for innovation and interactivity in the film. Through the use of virtual reality technology, viewers can be involved in and be part of decisions about the plot and characters of the film exploring the story, discovering the various trends and endings of the plot and personalizing the interactive experience, the viewer is freed from the traditional and passive viewing mode and can become one of the creators and decision-makers of the film.

Finally, highly realistic and emotive expression offers new possibilities for emotional resonance and characterization. By interacting with virtual characters, viewers can deeply understand the characters' inner world and their emotional experiences, build a real emotional connection with them, and further deepen the emotional level and meaning of the film experience.

3.2.2. Interaction between Environment and Audience

The "wolf and spices VR" allows viewers to interact with a virtual environment in various ways through virtual reality technology and interactive devices, providing a sense of participation and a personalized experience that is completely different from the traditional way Watching films is different. More importantly, VR headsets and associated sensors allow viewers to move and explore the virtual environment. The audience's head rotation, body movements and other movements are accurately captured and transmitted to the virtual environment to realize the synchronous

interaction between the audience and the virtual stage, so that the audience can really feel the existence and environment change. Second, the objects and elements of the virtual environment interact with the actions and behaviors of the recipients. Viewers can use interactive devices such as handles or controllers to interact with objects in the virtual environment, such as touching, selecting, or moving them. These interactions allow viewers to explore the virtual environment and increase the feeling of participation and immersion. In addition, the effects of sound, light and shadow in the virtual environment also affect the existence and behavior of the audience. As the audience's movement and position changes, corresponding sound effects and light and shadow effects can be activated, creating a sense of sound direction and distance and making visual effects more vivid and realistic.

3.2.3. Nonlinear Selection of Story Plot and Audience Decision-Making

An important interactive element is the non-linear choice of story and the decision of the viewer. Using virtual reality technology and interactive devices, viewers can participate in the creation of stories based on their own decisions and choose different plot directions and endings.

Non-linear story selection allows the viewer to freely choose various actions and decisions in the virtual environment. They can make decisions on key themes or points of conflict, thereby determining the hero's course of action and dialogue options, these decisions can influence the course of the story and the development of relationships between characters, and lead to different plot branches and endings. Viewers can watch the film multiple times depending on their personal preferences and decisions, discovering different plot clues and trends, increasing the fun and playability of the film. Audience decision-making is not just about selecting options, but also reflects the audience's values and emotional input, allowing the audience to become more deeply invested in the story.

3.3. The Influence of Immersive Interaction in "Wolf and Spices VR" on Audience Participation

The captivating interaction in "wolf and spices VR" has a positive effect on audience engagement. By interacting with the virtual environment, characters and plot, viewers can integrate more deeply into the film, develop a deeper emotional connection to the story and have a significant impact on the story's development.

In immersive interaction, the audience is no longer a passive observer, but a decision maker, actively participating in the story through their own decisions and actions, exploring how the virtual environment interacts with the characters and thus influences the direction of the story. This ex-

perience of active participation leads to greater audience participation and interest in the film.

The immersive interaction allows viewers to select and make decisions based on their preferences and interests, creating a unique storyline and viewing experience, this personalized experience addresses the audience's needs and ensures they engage and feel familiar with the story. Viewers can explore virtual environments, interact with characters and make decisions at their own discretion.

The immersive interaction also increases emotional involvement and emotional resonance. Through interactive dialogue with a virtual character, viewers can develop an emotional connection with the character and understand their emotions, motivations and inner world. You can also experience the ups and downs and development of the story with the characters, have more real and close emotional experiences, and pay more attention to the plot and fate of the characters.

Overall, an engaging interaction with a film improves the viewer experience and increases the appeal and impact of the video. When viewers experience this interaction in a film, they may perceive that the plot develops and ends differently depending on their decisions and behaviors, leading them to think better about the plot and moral issues and engage more actively with the film, which is crucial for success of the movie. Filmmakers must consider technology implementations and audience needs to create more engaging and interactive experiences to increase audience engagement. First, technical limitations can affect audience engagement. If the interactive experience isn't smooth enough or fails to meet the audience's expectations, then this can reduce their sense of engagement; Second, the audience's personal interests and preferences affect the receptivity of interactive elements. If the audience is not interested in the interactive experience or is unwilling to participate, it will reduce the audience's engagement.

IV. THE APPLICATION OF VIRTUAL REALITY TECHNOLOGY IN THE FIELD OF NEWS AND COMMUNICATION

4.1. Immersive Interactive Strategy Extracted from "Wolf and Spice VR"

The immersive interaction between "wolf and spice VR" is one of the key features of the game, which aims to provide viewers with a more allure and immersive viewing experience. Here are the engaging and interactive strategies that Wolves and Spice have put together:

First, emotional resonance and personalized interaction: by creating emotional resonance, viewers can develop a deeper emotional connection with virtual characters. Not only can you choose dialogue options to interact with the

character, but you can also customize his emotions and reactions based on personal preferences and audience behavior.

Second, environmental interaction and exploration: the introduction of more interactive environmental design, for example, solving puzzles, exploration tasks, etc. stimulate the viewer's curiosity and desire to explore, and at the same time, deciphering, collecting objects and other means allow the viewer to participate in the development of the plot and the process of solving the puzzle to participate, thereby increasing the interest and interactivity of watching the film.

Third, virtual social interaction and collaboration: by introducing the elements of virtual social interaction, the audience and other audiences participate in the plot, cooperate or confront, communicate and interact in real time, solve problems or complete tasks together, enhance the sense of interaction and social experience between the audience, and enrich the level of viewing experience.

Fourth, interactive multi-terminal experience: The interactive multi-terminal experience by combining virtual reality headsets and other devices (e.g. smartphones, tablets, etc.) is an innovative strategy. Viewers can interact with the virtual world via mobile phones and other devices, for example by scanning certain patterns to unlock hidden content or using mobile phones as virtual tools for specific tasks. This approach not only increases audience engagement, but also provides more opportunities for interaction and personalized experiences.

Fifth, dynamic scenario generation and personalized storyline: dynamic scenario generation technology is used to generate differentiated and personalized story development based on viewers' behavior and decisions. Audience choice determines the direction and conclusion of the plot, and different decision paths allow variety in the development of the plot, which not only increases audience participation and exploration, but also provides a personalized viewing experience for each audience.

Sixth, emotion recognition and regulation: by observing the audience's facial expressions, pronunciation and other details, emotion recognition technology can identify the emotional state of the audience in real time. According to the audience's emotional feedback, the system can adjust the pace, sound effects, image and other story elements accordingly to better control the audience's emotional ups and downs and experience changes to achieve emotional resonance and more engaging observation generate atmosphere.

Seventh real-time interactive performance: through virtual reality and real-time capture technology, audiences, virtual characters and real actors can interact in real time. The audience's movements and reactions influence the performances of the virtual characters and actors, providing viewers with a truly immersive and interactive experience through direct interaction with the actors. This not only in-

creases the feeling of participation and involvement, but also offers the opportunity to interact directly with the actors.

4.2. Specific Application of Immersive Interaction in the Practice of News and Communication

In the field of news communication, immersive interactive technology offers exciting prospects due to its unique features and functions, offering new possibilities for news reporting while giving users more opportunities to participate. Specific applications of immersive interactive technology in information communication practice include experiencing news in virtual reality, displaying information in augmented reality, delivering personalized messages, and interacting in social networks.

Virtual reality technology can immerse users in a virtual environment, providing an immersive news reporting experience. Using virtual reality, news organizations simulate scenes of disasters, historical events, or other notable scenarios so that users behave as if they were there. Through virtual reality devices, users can personally experience the emotional impact and atmosphere of the current event scene to deepen the understanding and resonance of current events.

Augmented reality technology combines the real environment and virtual elements to provide a more clear and intuitive visualization of information in press releases. Augmented reality applications allow users to use tools such as mobile devices or smart glasses to place virtual information charts, statistics or images on real scenes, making news content easy to understand and remember and increase the user's sense of engagement and experience with news content.

Immersive interactive technology provides users with choice and autonomy and provides opportunities for communicating personalized information. Through the use of interactive design and personalized algorithm recommendations, news organizations can provide customized news experiences according to users' interests and preferences, allowing users to choose the angle, depth and form of news they are interested in according to their own needs, which will improve participation and satisfaction with news content, better meet users' needs, and enhance users' attention and loyalty to news.

Immersive interactive technology offers more opportunities to combine information communication and social media. Using virtual reality or augmented reality technology, news organizations create, share, and distribute interactive news content on social media platforms. Via social media platforms, users participate in comments and discussions, share their personal experiences and opinions with other users and form an interactive community. Interaction in social networks not only expands the scope of information dissemination, but also promotes information dissemination and the formation of social consensus, thereby increasing the impact of information communication.

4.3. Challenges and Opportunities

Immersive and interactive experiences will face unprecedented challenges in the future. The first is a technical problem that requires advanced VR technologies and hardware, such as high-quality head-mounted displays, panoramic cameras and surround sound. On the other hand, the issue of content creation is crucial. Immersive interaction requires professional content creation teams to create high-quality virtual reality experiences, including film production, set design, character animation and interactive element development, and requires a combination of knowledge and skills in filmmaking, game development and user experience design. Additionally, user adoption is the biggest challenge in immersive interaction. Despite the unique appeal of immersive interactions, viewers may need time to adjust to new technologies and experiences, as well as the cost and convenience limitations of virtual reality devices.

We provide viewers with a rich, personalized storytelling experience through engaging interactions, giving them the freedom to choose different narrative paths and interactive elements. This design allows the viewer to be more deeply involved in the development of the plot, strengthening their sense of involvement and emotional involvement. At the same time, social interaction and experiences can be integrated, giving viewers the opportunity to interact and socialize with virtual characters and other audiences. It can not only communicate and interact with virtual characters, but also share experiences and exchange opinions with other viewers, thereby strengthening the connection and sense of participation among viewers.

We examine the current status, challenges and opportunities of immersive interactive experiences. However, we also recognize that this space is still full of potential future development opportunities that will help further develop immersive and interactive experiences. Above all, innovation and technological development remain crucial. We need more advanced VR technologies and hardware to provide a higher quality experience. This includes high-quality head-mounted displays, continued improvements in spatial vision, and more affordable devices to meet growing user needs. Second, innovation diversity and depth of content form the basis for engaging and interactive experiences. We need a professional content creation team that combines knowledge and skills in video creation, game development and UX design. We should focus on continuously improving the level of virtual character animation, scene design and story interaction to create more and more amazing vir-

tual worlds. Additionally, user adoption and the ability to personalize the experience are critical. We need to understand and respond to user needs, shorten user adoption timelines, improve user adoption, and lower the barrier to entry for virtual reality hardware. At the same time, the acceptance of new technologies by different user groups and the possibilities of designing the experience to improve user comfort and satisfaction are analyzed. Third, building sustainable economic models and promoting social interactions will be the challenges and opportunities of the future. We may explore different business models, such as providing a revenue stream for content creators through paid, subscription or advertising partnerships, to ensure the sustainability of immersive and interactive experiences. At the same time, we learn how to use immersive experiences in innovative branding and marketing activities. They also use more social interactions to integrate them into the immersive experience and provide viewers with more social and engaging interactions. Finally, with the development of immersive technologies, the security and privacy of user data becomes an important issue. Exploring how to create an engaging experience while protecting users' personal data and privacy is a top priority. In summary, the field of immersive and interactive experiences is full of potential and possibilities, but also requires continuous innovation and research to overcome the challenges of technology and user adoption. Future research by will help advance this area, providing viewers with richer, more personalized experiences while providing new opportunities and sustainability for content creators and the industry.

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