

A Comparative Analysis of VR Documentaries and Traditional Documentaries

ZHANG Tong-xi

University College London, London, UK

ZHOU Shi-yuan

University of Southampton, Southampton, UK

Virtual Reality is a new technology which has been used into different subjects. The combination of Virtual reality and documentary making has showed different characteristic. The traditional narrative method has changed and has different problems compared with traditional documentary making. This article compares the difference of VR documentary and traditional documentary in narrative method, audience experience, point out the problems of VR documentary and give advice.

Keywords: virtual reality, documentary, media, narrative

Introduction

Virtual Reality (VR) is an innovative technology that immerses users in computer-generated environments, replicating the sensation of physical presence and providing a heightened level of interaction with the digital realm (Grilles and Jean, 2022). As this technology continues to emerge, it has found extensive applications across diverse fields, including education, gaming, news reporting, and television programming. At its core, VR relies on 3D modeling, sensor interaction systems, and stereo audio technology to deliver its unique, immersive, and on-site experience. While both VR documentaries and traditional documentaries, designed for viewing on television and mobile devices, serve as mediums for conveying information and storytelling, they exhibit distinct characteristics in terms of production, communication impact, and audience engagement. This article aims to explore these disparities, offering theoretical insights to facilitate the seamless integration and advancement of VR documentaries within the realm of storytelling and information dissemination.

VR Documentaries and Traditional Documentaries

The traditional documentary media primarily consist of screen-based formats, such as television and mobile phones, which are typically presented within a distinct frame or border. These media are positioned at a certain distance from the viewer, creating a separation between the user and the screen. This spatial distinction allows viewers to easily divert their attention to other stimuli.

In contrast, experiencing a VR documentary requires the use of VR equipment worn on the user's head, effectively blocking out information from their real-world surroundings. This immersive technology transforms

the user into a virtual character, enabling active participation within the 3D virtual world constructed by VR, all from a first-person perspective.

Narrative Methods

Although Chinese documentary narration adheres to the principle of authenticity (Li, 2023), it has undergone significant changes in narrative mode across different media platforms. In the traditional era of documentaries, media primarily relied on screen-based platforms such as TV and mobile phones. As Grilles and Jean (2022) mentioned in their discussion of the “Overall Screen Age,” screens have shaped people’s imagination through the mechanism of “Reflection-identity.” Screens were physical objects in people’s living spaces, allowing viewers to immerse themselves psychologically through a single sense: sight and sound. On the other hand, VR technology utilizes simultaneous recording, 3D imaging, 360-degree panoramic shots, photogrammetry, and volumetric capture (Huang & Gu, 2023), creating immersive experiences for users that encompass visual, auditory, and tactile senses (Wan, 2016). VR constructs virtual environments that closely replicate real-world settings, enabling users to directly interact with these environments, often through the perspective of a virtual identity. This sense of presence is a hallmark of VR (Fang, 2023). When wearing a VR headset, users’ vision is limited to the virtual environment, temporarily disconnecting them from the physical world and immersing them in the VR-created space.

From the perspective of documentary production, traditional documentaries employ various techniques to enhance narration and atmosphere, such as montage and camera skills. For instance, in the Chinese documentary “China on the Tongue,” the director employs different camera angles to showcase production details while interspersing shots of the audience awaiting the prepared food, effectively highlighting the appeal of the cuisine. In contrast, in VR documentaries, these traditional skills have limitations. Most Chinese VR documentaries are presented in a 360-degree panoramic format. To prevent VR users from experiencing motion sickness, it is important not to switch scenes too rapidly, shake the camera excessively, or employ violent camera movements (Li & Liu, 2023).

In traditional documentaries, the audience typically plays a passive role, following the director’s narrative rhythm to understand the story. But in VR documentaries, narrative story generation shows a strong emphasis on user engagement, granting users a profound sense of participation and choice. These stories are often not fully predetermined by the designer but are instead shaped through the immersive and interactive narrative system provided by VR. The narrative evolves dynamically through user interactions with the system (Fang, 2023). VR introduces spatial elements, and the narrative sequence varies depending on the user’s choices. Users are no longer mere spectators; they become active participants. In a VR documentary, simultaneous events can be interconnected, allowing viewers to navigate between them through interaction, offering multiple paths of simultaneous action (Wan, 2016). The content of the story depends on the user’s interactions, creating a personalized experience. The infusion of interactivity into the narrative allows the audience to engage with the plot within the virtual space, driving the story’s development and leading to a more profound emotional experience (You & He, 2023). However, there is also a drawback: without proper guidance, it can be challenging for the audience to grasp the film’s narrative rhythm, leading to a confused viewing experience (Sun, 2017).

In the creation of traditional documentary, the content is centered around the director, who employs a range of techniques to guide the audience towards the intended emotional experience. Traditional documentaries reflect the producer's worldview, values, social perspectives, and reality (Li, 2023). There are three primary narrative modes in traditional documentaries. For instance, the Grierson mode features a clear theme and a straightforward, explicit presentation of views. The Direct film mode relies on visuals rather than language for narration. Additionally, there is the subjective or biased real film mode, which prioritizes subjectivity and lyricism, allowing the creator to intervene in the film and stimulate narrative through first-person interviews (Li, 2023). Traditional documentary producers use voiceovers and various camera techniques to evoke emotions and advance the narrative, enabling creators to employ their skills for subjective innovation.

The authenticity of VR documentaries remains upheld and even reinforced within the domain of VR video production (Hao, 2014). VR documentaries excel in authenticity compared to traditional counterparts. They faithfully replicate and recreate the story's original settings through all senses, providing audiences with a more profound and immersive experience than traditional films. Furthermore, VR documentaries reduce the director's creative influence, enhancing authenticity. VR documentary production shifts from traditional two-dimensional narratives to three-dimensional spatial narratives with 360-degree lenses, eliminating the need for traditional camera setups and cinematic language. To prevent viewer discomfort, scene transitions should not occur too frequently. This lack of directorial influence contributes to the documentary's heightened sense of realism. For instance, in the VR documentary "The Most Beautiful China," panoramic cameras are stationary, capturing scenes from all angles, allowing the audience to participate and immerse themselves in the experience. Panoramic images have a much greater capacity for conveying information compared to traditional videos, enabling them to offer more intricate details and better recreate a wide range of scenes, thus enhancing their ability to replicate reality (Chen, 2019).

Audience Experiences

In traditional documentary, the audience typically assumes the role of a bystander who relies on the filmmaker's imagery to evoke emotional experiences. Traditional documentaries excel at conveying information, knowledge, and stories, but they often provide a somewhat weaker emotional connection. Audiences in this context act as observers, positioned outside the narrative of the documentary's protagonist. In contrast, VR documentaries offer a unique immersive experience due to their panoramic perspective, which transforms the audience into active participants within the depicted scenes. This heightened engagement, coupled with the power of imagination, creates a more profound and immersive emotional journey. While VR may weaken the traditional linear storytelling aspect found in documentaries, it significantly amplifies the audience's sensory and emotional responses.

VR documentaries leverage multi-level 3D spatial audio and sound effects to enhance the authenticity of the auditory experience, further immersing viewers in the narrative. The use of 360-degree panoramic images intensifies the feeling of being present within the depicted environment. Compared to traditional documentaries, VR documentaries provide a heightened sensory impact, resulting in deeper and more potent emotional experiences. For example, in the VR documentary "60 Seconds in My Life", the audience can intimately experience the daily lives of ordinary people. Another compelling example is the South Korean documentary

“Meet You,” which employs VR technology to reconstruct the appearance, voice, and presence of a deceased little girl. When wearing a VR headset, the little girl appears as real as if she were physically present, offering a profound experience for her mother, who can finally feel a sense of connection and closure. These VR documentaries utilize multiple senses to recreate reality, allowing viewers to share in the emotional journey of those involved, such as a mother’s yearning for her departed daughter.

On the other hand, due to the considerable weight of the VR headset, extended use can lead to feelings of dizziness and discomfort among users. This discomfort arises from the discordance between visual stimuli and internal bodily sensations. Consequently, the duration of VR documentary films is restricted, with traditional documentaries spanning 20-40 minutes per episode, while VR documentaries typically range from 7 to 15 minutes. The brevity of these VR experiences poses a challenge to maintaining the cohesiveness and narrative logic of the content, as noted by Zhou in 2020. This limitation hinders the ability of VR documentaries to effectively convey a complete narrative.

Moreover, due to technological limitations and the high production costs associated with it, the scope of application for VR is narrower compared to traditional documentaries when it comes to selecting documentary themes. Some documentaries that primarily rely on text information and don’t heavily emphasize the experiential aspect are better suited for viewing on portable mobile screen devices. VR documentaries demand substantial resource investments, have lengthy production cycles, and the availability of high-end talent in the VR field is relatively scarce, which significantly constrains both the production and the range of subject matter choices for VR films. VR technology is better suited for creating immersive experiences that emphasize environmental themes, such as travel, war, and the animal world, among others. Traditional documentaries, on the other hand, offer a broader range of subject choices and place a stronger emphasis on storytelling.

Problems of VR Documentaries

VR documentary also faces challenges related to the lack of production talent with expertise in both technology and documentary filmmaking. Traditional documentary directors, who are accustomed to working with two-dimensional images, need to adapt their thinking to the unique characteristics of VR. On the other hand, VR technology developers possess extensive technical knowledge but often lack an understanding of the art of documentary filmmaking. To address these issues, this paper proposes the establishment of a VR documentary research institute in China. Such an institute could serve as a hub for collaboration between VR professionals and documentary creators, fostering mutual learning and driving innovation in the VR documentary industry.

In addition to talent-related challenges, there are technical issues plaguing the VR documentary landscape. These issues include low-resolution displays, high equipment costs, and heavy headset weights, as noted by Fang, Peng, and Wang in 2020. These factors contribute to a lower adoption rate of VR compared to more established media such as mobile phones and television. Furthermore, the cost and complexity of VR production make it challenging to create VR content at the same scale as mainstream media, as audiences are less likely to invest in VR equipment for just a few films.

The unique nature of VR documentaries also presents content-related challenges. The immersive and visually impactful nature of VR can sometimes blur the line between documentary and entertainment. This raises questions about whether VR documentaries should adhere to the traditional principle of “recording facts” or

embrace a more entertainment-oriented approach. Additionally, integrating content and technology in VR filmmaking poses its own set of challenges, including how to add subtitles and explanations without detracting from the immersive experience and how to incorporate interactive elements into the content.

The production process for VR documentaries often involves enormous engineering files, which can lead to network delays and instability. Moreover, disparities in color between the film produced by the creator and the film viewed by the audience directly impact the audience's perception (Zhou, 2020). These technical issues require attention and resolution to enhance the overall quality of VR documentaries.

Conclusion

In summary, VR documentaries and traditional documentaries differ significantly due to the distinct characteristics of the technology itself. VR documentaries exhibit spatial, interactive, and realistic qualities, while traditional documentaries are more focused on storytelling, featuring the director's subjectivity and rich narrative skills. VR documentaries are often shorter in duration, constrained by technology, and offer stronger visual and auditory sensory effects, resulting in deeper emotional impact. However, the fusion of VR and documentary filmmaking continues to face numerous technical and ethical controversies and drawbacks. These challenges encompass content production, technical limitations, as well as a shortage of talent and promotional efforts. To address these issues, it is imperative for the industry to bring together experts from various disciplines, with the aim of mitigating the shortcomings associated with VR technology in the field of documentary filmmaking.

References

- Chen, F. F. (2019). VR opens a new era of documentary. *Western Radio and Television*, (9).
- Fang, J., Tu, Q. J., & Ding, J. J. (2023). Analysis of virtual reality media and its narrative forms. *Special planning*, 7, 433.
- Fang, X., Peng, L. N., & Wang, L. (2020). Discussion on the selection of shooting content in VR shooting—Taking the shooting process of VR documentary “Mountain Tea” as an example, *Drama Home*, 1.
- Grilles, L., & Jean, S. (2022). Total screen: From movies to smartphones. *Journal of Nanjing University (Philosophy, Humanities and Social Sciences)*, (4), 59, 169.
- Hao, W. D. (2014). On the integration of VR and image recording. *Contemporary Cinema*, 82-85.
- Huang, S. H., & Gu, Y. Q. (2023). Perception, experience and emotion: The iterative evolution of documentary under VR empowerment. *China Television*, 10.
- Li, W. (2023). Talk about the diversification of documentary narrative mode. *Contemporary TV*, (7), 85.
- Li, Z., & Liu, Z. C. (2023). Three development directions of the documentary based on the update of VR. *Document Aries*, 115.
- Sun, C, P. (2017). VR documentary audio-visual language analysis. *Audio-visual Research*, 12.
- Wan, B. B. (2016). The influence of virtual reality technology on the development of documentary. *Modern Communication*, (1), 243.
- Wang, X. D. (2023). VR Immersive marketing exploration of fashion image. *Journal of News Research*.
- You, F., & He, H. P. (2023). Healing space narrative exploration based on VR media technology. *Media Criticism*, 15.
- Zhou, C. (2020). Based on the authenticity of documentaries, analyze the impact of VR application in documentaries on content communication. *Appreciate Media*, 144.