

Response, News, and Observation: Typologies of Communication in VR Documentaries

Guohao Dou*

Guangdong University of Finance and Economics School of Greater Bay Area Film and Television Industry, Guangzhou 510320, China

*Corresponding author: Guohao Dou, douguohao@gdufe.edu.cn

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Abstract: The combination of virtual reality (VR) technology and documentary style creates VR documentaries with distinctive image characteristics. This kind of image with its special spatial interaction, sense of presence, and immersion counters the one-way cognitive thinking of traditional documentary and reshapes its media properties with VR technology, which in turn generates new perception, identity, emotional experience, and understanding in the context of virtual immersive documentary image dissemination.

Keywords: VR documentary; Dissemination; Response; News; Observation

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1. Introduction

The combination of new technologies such as virtual reality (VR) enhances the realness attributes of documentaries, thus conveying a more realistic image and avoiding the phenomenon of “cultural discount” in the context of cross-cultural communication. In the process of film typology research, a variety of classification ideas and theories have appeared, including the overall presentation of cumulative, historical, and diachronic characteristics ^[1]. Whether from the perspective of form and content of traditional documentary films, or the perspective of concept and paradigm, a VR documentary is not a film that can be classified as a documentary film, but it is a film that can be classified as a documentary film from the perspective of VR technology ^[2]. Even if the production and experience technology continuously advances, the realistic expression, documentary style, and other similarities of VR documentaries with the traditional documentary remain unchanged.

2. Behavioral response to hyper-real analogues

VR documentaries begin with reality and bring about different responses from the participants, which can be roughly divided into psychological and physiological responses. Psychological responses include identifying with, empathizing with, or otherwise reacting to the content of the VR documentary. Physiological responses

include unconscious heart rate, heartbeat responses, and subconscious behavioral responses.

2.1. Multiple responses

The core of the research on the response in immersive virtual systems is the exploration of the authenticity VR technology brings. Mel Slater from the University of London proposed the concept of response-as-if-real (RAIR) in his research [3]. He first experimented in mid-2009 to investigate whether greater visual realism in immersive virtual environments would attract increased engagement or response from participants. In the experiment, data from 33 people in different immersive virtual environments were collected and analyzed, and it was concluded that improved visual realism may enhance realistic behavioral responses [3]. Slater's experiment was essentially an exploration of the impact of visual realism on existence, and in his article published at the end of 2009, he further investigated the behavioral response of audiences in immersive virtual environments by defining the illusion of place. On the premise of defining "Place Illusion" (PI) and "Plausible Illusion" (PSI), he proposed the concept of authentic response. He stated: "If you are there (PI) and what appears to be happening is really happening (Psi), then this is happening to you! Hence you are likely to respond as if it were real. We call this 'response-as-if-real' RAIR" [4]. Based on this, Slater suggested that the different levels of the response of the audience depended on the plausibility of the events that occurred, which was derived from prior knowledge and beliefs [4]. In 2020, Munhwa Broadcasting Corporation (MBC) in the Republic of Korea aired a VR human documentary program called "Meeting You," in which VR technology allowed a mother to virtually meet with her daughter who had died of leukemia three years ago [5]. Eight months and nearly 100 million won were used to create this immersive virtual environment, as shown in **Figure 1**. In this immersive virtual environment, the mother could not only have a dialogue with her daughter but also make contact, such as a high-five, with her daughter through a touch glove. The mother can even interact with her daughter in the virtual environment, such as celebrating her birthday, blowing out candles, and so on.



Figure 1. "Meeting You" program's virtual environment

Although the mother who participated in the program was immersed in the environment as shown in the picture above, the actual real-life environment took place under a green screen, as shown in **Figure 2**. Both the audience and the mother knew that this scenario did not exist in reality, but the mother still shed tears while interacting with her daughter. Based on this, it can be argued that the mother was able to experience realism (emotional reality) through the short duration of the program. She consciously responded emotionally and

behaviorally to the virtual environment. In a post-program interview, the mother agreed that it was a pleasant experience and that it was “the dream I always wanted.” Therefore, in combination with Slater’s findings, it can be argued that the participant’s response to the immersive virtual environment, while relying on the realistic virtual environment created by VR technology, comes more from the audience’s inner acceptance of this reality and the influence of previous experiences on their inner emotions.



Figure 2. “Meeting You” program’s production environment

2.2. Creative processing

Jean Baudrillard’s understanding of reality is that the analog created by modern technology is extremely real. Although it does not exist in the objective world, these virtual objects and virtual scenes are not unreal, but more real than reality, otherwise known as hyper-reality. From this level, immersive virtual reality environments can bring hyper-reality to the audience, where the audience responds to this analog reality with their reactions to reality. The essential difference between a VR human documentary and a responsive VR documentary is that a VR human documentary is defined as focusing only on the real life of human beings, while a responsive VR documentary takes reality as the basis of the film, and focuses on the audience’s experience and response. Responsive VR documentaries can be understood on two levels: firstly, realism can lead to the response of the participants. Secondly, rhetoric concepts can be utilized through creative processing to get a response from the participants.

This is mainly “the creative treatment of actuality” of an image to provide a response to the audience and eliminate any unclear meanings that may appear ^[5]. Common rhetorical techniques in VR documentaries include special VR filming techniques such as aerial photography, special effects, and narration. Responsive VR documentaries are more subjective, with a greater emphasis on the results of audience and participant viewing such as behavioral response ^[6]. This kind of response is set by the creators at the beginning of VR documentary production and tries to bring a sense of reality to the audience through these responses, which is also a clear reflection of the creators’ use of image discourse. Therefore, the core of rhetoric is the clarity of the semantics of VR documentary images, which illustrates a stronger subjective instillation.

3. Faithful reproduction of news scenarios

3.1. Journalistic attributes

The term “immersive journalism” was first mentioned by researchers such as American journalists and documentary filmmakers Nonny de la and Slater in their thesis in 2010 ^[3,8]. In the paper, the researchers used RAIR and concluded through experiments that an important role of immersive journalism may be to reawaken

the audience's emotional engagement with current events. It was argued that immersive journalism, by providing the audience with a more immersive experience based on principled, ethical, and best journalistic practices, may constitute a much more faithful duplication of real events ^[7]. Most importantly, the paper defined immersive journalism as news that was produced in such a way that people can have a first-person experience of the events or situations described in the news story ^[8]. Three key messages can be drawn from this. Firstly, the emphasis is on the audience entering the virtual system and experiencing it for themselves to recreate the news story. Secondly, the audience can gain a sense of presence visually and aurally in an immersive virtual reality system. Thirdly, this personal experience can bring about positive feelings and emotions.

Closely related to this is the theory put forward by McLuhan, whereby "the medium is the message" and "media are extensions of ourselves" ^[9]. This media theory perfectly explains the necessity of applying VR technology in news reporting, that is, the development of any media technology implies the extension of the human body organs and senses. Before the application of immersive virtual systems in journalism, this extension was in the form of photographs, audio recordings, and videos, but VR technology extends the human perception of the world even further, which not only meets the needs of the human senses that are more realistic but also is more in line with the journalism's concern for realism.

However, the key difference between immersive journalism and journalistic VR documentaries is that Nonny de la's definition of immersive journalism focuses only on the audience's access to the news scenario ^[8]. The definition of immersive journalism focuses only on how the audience can access news scenarios and how experienced they are. It does not pay attention to the fact that journalism needs to be timely, and the timeliness of immersive journalism is still difficult to guarantee.

3.2. Explanatory elements

To guide the audience's viewing purpose and get rid of the interference of unconscious browsing on the news report, the news-type VR documentary will often include subtitles, press releases, commentary, and so on. to explain the background or current situation of the news, to enhance the audience's understanding of the news and provide a stronger sense of immersion.

The difference between traditional news reports is that news-based VR documentaries give the audience greater freedom of perspective, with the addition of explanatory elements to support the images and content. Specifically, not only does it provide the necessary information to understand the news scenario but also guides the audience to identify the focus of communication in the free-viewing scene. On the other hand, the explanatory elements in traditional news reports, mainly explain the content outside the frame of the camera.

4. Empathy for real observations

4.1. Experiential sensation

According to Csikszentmihalyi, "mind flow" is a psychological state, which is the holistic sensation that people feel when they act with total involvement ^[9]. Therefore, in VR documentaries, the audience is immersed in the virtual reality environment, hence the audience's body and mind will also have a holistic sensation, where they will consciously enter the virtual reality environment. Whether it is Nicholls' theory of observation from the perspective of documentary theory, Slater's theory of real response from the perspective of experimental research, or Mikhail's theory of mental flow from the perspective of psychology, all of them share the common goal of achieving immersion in virtual reality. All these theories point to the fact that VR documentaries have a sense of immersion, which allows the audience to experience realism in the virtual environment, and that this sense of reality can bring the audience a sense of experience and empathy. Therefore, this type of VR

documentary is mainly aimed at bringing the audience an experience of the real environment and tries to let the audience experience empathy with the theme of the image.

This type of VR documentary has a common feature, which is to create a sense of experience. For example, they are shown from the first point of view, portraying themselves as a member of the video content. For example, the first VR documentary, “Blindness,” shows the real feelings of blind children, where a classroom scene is set up in the film, and the VR camera is set behind the desk, simulating the perspective of a child who is attending class^[10]. In this scene, the audience can feel the classroom of the blind children by changing camera perspectives as if they are really in such a classroom, which enhances the audience’s understanding of the daily life of the blind children.

4.2. Empathy

Imagination, as an inherent property of VR images, allows audiences to imagine based on the authenticity of the virtual environment created by VR technology. Many scholars have included the commonality of emotion generation in their research on VR documentaries. For example, Western scholars have been engaged in a theoretical dialogue on the following question: Is interactive documentary an empathy machine? Si examined this question and explored the phenomenon of empathy in VR documentaries through the perspectives of many people^[11]. Milk, the creator of the VR documentary “Clouds over Sidra”, mentioned in his public speech that by making some of these VR documentaries and bringing them to more people to experience them, he will be able to change the virtual world in the images. He believes that VR is a tool that can make the audience empathetic, and can bring people closer to each other through empathy, therefore, VR creates the ultimate empathy machine^[12]. On the other hand, Murray believes that VR is not a film to be watched, but a virtual space to be accessed and navigated and that feelings of empathy are not automatic for the user. Therefore, she prefers to think of VR as frameless movies^[13].

Despite these different views, there is one issue that has never been denied by researchers, that is, the immersive VR environment created by VR technology can bring the phenomenon of empathy to the audience to a certain extent, and make the audience experience such an emotion. With the help of an immersive VR environment, VR documentaries can create a more realistic and immersive situation, so that the audience can deeply experience and feel the content shown. The diversified and interactive space and time processing methods allow the audience to have more choices and participation, crediting the audience’s access to emotions.

5. Conclusion

Whether it is the behavioral response to VR documentaries, the use of VR technology to faithfully reproduce news scenes, or the feelings of empathy, the essence is based on the realistic characteristics of documentary images. What a VR immersive environment can do to enhance the audience’s experience is to change the one-way communication of traditional images into an interactive communication situation under a free perspective, thus bringing the audience into the common meaning space made of images, and making the audience feel the meaning of the images from a relatively objective observation point of view. A relatively objective observation perspective enables the audience to have an emotional experience of empathy. In the future, documentary images, which are based on reality, and provide the audience with immersive and empathetic experiences, will also appear in various technological forms, such as XR and holograms. Therefore, the application of VR technology in images will not only help the audience to understand the meaning of the images but also help them to understand their essence. The application of VR technology in the creation of images should not be regarded as a simple technological upgrade, but rather a gradual change in the way images are disseminated under the empowerment of technology.

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