Report and Opinion

The Continuation of "Futurism" in Journalism: Reconstructing Virtual Reality News Documentaries

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Abstract: A large number of news production teams are trying new technical tools to enhance the user experience, enhance the narrative expression strength, in order to achieve the ultimate goal of meeting user needs. In the collision between news documentary and virtual reality technology, although gradually mature works and production methods are preconceived, conceptual classification still needs to be discussed in depth, and even cleared up and reconstructed. In the years since Noni de la Pena's concept of "immersive journalism" and related works were officially launched, the concept of virtual reality journalism has been repeatedly debated by journalism disciplines and interdisciplinary fields combined with the application of technical tools. The author based on the study to more clearly the concept of virtual reality news documentary restructuring, and the continuation of the virtual reality technology applied in journalism "futuristic" thought, make the new media such as news documentary works of art in the field of journalism can have more clear positioning, and then follows the law of development, improve the aesthetic experience.

1. Introduction

In recent years, virtual reality technology has been widely used in the media industry. Its diversified display effect combines objective reality with entertainment freedom. The growth environment of creative economy provides more support for virtual reality media project. At the same time, the price of processors and other hardware devices is also constantly promoting the user's perception of experience and news producers' needs for in-depth content expression. In the early stage, well-known network companies invested a lot in virtual reality technology to solve the urgent transformation needs of traditional industries. Paper media, which once occupied a major position in the cultural consumption market, is also facing the difficulties of the impact of digital media. In this context, the influx of virtual reality simulation technology has brought more inspiration to experimental producers. However, due to the bottleneck in the development of hardware equipment in the application and the immaturity in the production process, it has become one of the solutions to explore the narrative content of appropriate expression and pay attention to "content is king". However, before attempting to design a VR news documentary, the author found that there was an unclear division in the concept scope of VR news. According to the different technical tools, the following part deconstructs and reconstructs the concept of VR documentaries under VR news business, and refines the classification to expand a wider field in the future.

2. Virtual Reality News Documentaries Under The Influence Of "Futurism"

1. Futurism without tense

Futurism, as one of the trends of thought in modern literature and art, after the first stage of political development in the 1940s and the second stage of economic development in the 1950s and 1960s, now focuses on human's reflection on the future life due to the development of science and technology. Although it has been more than 100 years since the Italian Marinetti initiated it in 1909, futurism has always been playing its role, constantly changing with the theme of The Times and the degree of social informatization, and is not subject to time constraints [1]. It can be said that futurism always has specific content, but no fixed tense.

Here we have to point out one of the sources of futurism theory, futurology. Futurology takes future problems as its research object, and its main research fields include technology prediction related to the research topic, that is, the comprehensive evaluation of the impact of technological inventions and applications on the future. Futurism supported by theory is gradually full and extended to various artistic media fields, such as visual communication design, film, music, literature, etc. At the same time, due to the change of technical tools, the journalism industry is constantly innovating its production mode, and a variety of businesses contain a variety of forms of expression. After experiencing newspapers, radio stations, television stations and mobile clients, the journalism industry under the influence of futurism also needs to explore the application of emerging production technologies, such as virtual reality simulation technology, not only to help solve the current problems, but also to predict the development ways of news communication in the future by summarizing the rules.

2. Virtual reality news documentaries

When describing the evolution process of domestic Internet companies, "Tencent Biography" used to compare this period to "who can stop a volcano erupting"? The virtual reality industry is like an active volcano, but will it be as destructive as Colima in Mexico? Or would a volcano like Sakurajima in Japan, full of people living off the tourist business, attract a lot of eyeballs to experience it? If the development of this kind of information industry is viewed from a positive perspective, continuous innovation should be made according to the technical characteristics of virtual reality and the integration of traditional industries, the development of hardware equipment should be complied with, and the "freeze frame" of existing theory and practice development should be constantly broken to enhance user experience. In the process of mutual selection between the traditional media industry and the development of technical tools, more and more so-called "rules" are regarded as "art" rather than "science", with the subtext being a warning against and respect for uncertainty. In the complex multi-dimensional framework of the information age, virtual reality news can be called the embodiment of "futurism" thought in journalism. Futurism, full of positive energy and pursuing speed, is an important school of modern art thought. It predicts and predicts the future social development prospect according to the previous development law and the existing scientific cognition, so as to control the process and adapt to the future. The deep transformation of the media ecological pattern will also bring about such a research state, which actually starts from anxiety. Therefore, it is still of great significance to re-examine the interaction between the "futurism" thought and the development of information content platforms such as virtual reality news [2]. Although "futurism" is not the main object of study, the hidden influence of its main ideas over the years provides an effective basis for solving the contradictions caused by the interweaving of technology and art.

Before virtual reality and other technologies can be fully applied in real-time news, that is, the media industry can realize real-time news transmission in the future, the author divides most of the existing electronic works, namely virtual reality news videos, into "virtual reality news documentaries". In the process of development, virtual reality is unlikely to be a single technical tool in the production process. It is obvious that high speed, large capacity and low delay wireless communication technology and hardware equipment capable of carrying the data transmission of video sharing platform are needed to help realize real-time recording and real-time transformation. Only efficient real-time transmission can protect the unique meaning of news expression. At present, 5G speed is still unable to complete the transmission and production of real-time news in a short period of time. Headwear hardware devices also have the defects of uncomfortable wearing and dizziness caused by long-time viewing.

But news documentary can match the realization range of existing virtual reality technology. News documentary is a fusion of real news and film art, and its characteristics provide a vast soil for the innovative expression methods that can be brought by technical tools. It not only expresses the objective news content, but also increases the artistic form of the film. The production process needs to be infused with the thinking of the creators and media, which coincides with the purpose that the application of virtual reality technology can assist in increasing the communication effect and experience effect. This extension of creation in time and space proves the rationality of the production mode of virtual reality news documentary. According to the current technology, combined with the characteristics of news documentary, not the pursuit of timeliness, virtual reality news documentary content easier to express directly, which is most of the news media producer is virtual reality news, but the final is actually late time lag and large production of digital media arts, in the context is still the cause of the virtual reality news documentary. On the one hand, the current virtual reality technology can realize the reversibility of time. For example, users can read their hypertext information at any time with a head-worn display device (HMD). On the one hand, it can realize the infinity of space, that is, it can not reproduce the

news documentary scene through the digital virtual image, which makes up for the deficiency of the traditional news documentary experience without the sense of presence.

3. Authenticity brings production rationality

In the case that most news works produced by using virtual reality technology are classified as news documentaries, the rationality of virtual reality news documentaries is still in need of further discussion because of the concept and classification changes guided by technical tools. As explained in the above "virtual reality news documentary", the development advantage of virtual reality technology is also reflected in the process of "being discovered".

In the process of combining virtual reality technology with traditional news media industry, authenticity is often discussed. The authenticity of previous studies is "Are the characters and scene ontology in this news video real?" However, the necessary condition of real life is real time, which can not be performed by actors, nor can there be a script to fictionalize it. The state of extreme reality can not tolerate the editing process of full reality. After determining that the electronic information content displayed by such platforms is news documentary, the authenticity of the author will discuss is whether the factual content of news documentary can be accurately expressed and whether the narrative content can be close to the reality. Virtual reality news documentary is to follow the news documentary to the principle of documentary, to the real people and things of the concrete content as the object of expression, do not allow the content of fiction and interpretation. Part of the research on documentary also discusses its authenticity, such as the construction of reality based on the special performance of documentary. The development of computer technology subverts the status quo of production mode, making experimental artists constantly discuss in the classification of comparative visual art and redefine the scope [3]. Virtual reality simulation through role modeling and the construction of the scene in the game engine, the documentary scenes and the character image lifelike shape again, is to make the character more rich, smooth narration development, therefore, virtual reality news documentaries have to meet the demand of news authenticity documentary sexual expression of basic conditions.

3. Further Reconstruction Under The Influence Of Futurism

As a whole production rationality, can have the further classification aspect differentiation analysis. Virtual reality technology advocates users with "first

perspective" to participate in the real construction, so a large number of news videos have promoted virtual reality art as a form of artistic expression worthy of recommendation. Based on the concept of "Immersive Journalism" proposed by Noni de la Pena, this paper discusses the conceptual reconstruction of virtual reality news documentaries in a deeper level by combining the production methods of digital media and the principles of immersion and interactivity.

1. Virtual reality news documentary and virtual reality news documentary

Why is the foregoing discussion defined as "virtual reality newsreels" rather than virtual reality newsreels? The introduction of virtual reality technology reshaped the production of news documentary, followed the content authenticity principle of news documentary, but also increased the interaction that is different from 360-degree panoramic news video. This paper embarks from the production process technology tools and content, the virtual reality news documentary is divided into two parts, respectively for the virtual reality news documentary with 360 - degree panoramic video news, among them, the 360 - degree panoramic video news can be referred to as virtual reality, whether in the future research is facing "resolution", has yet to be under a lot of practice to promote in-depth discussions in the future.

Forerunner Noni de la Pena's "immersive journalism" process consists of three main steps, following the best journalistic practices. Firstly, in the preliminary "interview" work, the narrative content materials of the real scene of the news were gathered, such as the real news scene, the real dialogue recorded in real time, and the characters (witnesses or parties) in the scene, etc., which were created based on stereo modeling or dynamic bone capture to create the simulated digital avatar. Secondly, build a virtual scene describing proprietary linear news events "hanging" in the game engine Unity, import the existing character shaping, etc., to create a three-dimensional news scene with strong presence, proximity and impact; Finally, the virtual reality headset display device (HMD), somatosensory interaction (controller), motion tracking (processor) and other devices are used for complete presentation [4]. As Noni de la Pena put it in her TED talk, this kind of immersive journalism is not about forgetting where you are while you're working, but about feeling that "we're in two places together" -- that is, double existence. Immersion, as the most important shining point of virtual reality, has achieved an unprecedented effect in the presence of user experience [5].

360-degree panoramic news video uses the special lens of the panoramic camera to capture the visual information seen from all angles at a fixed

position, so as to reduce the number of videos and cameras to be stitched as much as possible, reduce the gap problem in video stitching and improve the stitching efficiency. In a sense, 360-degree panoramic news may just be a video about news content lacking timetables, which is temporarily classified as "virtual reality news documentary" because it tends to be factual.

In the true sense of virtual reality documentary is not to the user to watch the stitching good "around" video, but can be immersed in the simulation environment in the first Angle of interaction of information content, to achieve a higher level of engagement, reaction in virtual reality has become a real output form, let "can walk free audio-visual technology" is a complete application.

2.   Is 360-degree panoramic news video virtual reality?

At present, in the field of news research, there are some methods that try to use concept differentiation method to test virtual reality news documentaries: actor network theory, normative theory and other relevant sociological viewpoints [6]. This detection method fuses journalism with sociology, subconsciously separating 360-degree video from virtual reality news. Before the users did not experience the real VR video, including the producers also mistakenly thought that the 360-degree panoramic news video was VR. Part of the news production team was suspected to have evasive action during the initial experiment, labeling 360 panoramic video as "virtual reality news". With the improvement of technical level, virtual reality news production has gradually gone out of university laboratories and research institutions, and a large number of experiments have produced fruitful research results. The production of 360-degree panoramic news video hardly requires any expertise. As mentioned above, the video can be filmed with inexpensive cameras, and the video can be shared on the user platform, which greatly reduces the transmission cost [6]. In particular, watching on mobile devices is extremely short of immersion [7]. Therefore, from the perspective of the most important experience effect, the 360-degree panoramic technology lacks both response and interaction [8]. If only the role of spatial presence is identified as a form of virtual reality, there is still a certain gap between panoramic news and virtual reality news documentaries that really experience the process of modeling and scene construction, and the sense of spatial presence that lacks a high sense of immersion and interactive function is too single. In addition, the 360-degree panorama is recorded as real content, and does not participate in the virtual electronic content production process itself. If high speed real-time

recording can be achieved in the future, 360-degree panorama will certainly have the opportunity to become an innovative 3D transformed news and expand the viewing dimension and perspective range. However, it is still controversial that it can be equivalent to virtual reality. Only due to the defects of just time lag and the scope of news content expressed, for example, most video sharing websites such as YouTube still classify 360-degree panoramic news videos as virtual reality channels. 360-degree panoramic news videos are "mapped" to the label of virtual reality in the field of news, which meets the early design and release needs.

News documentary is mainly documentary, spread more serious news content, so it can not focus on the pursuit of player experience like games. However, due to the interconnection of the production engine and the appropriate entertainment determined by the narrative content of news documentaries, VR news documentaries have more representative design references in the production orientation, thus providing a reasonable research orientation for the future VR simulation design and weakening the limitations brought by the traditional classification.

3.   The limitations of virtual reality news documentaries

In 2017, the Oxford Reuters Centre for Journalism Research released a study on the cost of producing virtual reality news. The report points out that high quality content rarely appears in VR news documentaries [9]. The low content quality is due not only to the limitations of hardware facilities, but also to the inexperience of journalists, who cannot fully adapt to the technology in the era of digital media. In addition, the mainstream TV media and other platforms are mainly traditional 2D news documentaries, and the traditional demand is large at present.

In addition, the current virtual reality experience products are mostly PvE (Player VS Environment) devices, and the single-player interaction lacks the collaboration and interaction between users, as well as the communication process of sharing information. Virtual reality interactive technology is considered by most people to be the weakest link in the whole development technology system [10]. However, the most prominent aspect of virtual reality news documentary is its interaction, and the technical shortcoming has set up some existing obstacles to its development. As a result, human-computer interaction becomes limited, which may lead to the simultaneous appearance of immersion and loss, resulting in deficiencies in user experience. Clearly in among them, the mixed feelings in the process of watching, but because of the innovation are also explored on the

audio-visual language, make a virtual reality more audio or use traditional digital audio editing software, such as Logic Pro X and Adobe Audition CC, if there is more suitable and more targeted virtual reality audio design software, will greatly improve the efficiency of production, improve the user experience, will be the height of the virtual reality design news documentary ascend a new step.

On ethical issues, also some scholars questioned, think of the virtual reality technology to produce video also itself is not a "virtual reality", but that doesn't exist, is a producer imagination of virtual characters, plot, etc, the virtual reality video all divided into virtual reality technology power of film art, namely "virtual reality". Because as the 2018 movie "the number one player" shown in the plot, no order, the whole city is in "paralysis", run-down streets are full of people in VR glasses of out of control as "dance gun lane stick", although finally has a hero to save the city and the residents, defeat the evil forces, but the pursuit of spiritual or stay after winning or losing the game, the ruins of the city state became a failure under the utopia. However, some VR video productions may only pursue new experiences brought by sensory stimulation. For example, a can is suspended in the air in the virtual experience, but in the real situation, if the can is not thrown in the air under certain conditions, the result will be free fall. Because of this "can experience," some users are even more confused about the already confusing categories of virtual reality. In fact, if just for the sake of experience and experience, loss to the ultimate development goals of virtual reality technology, visual entertainment is one of the direction of development, only because of the commercial economy income is significant, investment and development focus on short time caused part of the user perceptions of virtual reality technology application itself to misunderstanding.

Conclusion

The advantage of "virtual reality + news" in digital media application has wireless potential. Walter Lippmann, an American scholar of journalism and communication, once defined the media as follows: "There are only two core abilities that the media pursue: one is speed and the other is attitude. With the former, you get readers and business value. If you have the latter, you can stand out." Obviously, if virtual reality news documentary wants to become mainstream media, its speed and attitude need the "support" of hardware development, so that it can gradually become independent and create infinite possibilities for news communication and film art. In this paper, the virtual reality news documentary is conceptually deconstructed and reconstructed, hoping

to provide reference for future design orientation. Face current problems head-on, rather than treating another problem as a solution to current problems, by discussing persistent controversies like 360-degree panoramic news video and virtual reality. Unfortunately, news videos available on video platforms now have multiple channels with multiple names, and this is where the Internet environment needs to be improved. This is also an "interesting" obstacle to the development of the creative economy.

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Reference
1 Deng Lujie. Nietzsche's Philosophical Practice -- Italian Futurism Movement [J]. Cultural Relics Identification and Appreciation, 2018(23):110-111.
2 Zhao Xinyu. Radio Futurism -- Taking Heilongjiang Music Radio as an Example to Explor the New Direction of Radio Management [J]. Media Forum,2019,2(01):11-12.
3 Roy F L, Vanderbeeken R. The Documentary Real: Thinking Documentary Aesthetics [J]. Foundations of Science, 2018, 23(2):197-205.
4 Nonny de la Pena, Weil P, Llobera J, et al. Immersive Journalism: Immersive Virtual Reality for the First-Person Experience in News [J]. Journal of Presence, 2010, 19(4):291-301.
5 Nonny de la Pena. "The Future of News? Virtual Reality. "TED.com. https://www.ted.com/talks/ nonny_de_la_pena_the_future_of_news_virtual_ reality. 2015
6 Radwa Mabrook and Jane b. Singer, Virtual Reality, 360 ˚, Video, and Journalism Studies: Conceptual Approaches to Immersive Technologies [J]. Journal of Journalism Studies, 2019, DOI: 10.1080/1461670 x. 2019.1568203
7 Watson, Zillah. Virtual Reality for News: The News Reality. [EB/OL]Oxford: Reuters Institute for the Study of Journalism. http://www.digitalnewsreport.org/publications/20 17/vr-news-new-reality/.2017.
8 Conroy, Andy. "The BBC and Virtual Reality." [EB/OL] Research and Development, The BBC, June 9. http://, www.bbc.co.uk/rd/blog/2016-06-the-bbc-and-virt ual-reality, 2016.

9   Lin Mao-Shen. Brief Discussion on the Change of Virtual Reality Technology to News Media [J]. China Media Science and Technology, 2018(08):104-105.

10   WEN Xiaojun. Virtual Reality Industry Development White Paper [N]. China Computer Journal, 2017-08-28(008).

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