



## The Inevitability of Technological Innovation in Media Industry—Virtual Reality News

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**Abstract:** Virtual reality technology+journalism collided with a new spark, which gave birth to the inevitable product of technological innovation in media industry-virtual reality news. Through the comparative analysis of the types, advantages and disadvantages, development prospects and difficulties of virtual reality news, this paper holds that virtual reality news will definitely break through the technical limitations in the near future and realize the real-time, immersion and interactive dissemination of information.

[Yongzeng Xue, Xinjing Gao, Enze Zhang. **The Inevitability of Technological Innovation in Media Industry—Virtual Reality News**. *Researcher* 2021; 14(6):41-44]. ISSN 1553-9865 (print); ISSN 2163-8950 (online). <http://www.sciencepub.net/researcher>. 6. doi:[10.7537/marsrsj130621.06](https://doi.org/10.7537/marsrsj130621.06).

**Keywords:** Virtual reality news; Information dissemination; technological innovation

**Project:** This paper is a phased achievement of the National Social Science Foundation project "Virtual Reality News Research under the Perspective of Communication Science"(No. 18BXW102).

The process of human cognition of nature includes practical verification and theoretical summary of natural phenomena, and the emergence of virtual reality simulation of natural existence technology has expanded a new way for human cognition and transformation of nature, and has become the third way for human understanding of nature.<sup>[1]</sup> Virtual reality is a digital simulation of people, buildings and environment in the real world, relying on new technologies such as computer technology, digital media technology and art, human-computer interaction technology, photoelectric control technology, and human-computer efficiency engineering. Compared with traditional paper media, television, radio and other media, virtual reality provides the audience with a richer and more diverse information receiving experience through the multi-sensory combined experience of sight, hearing, smell and touch. This related information organization and structure enables the audience to obtain it.<sup>[2]</sup> Academician Qiping Zhao once expressed in many articles: Human society has now entered the period of VR+, and the industrial development model of VR+X can now be regarded as the latest economic growth opportunity for all industries in the world.<sup>[3]</sup> Nowadays, virtual reality technology+ journalism has collided with a new spark. The theoretical research of experts and scholars from different disciplines, and the empirical tests of designers and programmers all demonstrate the incomparable superiority of virtual reality news in

information dissemination from the aspects of theory and practice, macro and micro. Because the virtual reality news media needs more "pre-storage" space and ultra-high-speed real-time scene switching and sharing, the high transmission rate and ultra-low delay of 5G can just meet this demand. With the update and iteration of network communication technology, the high network speed and stable network in the 5G era will push virtual reality news to land in the direction of "news".

### 1. The types of virtual reality news are compared

In the strict sense of news paradigm, the scene news based on 3D model is the real virtual reality news, and it is also the key research object of this paper, that is, to realize the simulation and restoration of the real world through computer modeling technology and then show the whole story. However, due to the technical limitations of modeling and the complexity and time-consuming process, its application scope at home and abroad is narrow at present. However, the 360 full-motion video News, which is a mosaic of pictures, videos, sounds and other materials, can not be called completely immersed virtual reality news, but it has become the mainstream form of virtual reality news under the current technical conditions. 360 full-motion video News is a video shooting method based on capturing spherical view, and the viewer can watch the news content in any direction as the center of the sphere. On the other hand, the scene news based on virtual reality scene

provides all viewpoints in the space to the audience, while the news event itself becomes the center of the sphere, and the audience's position can exist in all layers outside the sphere. In September 2015, a virtual reality news documentary "Kindergarten in the Mountain Village", which was produced by Caixin Media and based on field shooting, was broadcast at the International Conference on "Global Anti-Poverty and Children's Development". Although this film reorganized the shooting cycle of traditional news and reserved a large number of fault-tolerant seats, it took about three months for this 360 full-motion video work to be prepared before and after the final work was completed. The scene news Hungry Los Angeles, which made its debut at Sundance Film Festival based on 3D scenes, took several times as long as the former because of complicated scene restoration technology.

At present, viewers log on virtual reality video experience websites such as UtoVR, iQiyi VR, wonderland VR, GoproVR and Steam VR, and most of the virtual reality news reports that can be browsed are still 360 full-motion video news, such as UtoVR's virtual reality news "enjoying ice and snow-the opening of Harbin Ice and Snow Festival" and "watching two sessions with the south". The advantage of panoramic news is that equipment can be set up at the event site in advance to record the whole event truly and objectively, and because of the relative convenience of operation technology, it can have better performance in real time. Through 360-degree full-motion video news, the audience can have a full view of the news scene environment, characters and events, and obtain more authentic and complete news content than descriptive text news, summative data news and video news with a single perspective, thus realizing the process of event information from intermittent, individual and independent dissemination to continuous, combined and comprehensive dissemination. However, there are still some deficiencies in interactive participation and three-dimensional immersion. In fact, 360 full-motion video News only provides the audience with the immersion of watching news videos in multiple directions, rather than watching them in multiple directions. If a certain frame has the occlusion relationship between front and back, the audience can't see the truth behind it, so it can't realize the audience's autonomous roaming in the full sense. The virtual scene environment composed of 3D model can enable the audience to bypass the obstacles in the environment and realize the internal roaming and viewing angle conversion in the news scene. However, virtual reality scene news still has great limitations in subject matter selection, reporting efficiency and interactive experience. It can be seen that there are still many ways for the virtual reality scene news to spread

the "news" of recent events for the public in the true sense, which need interdisciplinary exploration by scholars in various fields.

## 2. Advantages and Disadvantages Analysis of Virtual Reality News

Looking at the development process of virtual reality news, some scholars pointed out that from 2015 to 2017, especially after 2016, the research angle of virtual reality news at home and abroad experienced the transition from technology as the key to theory as the core, and the media gradually recovered from the initial addiction and madness of technology to rational thinking about the influence of virtual reality on news paradigm,<sup>[4]</sup> and more explored the development potential of virtual reality news from the conceptual point of view. It is believed that virtual reality news is fundamentally different from traditional news in connotation, communication characteristics and model construction, which enriches the research of virtual reality news in theory.<sup>[5]</sup> Some researchers believe that virtual reality news is a kind of "deep immersion" multi-level news that provides audiences with different viewing angles in the presentation of narrative content; In the aspect of narrative expression mode, it is an omniscient perspective news with multiple story lines "mesh and parallel"; In the true presentation of the story, it is a kind of documentary news with "reasonable conception"; In the aspect of narrative language expression, it is a kind of "hypertext" multi-media fusion news; It is a kind of "remote" immersive news in the presentation of information time and space; It is a kind of "active integration" interactive news in the way viewers watch it.<sup>[6][7]</sup> Some researchers have shown through experiments that interactive virtual reality news is superior to traditional video news in sensory immersion, interactive interest, information transmission accuracy and content credibility.<sup>[8]</sup> Virtual reality news breaks through the deficiency of transmitting information in a single form of media, and "draws" the audience in distant places to the place where the event occurred and experiences the occurrence and follow-up of the event on the spot. The audience is no longer simply "reading", "listening" and "watching" news events, but also "participating" in the whole process of news occurrence, and gains not only a news story, but also audio-visual feelings and emotional experiences in story interpretation and participation.<sup>[9]</sup>

But at the same time, the hidden worries about virtual reality news in academic circles mainly focus on the following aspects: First, virtual reality news has the process of technicians restoring the scene through image technology, modeling technology, sound mixing technology, etc., and the virtual environment created by some works is even more visually impactful and

shocking than the real scene. Therefore, some scholars question whether the virtual reality news produced by human factors can really meet the principle of authenticity and objectivity of news; Secondly, because virtual reality news focuses on dynamic pictures and surrounding sounds, it lacks the guidance and control of professional journalists' values in news reports. Some scenes that are too bloody and brutal are easy to stimulate some potential criminal factors, or touch the victims and related personnel in the news again; Third, virtual reality news, as a "hot medium" with high definition and saturated information, makes the audience's ability to think, distinguish and judge low,<sup>[10]</sup> throws a large amount of information in front of the audience without screening and elimination, which is very easy to cause the news receiver to become a "one-dimensional person" who loses independent thinking, free imagination and subjective judgment under the oppression of information surplus,<sup>[11]</sup> and also makes virtual reality news become a pan-entertainment.

### 3. Development prospect and dilemma of virtual reality news

The content of news reports is often an objective event with unexpected and sudden changes without psychological preparation. Because of its wide coverage, large number of people or great harm, the event itself has the characteristics of sporadic, destructive, secondary and periodic, such as natural disaster news, personal injury news, entertainment gossip news, etc. As far as its content itself is concerned, it is easy to cause public concern and topic storm. Based on the above characteristics, news events have two special values: first, the freshness and attractiveness of information itself; The second is the shock and influence on the audience.

News communication revolves around the "5W model" put forward by American scholar H. Laswell, that is, who tells what to whom at what time and in what way, thus resulting in what consequences. However, in order to pursue the timeliness of news, there are some differences in "5W mode". For example, due to the suddenness of events and the necessity of reporting them immediately to appease people's emotions, news reports need to make certain emphasis and trade-offs among factors such as time, place, people, causes and process, that is, when events suddenly break out and some factors are uncertain, the unimportant factors should be discarded first, and attention should be focused on the possible influence and development trend of events.<sup>[12]</sup> Virtual reality news does not have high requirements for some factors in 5W, such as only showing day and night in the scene, but there is no need for an accurate time point in the picture, and the location can be narrowed to the

perspective range related to the event and some irrelevant factors can be eliminated.

In terms of reporting media, some researchers believe that many official media have settled in short video media platforms, such as Tik Tok, Bilili Animation, Watermelon Video, Pear Video, etc., and actively participated in the live webcasts of news events and the interactive exchanges among audiences, which expanded the information dissemination channels and made the information dissemination methods more grounded, making the news content more likely to resonate with the public.<sup>[13]</sup> However, some scholars believe that this short video reporting method is similar to montage splicing, and rearranging fragmented information from different perspectives in different orders will produce different narrative effects, which will make the authenticity of news content bear certain risks; Excessive freedom, overflow and mutual influence of public speech may also lead to emotional imbalance of audience groups.<sup>[14]</sup> In the pursuit of social value, because the news happened suddenly and its dissemination was limited by time efficiency and geographical distance, its cause could not be quickly understood by the public, and all kinds of speculation and gossip could easily breed in this blank period of information. In walter lippmann's book Public Opinion, there is a view that the only emotion that people can have for an event that they have not attended in person is the emotion aroused by imagination and understanding of that event.<sup>[15]</sup> The public's imagination and understanding of emergencies comes from the information provided by reports. If there are false rumors and false reports, the public will easily have panic and anxiety, and then form a negative public opinion crisis. Based on this, some scholars believe that it is necessary to ensure the authenticity of news and grasp the role of news emotional guidance when editing news reports. When the authenticity is uncertain, we can grasp its core value in emotional guidance, and concentrate the public's attention on the follow-up rescue, the support from all sides and the high attention of government departments, so as to reduce the public's subjective speculation on the cause of the incident by objective fact reporting. Virtual reality news shows the story omniscient and omniscient, which avoids the fragmented information dissemination of the above video news.

### 4. Conclusion

Virtual reality news is developed on the basis of merging old media, among which video and audio media occupy the core position. Nowadays, 5G network promotes the rapid development of video news and lays a solid foundation for the prosperity of virtual reality news. Virtual reality news is no longer

an idealistic utopia, but an inevitable stage of news development with the help of technological innovation. Once the limitations of the existing technology are broken through and matured, virtual reality news will realize the real-time, immersion and interactive dissemination of information.

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6/25/2021