The New Development of Narrative Language And Aesthetics of VR Films

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Abstract. The ongoing evolution of Virtual Reality (VR) technology has engendered considerable interest in VR films that have recently leveraged this technology for narrative purposes in the industrial and scholarly domains. These films exhibit unique audiovisual production and viewing paradigms, manifesting distinctive technical and aesthetic attributes when juxtaposed with traditional cinematic works. This article focuses on recent VR narrative works as its primary research subject, delving into the extent to which VR films both draw from and confront the conventions of traditional film language. The research commences by delving into foundational formal techniques, notably encompassing composition, scene management, montage, and viewpoint. While VR does not rigidly adhere to the established canon of classic film techniques, its distinctive feature lies in its comprehensive panoramic depictions, thereby engendering heightened potential for spatial narrative. Of equal significance is the embodied experience that endows the audience with a more veritable vantage point and heightened sensory discernment, thus amplifying the "emotional resonance" interwoven within the narrative fabric. The analysis of the advantages and constraints inherent in employing VR for narrative exposition yields novel insights into audio-visual languages, alongside narrative aesthetics, allowing us to contemplate the panorama of cinematic imagination within the precincts of the contemporary new media milieu.

Keywords: VR; VR films; film language; spatial narrative; embodiedness

1 Introduction

In the early hours of June 6, 2023, as per Beijing time, the "Apple Vision Pro," Apple's mixed reality headset, was formally introduced at the Apple Worldwide Developers Conference, capturing worldwide attention. This groundbreaking headset, integrating Augmented Reality (AR) and Virtual Reality (VR), has attained cutting-edge achievements across multiple domains, including interactive functionality, immersive experiences, realistic replication, and device performance. Consequently, it has advanced the democratization of virtual reality technology, catering to a broader and more diverse audience. Since the heralded "Year of VR" in 2016, coinciding with the maturation of VR video technology, an increasing number of artistic innovators have

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aspired to synergize VR technology with the art of filmmaking. Eminent directors and industry leaders have joined the ranks of VR content creation, as exemplified by Justin Lin, renowned for his contributions to *Fast and Furious*, who release of the first live-action VR short film, *Help*, in 2016. Simultaneously, major international film festivals, such as the Sundance Film Festival, Tribeca Film Festival, Venice Film Festival, and the Beijing International Film Festival, have established dedicated VR sections, providing a platform to showcase VR films and bestow prestigious awards. For instance, the VR animated film *Pearl* garnered a nomination for the 2016 Academy Award for Best Animated Short Film. After the debut of the Dutch VR experimental short film *Ashes to Ashes* across multiple film festivals, certain media outlets and producers have enthusiastically advocated the storytelling potential of VR [1]. This has led to a gradual diversification in VR films' format and thematic content, spanning from concise short films to intricate feature-length narratives. In 2017, the distinguished Ming-liang Tsai, celebrated for his distinctive visual style, directed *The Deserted*, a VR film. Concurrently, Oculus, a prominent US VR content producer, crafted the 40-minute live-action VR film *Miyubi*. These works offer a glimpse into the capacity for creating feature-length narrative experiences within the VR medium. In 2018, Google's Spotlight Stories platform released the VR animated film *Back to the Moon* as an homage to Georges Méliès, while the interactive VR film *Carne y arena*, directed by the renowned Mexican filmmaker Alejandro Gonzales Inarritu, enriched sensory experiences, ultimately receiving the 90th Special Achievement Academy Award. Notably, China has made significant strides in VR film production. At the 2019 Venice Film Festival, the VR film *Black Bag*, directed by Chinese filmmaker Shao Qing, emerged as the sole mainland Chinese VR film to be selected. In 2020, the live-action VR film *Killing A Superstar*, produced by iQiyi, became the first domestically produced VR film to secure an award at the Venice Film Festival, earning the esteemed "Best VR Film Story Award." iQiyi subsequently released another VR mystery film, *The Final Wish*, in 2021. In 2022, the VR film *The Man Who Couldn't Leave*, helmed by Taiwanese filmmaker Singing Chen, set against the backdrop of 1950s Taiwan and portraying the experiences of political victims, was honored with the "Best VR Experience Award" at the Venice Film Festival.

When examining the relationship between VR and traditional films through the lenses of film ontology and film history, a series of fundamental questions naturally arise. These inquiries include: "Are the so-called VR films genuinely classified as films?" "To what extent does the production process of VR influence its narrative potential?" and "Is there a potential for VR and traditional films to coalesce and mutually enrich each other?" The existing landscape of VR content can be broadly classified into distinct categories: The first category entails VR games. The second category focuses on spatial displays, often emphasizing visual spectacles and supplemented by commentary. Examples include space-themed works like *Spheres* and *Space Explore*. The third category pertains to interactive narrative VR, distinguished by robust interactivity, as exemplified by guided VR films such as *Anne Frank House VR* and immersive VR installations like *Carne y arena*. The fourth category, classic narrative VR, incorporates limited interactive elements. Illustrative instances encompass animated VR narrative films like *Wolves in the Walls*, *BATTLESCAR: Punk Was Invented*

By Girls, and *The Hangman at Home*, as well as live-action VR narrative films such as *Miyubi*, *Sergeant James*, and *My Brother's Keeper*. In the broader context, the current landscape of VR content primarily leans towards interactive gaming experiences, with narrative-focused content comparatively less pervasive. However, when VR technology is employed for storytelling, it immediately intersects with the established techniques of traditional filmmaking. As underscored by some scholars, the contemporary definition of VR films must still encompass the essential characteristics of conventional films. Although specific interactive elements have surfaced in certain VR films—such as diverse viewing angles triggering distinct events—these interactive elements primarily introduce new possibilities for narrative structure. Yet, the primary experience for the audience continues to revolve around "watching" the unfolding story. Consequently, "VR film" is more appropriate than "game." The principal value of VR films remains rooted in their ability to convey a compelling narrative. Hence, the key to success in the realm of VR films is fundamentally centered on the effective utilization of VR technology for storytelling purposes [2].

Traditional films boast sophisticated audiovisual language alongside established narrative principles. Viewed through the lens of André Bazin's theory on the "evolution of film language," each stride taken in the evolution of film language, be it from silent films to sound films or from montage to shot composition, represents a dialectical progress. This progression has endowed visual media with an enhanced capacity to reflect and embellish reality through intrinsic methods [3]57-74 . The creation of VR films remains in its nascent, exploratory stage, lacking a fully developed and coherent narrative language system. The distinctive attributes of VR technology also reveal a partial dissolution of the narrative syntax inherent in traditional films. In response, both academia and the industry have embarked on extensive studies. The optimists regarding the narrative potential of VR films assert that VR films can assimilate traditional film language and may even develop a distinctive language of their own. For instance, exemplary VR films like *Pearl* and *Back to the Moon* innovatively draw inspiration from the rich tradition of film and theatrical artistry, achieving an initial fusion of narrative and aesthetics [4]. On the contrary, the skeptics, or those who adopt a more critical stance, argue that the essence of VR contradicts narrative, let alone narrative language. They contend that the interactive elements, 360-degree panoramic imaging, and other characteristics intrinsic to VR disrupt the storytelling and visual composition inherent in traditional films, neglecting the audience's psychological experience [5]. From the author's viewpoint, it is crucial to recognize that VR may not seamlessly integrate with certain aspects of traditional film language. In VR films, incorporating specific film language techniques may appear rudimentary, and, in some instances, visual treatments might prioritize guiding the audience through the storyline rather than optimizing narrative effectiveness. However, VR also unveils its distinct medium-specific qualities, particularly in spatial representation and embodied perception, presenting advantages that favor narrative. Through a systematic analysis of several pivotal VR films from recent years, this article explores the intricate facets of VR films' adaptation to and incorporation of traditional film language, in addition to their innovative elements. The goal is to provide fresh perspectives on the prospects of story-

telling in VR and to ponder whether it can introduce novel avenues for narrative aesthetics.

2 Boundaries or No Boundaries: VR's Challenges and Compromises to Traditional Films

Traditional films operate within the foundational structure of a two-dimensional frame, serving as a tool for creators to arrange compositions, determine scenes, and select angles. This frame functions analogously to a window, where the observable elements within the frame and the envisioned elements outside the frame collaboratively form the entirety of the cinematic space. Echoing the sentiments of André Bazin, he conveyed that the edge of the screen is not the outer limit of the image; it is a frame that only reveals a corner of reality. The images presented to us by the screen seem to extend into the outside world infinitely [3]192. In contrast, VR films reside within the domain of 360-degree immersive imagery, effectively eradicating the conventional notion of a frame.

Although VR films have moved beyond the confines of the two-dimensional frame, current VR narrative endeavors still heavily rely on framing techniques. For example, specific sections of scenes may be deliberately blurred or obscured, serving as a surrogate for the traditional frame. Additionally, creators leverage architectural elements like doorways and windows, which naturally form deformed frames with square or circular shapes, to partition the spatial environment and steer the viewer's gaze, enhancing the visual depth. In the film *Pearl*, this approach is adeptly employed as a car window demarcates the separation between the interior and exterior, ingeniously seamlessly creating a quasi-frame. This strategy enables viewers to partake in the panoramic vista while maintaining a sense of familiarity reminiscent of traditional films. In *Wolves in the Walls*, the frequent use of square frames serves to segment the space, allowing viewers to observe the movements of wolves on the opposite side of the window, extending both the vertical and horizontal dimensions of the spatial experience. In the film *The Key*, viewers are immersed in the dream world of the protagonist, Anna, assisting her in retrieving lost memories, culminating in the revelation that the narrative centers around refugees. As the scene transitions to a dilapidated setting, Anna explains that this was her former home, and the mirror on the wall serves as a frame, projecting images of displaced refugees (see Figure 1). This moment highlights the significance of prior events and the symbolic meaning of "the key" – many refugees still retain the keys to their homes, despite the likelihood of never returning. The reliance on framing techniques within the context of panoramic VR raises a noteworthy contradiction between panoramic viewing and storytelling. The inherent strength of fully immersive experiences lies in the extensive and rich spatial information they provide. In contrast, traditional visual narratives emphasize the presentation of focal points and pivotal details, often complemented by techniques like close-ups and zooming. As a result, the employment of two-dimensional frames to segment space can be interpreted as a form of compromise, indicative of VR's endeavor to align its technological attributes with the established framework of traditional film language.

Fig. 1. The use of framing in *The Key*

Beyond the localized "compromises" and "reversions," the elimination of visual boundaries by VR challenges the technical limitations of filmmaking and redefines the relationship between films and its audience. Within the 360-degree panoramic view, viewers actively select specific perspectives or regions, leading to a shift from passive observers to engaged participants. This transformation carries significant implications, partially undermining the implicit authority traditionally held by the author in filmmaking. The dynamic interaction between the viewer and the visual imagery evolves from the paradigms suggested by classical film theories such as framing, window theory, and mirror theory, giving rise to new patterns and modes of engagement [6]. As VR dissolves spatial boundaries, the relational dynamic between viewers and imagery shifts from passive observation to active, embodied participation, deepening the sense of presence beyond the psychological projection underpinning classical film theories. Ultimately, this transformation empowers viewers, transitioning them from mere observers to firsthand experiencers of the narrative.

3 Inside and Outside the Setting: The Narrative Potential and Emotional Impact of Embodied Spaces

Similar to traditional films, scenes serve as the fundamental spatial units for organizing the narrative structure of VR films. During the initial stages of VR filmmaking, the number of scenes was relatively limited, and their temporal and spatial relationships lacked complexity. However, as VR storytelling has matured, the handling of scenes in VR films has grown increasingly sophisticated. Capitalizing on the unique attributes of the 360-degree panoramic view and the capabilities offered by six degrees of freedom technology, VR films manifest notable distinctions from traditional films in areas such as scene transitions, Mise-en-Scène, and the utilization of extended continuous shots. The viewer's active involvement within VR spatial narratives necessitates the meticulous construction of comprehensive scenes that immerse the viewer in the experience. Scenes fulfill not only the fundamental narrative functions of establishing the envi-

ronmental setting, creating a particular ambiance, and facilitating interactive elements, but they also aspire to evoke emotional responses from the viewer. Some scholars pointed out, "The 'virtuality' of virtual space exhibits diverse aesthetic and cultural traits, capable of accommodating vastly different natural and social contexts. Consequently, the viewer's aesthetic experience becomes grounded in tangible and palpable current life experiences. [7]" As a sensory medium, VR employs its immersive, interactive, and heightened sense of presence features within the context of the spatial narrative, empowering viewers to sense authenticity, rekindle memories, and embark on imaginative journeys within the encompassing embodied encounter.

3.1 Temporal and Spatial Handling of Multiple Scenes

Currently, VR films are often limited to a small number of scenes. However, as creators continue to explore this medium, there is a gradual increase in the number of scenes featured in VR films. Furthermore, these scenes' temporal and spatial relationships are becoming more intricate and varied. Conventional narrative structures commonly found in traditional films, including flashbacks, parallel storytelling, and temporal shifts, have also found their way into VR films. A noteworthy illustration is the American VR short film *My Brother's Keeper*, released in 2017. This film narrates the story of two brothers who, after growing up, unexpectedly find themselves on opposing sides of a civil war, becoming enemies. The transitions between scenes in this film frequently involve flashbacks and intricate cross-cutting narrative relationships. In a pivotal moment, the two brothers unveil each other's identities as adversaries. The camera alternates between their subjective viewpoints, past recollections, and the ongoing situation (see Figure 2), creating an interwoven narrative that seamlessly shifts between the brothers' childhood, where the younger brother symbolically "shoots" the older brother with a makeshift wooden gun, causing a surreal saturation of the older brother's clothes in blood, and the present battlefield where the older brother collapses after being shot.

Fig. 2. Scenes with interwoven time and space in *My Brother's Keeper*

In *My Brother's Keeper*, a narrative structure reminiscent of traditional films is evident, featuring elements akin to montage. Past and present scenes intertwine, yielding a profound implication: the transformation of childhood games into tragic realities, serving as a poignant reminder of the costs of war. This observation prompts a deeper exploration into whether VR films can embrace the temporal distribution characteristic of montage storytelling in traditional films.

Given the immersive impact of panoramic space, the excessive application of rapid montage techniques, reminiscent of those employed in traditional films, may result in spatial disorientation and physical discomfort in VR films. Consequently, some scholars advocate for the departure from the conventional core language of montage in VR films. They emphasize that due to the viewer's singular perspective - experienced through a first-person lens - maintaining continuity within the imagery is paramount during the viewer's active exploration process. Any disruption could abruptly expose the virtual nature of the perceptual world, undermining the sense of immersion, presence, and active engagement [8]. It is evident that utilizing traditional montage within a single scene in VR films is inappropriate. However, the film *My Brother's Keeper* demonstrates that VR films can achieve a versatile temporal-spatial structure across multiple scenes. Techniques such as multi-linear narratives and temporal manipulation, commonly employed in traditional cinematic art, are equally feasible within VR, as exemplified by this film.

3.2 Mise-en-Scène and Exploration of Long Takes

André Bazin attributes Jean Renoir's film *La Règle du jeu* to a narrative technique that transcends traditional montage, achieved through long takes. This method is valued for portraying everything without fragmenting the world, revealing hidden meanings within individuals and objects while maintaining a natural sense of unity [3]72. In VR films, which predominantly consist of several extended scenes, the arrangements of scenes closely parallels that of traditional films. Techniques such as camera movements, actor positioning, alterations in lighting, and set transitions are employed to advance the narrative. Mise-en-Scène frequently aligns with long takes, allowing for the comprehensive depiction of the authentic passage of time.

The live-action VR film *Ashes to Ashes* recounts a family story where the children come together to fulfill their late grandfather's final wish of having his ashes scattered into the air. The film is set within a studio, captured entirely in a single continuous take. The camera angle and actor performances shift following the unfolding plot, adhering to the director's pre-determined course. A distinctive aspect of the film is incorporating both the narrative and behind-the-scenes elements. During the transitions between scenes, "bloopers" or behind-the-scenes moments are presented, fostering a self-reflective effect. As viewers engage with the plot, they are briefly removed from it, allowing them to observe the behind-the-scenes activities. This approach addresses the challenge of concealing crew members during VR filming, choosing instead to unveil the backstage to the audience. When a segment ends, instead of immediately transitioning to the next segment, this film portrays the actors completing their performance, and the crews dismantling the set and preparing for the subsequent scene (see Figure 3).

At the same time, the camera (from the perspective of the urn containing the ashes) moves along a track to the next scene being arranged. When the actors are ready, makeup is applied, and the clapperboard is used, the viewers and actors re-enter the narrative, generating a "play within a play" effect.

Fig. 3. One continuous shot is presented behind the scenes in *Ashes to Ashes*

In his work *Qu'est que le cinéma?* André Bazin explores both the conventional montage techniques and the concept of internal montage within a single shot. He emphasizes the innovative narrative aspects introduced by utilizing depth of field and continuous camera movement. Bazin contends that these techniques do not negate the achievements of montage but rather infuse them with relativity and novelty, contributing to the evolution of cinematic language [3]73-74. Likewise, the employment of extended takes in the expansive 360-degree space of VR enables the organization of multiple dramatic elements within a single scene, resulting in an internal montage within a shot. This type of montage transcends the traditional boundaries of editing individual shots and is, instead, rooted in the holistic spatial composition of the scene. A notable practical illustration of this "internal montage within a shot" concept is found in the VR film *Ashes to Ashes*, even though it does incorporate a significant amount of non-dramatic elements into the shot due to certain technical constraints. Nonetheless, this film unequivocally showcases the immense potential of VR films in scene composition using long takes, potentially paving the way for developing a distinctive aesthetic in shot composition.

Examining the subject from a more profound standpoint, spherical 360-degree panoramic imagery and the personalized, controllable viewpoints within VR films enable viewers to occupy the central position in the immersive experience. This detachment from the physical constraints of the real world liberates the observer to observe and perceive the virtual realm freely. Consequently, the narrative in VR transcends the exclusive adherence to the spatial conventions of traditional films. Instead, it should strive to establish a novel aesthetics of spatial narrative. Lev Manovich introduced the concept of "Spatial Montage" in his seminal work *The Language of New Media:* Unlike the conventional temporal montage prevalent in traditional films, spatial montage takes a distinct trajectory by replacing the sequential temporal arrangement with spatial sequences. Typically, spatial montage entails a series of images with varying dimensions and proportions, all concurrently displayed on the screen. However, this juxtaposition alone does not constitute montage; it necessitates the director to establish a coherent relationship, determining which images to present together, their synchronous appearance, and the nature of their interconnections [9]. Compared to

traditional films, VR films align more closely with the principles of spatial montage, as they can amalgamate numerous dramatic elements into a broader and more comprehensive spatial environment.

Lev Manovich's conception of "Spatial Montage" was not explicitly formulated for VR imagery but was primarily directed at exploring the impact of new media technologies on the language of visual representation. Interestingly, it parallels André Bazin's notion of "internal montage within a shot." Both concepts indicate the potential for VR films to forge their distinct aesthetic trajectories within the spatial narrative.

3.3 Empathetic Embodiment within Embodied Spaces

When viewers immerse themselves in the narrative settings of VR films, the role of the VR space transcends its conventional functions of depicting the environment, introducing characters, and advancing the storyline. It also facilitates emotional connections at a psychological level, driven by the viewer's embodied cognition. In Le cinéma et la nouvelle psychologie, Maurice Merleau-Ponty explains the intricate interplay between the body and film, asserting that "we can only comprehend the film's meaning through perception: the film is not intended for intellectual contemplation but for sensory perception. [10]" Some scholars expand on this idea, suggesting that "the exchange of emotions and sentiments between the audience and the film transpires not solely through rational cognition but through the embodied perception of the viewer's body, establishing a profound and ethereal linkage between the film and the viewer's corporeal self. [11]" Films have traditionally been regarded as "empathy machines," and the immersive, interactive qualities inherent in embodied VR films amplify this empathetic impact, serving as a pivotal foundation for emotive storytelling. In terms of bodily presence and emotional resonance, VR films create a physiological "presence" for the audience that conventional films struggle to achieve. For instance, the VR film Carne y arena plunges viewers into a vivid scene depicting refugees crossing the desert at the US-Mexico border. As the audience removes their shoes and enters a room covered in sand, their bodies become ensconced within a simulated environment intricately related to the film. They tangibly experience the discomfort of the sandy terrain, almost as if they are integral parts of the refugee group. Through the VR headset, the audience perceives themselves standing in a desert landscape, and the tactile sensation under their feet is that of genuine sand, creating a multisensory encounter where the virtual and the physical coalesce, mediated by the sense of touch. The viewer's physical body and conscious perception become enveloped by the spatial environment of the film, leading to a more deeply embodied comprehension of the plight of the isolated and desperate refugees.

The effectiveness of VR in representing human traumatic memories becomes evident in the example of *Carne y arena*. Particularly suited for themes of this nature, documentaries hold a prominent place among VR filmmakers. The VR documentary *Traveling While Black* serves as a platform for multiple generations of African Americans to recount their experiences with racial discrimination. A significant location within the film is Ben's Chili Bowl restaurant, previously featured in the "Green Book"

[1], now serving as a historical icon advocating racial equality. The director immerses the viewer within the restaurant, allowing them to listen to the genuine life stories of the restaurant's owner and its patrons, granting insights into the experiences of the black community and fostering empathy for their circumstances. The viewer might even find themselves adopting the identity of an African American male, enhancing the empathetic connection beyond mere observation of characters on a screen. Sitting beside them, becoming part of their world, facilitates the development of a shared understanding and emotional connection.

We may assert that the spatial narrative mode has introduced novel creative prospects to VR. The innate immersive quality of the 360-degree stereoscopic space, coupled with interactive mechanisms, engenders a palpable sense of physical presence for the viewer, allowing them to observe and fully experience the narrative deeply. This heightened engagement effectively stimulates multiple senses and invokes personal memories, offering a fertile ground for exploring innovative amalgamations of elements traditionally associated with cinematic long takes, deliberate pacing, and meticulous spatial composition. Furthermore, specific archetypal film genres, such as those revolving around war, racial themes, mysteries, suspense, and emotional narratives, find a natural affinity with VR, capitalizing on its inherent strengths in emotive storytelling.

4 Subjective and Non-Subjective Viewpoints: Narrative and Viewing Modes in VR

The distinct spatial nature of VR, encompassing the whole field of view, combined with the technological support of six degrees of freedom (6DoF) in headsets, renders the configuration of viewpoints a pivotal element in the unique viewing experience of VR narratives. As contemporary narrative theorist Wallace Martin contends, "Narrative viewpoint is not an appendage added to convey the plot to the reader; on the contrary, in the majority of modern narrative works, it is the narrative viewpoint that creates the interest, conflict, suspense, and even the plot itself [12]." In traditional films, the director exercises complete control over the viewpoint. In contrast, VR allows the audience to choose what to view by rotating their head horizontally and vertically. However, the position of the viewer's viewpoint or "body" is established by the creators, which may involve fixing the viewer's body in a specific location (as seen in *Sergeant James*) or having it follow a predetermined path. This inherent integration of the viewer's body within the story world mandates a profound engagement [13]. Hence, VR filmmakers must provide clear character perspectives (whether objective or subjective) to ensure the viewers' immersion in the scene and active participation in the narrative.

[1] "The Green Book" specifically denotes *The Negro Motorist Green Book*, a travel guidebook authored by an African American. This comprehensive publication encompasses all 50 states of the United States, cataloging establishments, including hotels, restaurants, gas stations, beauty salons, and other public facilities that predominantly refrained from racial discrimination.

Fundamentally, there exist two primary types of viewpoints in VR films. First is the objective viewpoint, often colloquially referred to as the "ghost" perspective. Analogous to traditional films, this objective viewpoint allows viewers to perceive the environment but does not position the viewer's "body" as an active participant within the narrative. For instance, in *The Deserted*, the fixed viewpoint mode lets viewers observe the film's space from a bystander's perspective, devoid of direct interaction with the main character. In comparison to traditional films, this objective viewpoint in VR offers a more immersive experience, permitting viewers to be present in the scene and fulfill their voyeuristic inclinations. The second type is the subjective viewpoint, where viewers can experience the narrative from the perspective of a character within the story. They have the agency to control the viewing trajectory of their character, fully embracing that character's identity and achieving a heightened sense of presence. In the 40-minute live-action VR film *Miyubi*, viewers adopt a first-person perspective, actively participating in the storytelling. In this film, Miyubi, a small robot manufactured in Japan, is given as a birthday gift by an American father to his son, Dennis. The director enables the viewer to embody Miyubi (see Figure 4), enabling exploration from the perspective of this tiny robot, observing the family's activities, interactions with the girl, accompanying the boy to school, and engaging with all the characters. The film's plot revolves around Miyubi (the viewers), and all the characters in the story engage directly with the viewer. Consequently, the viewer transcends the role of a mere observer and becomes an "observed" entity within the narrative.

Fig. 4. The subjective viewpoint in *Miyubi*

The embodiment of narrative through a subjective viewpoint in VR underscores the unique nature of the viewing experience, offering the audience a comprehensive understanding of their existence within the cinematic realm. In Taiwanese artist, Huang Xinjian's VR film *Samsara*, the storyline revolves around future humans compelled to depart a ravaged Earth in search of a new habitat. The film strategically positions the viewer within the bodies of various characters, providing a first-hand experiential connection with the narrative. The viewer might take on the roles of individuals re-

sponsible for deforesting tropical rainforests, bomb-wielding assailants in the city, refugees endeavoring to traverse borders, life forms suspended in nutrient fluid, or even evolving new species. Using multiple subjective viewpoints engrosses the viewer in a situation deeply intertwined with the narrative's essence. Merleau-Ponty's concept of "body schema" aptly resonates with this notion, as he elucidates that "the spatiality of the body is not the spatiality of position, as with external objects or the spatiality of 'spatial sensation,' but rather the spatiality of situation [14]."

Compared to traditional films, the transition of viewpoints in VR still appears relatively straightforward and constrained. Traditional films benefit from a degree of liberty and intricacy in viewpoint manipulation, enabling directors to configure camera angles, edit sequences and combine diverse shots, facilitating seamless shifts between different perspectives. While certain VR films have tried to introduce viewpoint changes within a single scene to enhance storytelling, such attempts still exhibit a lack of naturalness and fluidity when juxtaposed with traditional films. This discrepancy is particularly pronounced when the viewer assumes an integral character role within the film, as frequent viewpoint alterations can disrupt the sense of immersion and undermine the establishment of a coherent identity.

5 Conclusion

From a visual and auditory language perspective, VR storytelling is still in its nascent exploratory phase, lagging behind the well-established language systems of traditional films. The accumulated century-long knowledge of filming techniques and experiences in the realm of films does not seamlessly transfer to the VR environment. The most salient features of VR films are rooted in their immersive full-field stereoscopic space, intense sensory stimulation, and interactive elements, collectively engendering a profound sense of physical presence for the audience, amplifying observation and experiential immersion. This multisensory imagery effectively incites the viewer's emotional engagement. While VR films are designed to construct immersive embodied experiences, storytelling remains their paramount objective. Nevertheless, due to the spatial nature of VR, viewers may occasionally experience a sense of "disorientation" within this virtual realm. Consequently, creators frequently employ visual guidance techniques to channel the viewer's attention toward pivotal narrative points, predominantly manifesting through motion, lighting, color, sound, and interactivity. This emphasis on visual guidance reconciles the tensions between VR technology and narrative cohesion.

The evolution of digital technology and the emergence of virtual reality undeniably infuse fresh vigor into the contemporary film industry, prompting a growing number of creators and researchers to embark on innovative experimentation, all while continuing to reflect on the ontology of film and its future trajectory. Despite divergent perspectives among film scholars regarding the development of VR films, persistent technological advancements and ambitious market initiatives continuously propel the advancement of VR narrative creation. As underscored by the acclaimed domestic VR director Shao Qing, VR possesses distinctive genres in which it excels, leading him to

foresee a more diverse creative landscape within VR, attracting many artists to contribute their unique perspectives [15]. The objective of VR films may not be to supplant traditional films but rather to present a parallel visual medium alongside the conventional screen. While traditional films can function as a wellspring of inspiration for VR films, offering a repository of audiovisual techniques for reference, VR technology can potentially introduce new narrative possibilities to the cinematic realm——specific traditional film genres can leverage VR technology to give viewers fresh and unparalleled viewing experiences.

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