

Research on New Characteristics of Audio-Visual Language Design in VR Animation Under Interactive Narrative Systems A Case Study of “The Line”

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ABSTRACT

With the development of film and television animation technology and computer information technology, virtual reality has brought new media and forms to the field of storytelling. Among them, VR animation, with its unique immersiveness and interactivity, has elevated the emotional experience and interactive communication of viewers to a higher level. At the same time, emotional experience and interactive storytelling have also garnered more attention from content creators. This article will take "The Line" (花房姑娘) as an example to analyze the narrative approach of VR animation, summarize the new characteristics of audiovisual language design in VR animation under the interactive narrative system, and further illustrate the important role of audiovisual language design in VR animation storytelling.

Keywords: *Interactive narrative system, Virtual reality, Audio-visual language design.*

1. INTRODUCTION

With the development of film and television animation technology and computer information technology, virtual reality has brought new media and forms to the field of storytelling. From traditional film and television to virtual imagery, people's viewing experience has made significant progress. Audiences are no longer satisfied with the traditional single mode of obtaining information in front of a screen, but rather pursue a sensory experience and immersion. Therefore, in addition to the development of technology and equipment, the presentation of content is also an important guarantee for audiences to have a good experience. Among the various types of VR content, VR animation brings more possibilities for audio-visual experiences to audiences. In terms of audio-visual language design, compared to traditional animation, VR animation, with its unique immersiveness and interactivity, elevates the emotional experience and interactive communication of audiences to a higher level [1], and emotional experience and interactive

narrative have also attracted more attention from content creators.

Regarding the emotional experience of virtual reality, Professor Norman proposed the concept of "emotional design" in his article "Emotional Design", which states that "design at the visceral level focuses on appearance, design at the behavioral level focuses on operation, and design at the reflective level focuses on image and impression" [2]. In the process of bringing audio-visual experiences to viewers, VR animation can only gain recognition for the storyline and characters, and further obtain corresponding emotional experiences when viewers truly immerse themselves in the film [3]. John Bucher believes that "storytelling" in virtual reality is the creation and narration in a virtual immersive space; the narrative of VR technology is to put content into virtual space for application, transformation, and transcendence. Although VR is a virtual immersive technology, it still cannot escape its essence as a narrative tool, and viewers' emotional experiences

will still be obtained during the narrative process [4]. However, this image art also faces the controversy of the "interaction paradox" where immersion and interaction conflict [5], which has triggered thoughts about whether narrative ethics and film aesthetics will disappear [6]. This article will take "The Line" (花房姑娘) as an example to analyze the narrative methods of VR animation, summarize the new characteristics of audio-visual language design in VR animation under the interactive narrative system, and further illustrate the important role of audio-visual language design in VR animation narration, as well as how to use audio-visual language design to create a better narrative environment and a superior viewing experience for VR animation.

2. OVERVIEW OF VR ANIMATION "THE LINE"

The work "The Line"("Figure 1") is a VR animation short film produced by Brazilian content developer ARVORE, revolving around the theme of "Have you ever felt like you're living in a constant repetition?" Set against the backdrop of a scale model of São Paulo in the 1940s, users can experience an immersive VR interactive experience by unlocking the charming figurines of two miniature dolls, Pedro and Rosa. "The Line" won the Outstanding Innovation Award for Interactive Media at the 72nd Primetime Emmy Awards and the Best VR Experience Award at the 76th Venice International Film Festival. After being launched on platforms such as Oculus, Pico Neo3, and Steam, it has garnered widespread attention.



Figure 1 Film poster.

As a VR animation short film, "The Line" boasts complete storytelling elements, distinct stages, and a clear narrative thread, coupled with third-person narration to explain the plot, making it easy for viewers to understand and watch. As a film created through virtual reality, it possesses the immersive and interactive qualities of VR, allowing

viewers to experience the unfolding of the story through VR glasses and interact with the plot through gestures, button presses, and other operations. In summary, "The Line" features a complete plot narrative and significant interactive features, making it a noteworthy example of a VR animated short film worth exploring.

3. AUDIO-VISUAL LANGUAGE ANALYSIS

Unlike traditional films, scenes in virtual reality imagery replace lenses and become the units for conveying images and information. This article will conduct a narrative design analysis of "The Line" from the perspectives of plot analysis, scene design, gaze guidance, and interactive character design.

3.1 Plot and Character Design

In terms of plot design, "The Line" boasts a concise and straightforward narrative that is easy to understand. The story begins with a third-person narration that immediately introduces the film's theme: "Do you feel like you're living a monotonous routine day after day?" As the plot unfolds, the protagonist Pedro, initially a mailman trapped in a repetitive cycle, one day breaks free from his established route and embarks on a journey of adventure for love. As the story progresses, Pedro ultimately finds himself with the heroine Rosa, in an unexpected yet logical ending. ("Table 1")

Table 1. Narrative structure of the film

Prologue	The story begins when the key is picked up from the book, unlocking the door to a microscopic town behind it. The people in the small town live in a monotonous cycle that repeats every day.
Development	The protagonist, Pedro, is a postman. In addition to delivering newspapers day after day, he also picks a flower every time he passes by the park and secretly gives it to the girl he likes, Rosa. One day, Pedro realizes that there were no flowers left to pick. Pedro, who has no flowers to give, rides his bike sadly, wandering the streets at night.
Climax	Pedro discovers the last flower on the distant back mountain and deviated from his route to head there. Pedro, who has plucked the flower, deviates from the track and fell uncontrollably into the world beneath the table during his descent. Pedro experiences a series of adventures in the world beneath the table and returns to the small town.
Ending	Pedro is extremely sad because he lost his flowers and bicycle during the adventure, but he still plans to go find Rosa to confess his love. Upon arriving at the flower room, Pedro discovers that all the flowers he had previously given has been collected by Rosa. Pedro and Rosa are finally together.

The main characters in the film include the protagonist Pedro, Rosa, and the residents of the small town (such as the woman watering the garden, the traffic controller, the organist, etc.). Pedro is a postman in the small town, where the residents all lead a routine life along a predetermined route, and no one wants to change the status quo. For the audience, this is an animated film with a third-person perspective (God's perspective). At first, they enter the story of the small town as a bystander, but as the plot progresses, they can interact with the characters through a series of operations, ensuring

that the audience is not completely detached from the storyline. Compared to traditional film and television media, virtual reality imagery allows the audience to actively participate in the development of the story; however, compared to fully immersive first-person VR films, the third-person perspective maintains a "distance" from the story, which enables a more objective presentation of the story's development, unrestricted by space, and also eliminates the dizziness that may occur in novice players, allowing them to focus on the storyline for a longer period of time. ("Table 2", "Figure 2")

Table 2. Introduction to film characters

Character	Introduction (in order of appearance)
Mrs. Kemp	She waters the flowers in every cycle, even if there is no water in the hose.
Mr. Washington	As a traffic controller, he stops cars at the same time in every cycle
Pedro (postman)	He delivers the same newspaper, and he can ride a bike through the entire miniature town
Organist	A person alone playing the organ
Rosa (the girl in greenhouse)	Rosa likes yellow, but she has to take care of prickly red flowers all the time



Figure 2 Pedro and Rosa.

3.2 Scene Design

In terms of scene design, the film opens with a miniature town featuring a central square, a park, a

church, a back mountain, and even intricate layouts under tables. The overall style is set in the 1940s Sao Paulo, leaning towards a realistic approach. The film's lighting is predominantly dim, evoking

the monotony of daily life in the town. The initial scenes only reveal a portion of the town, with the rest shrouded in darkness. However, as exploration progresses, new scenes are illuminated. The final garden scene, with warm and bright colors, forms a stark contrast to the previous ones, indicating that Pedro and Rosa have finally broken the cycle and ushered in a happy life.

Unlike the immersive virtual reality short films in the first person, the scenes in this film are all presented on a large table, with the entire story

being viewed from a third-person perspective with a bird's-eye view. In terms of scene transitions, the film adopts the spotlight effect of traditional stage plays to guide the audience's attention. The main method is to switch to a new scene through the illumination of lights. As the protagonist Pedro rides his bicycle throughout the entire town, a new scene is illuminated by the lights, and the original scene is shrouded in darkness. It is through these scene transitions that the audience can better focus on the current story development. ("Table 3")

Table 3. Introduction to main scenes of the film

Serial number	Scene	Content
1	In front of the small town	The green train and the blue car are both moving in the same direction along the tracks on the ground
2	Central Square	The deserted square is accompanied only by a lone organist
3	Park	Pedro would come here to pick a small yellow flower every time he made the loop
4	Church	Pedro placed the picked flowers in front of Rosa's flower room
5	Backhill	Pedro found the last little yellow flower here
6	Under the table	After experiencing the adventure, Pedro returned to the small town
7	Garden	Pedro met Rosa here

3.3 Visual Guidance

In traditional films, scene transitions often rely on visual cues and montage techniques, while long shots require scene choreography. In virtual reality imagery, scene transitions are preset in advance, allowing viewers to "self-choreograph" the scenes through their own eye movements. In "The Line", the primary technique of eye guidance is through the movement of characters in the scene, prompting the viewer's gaze to focus on specific locations and controlling the viewer's line of sight. After the protagonist appears on screen riding a bicycle, the viewer's gaze firmly follows the protagonist, watching the story unfold in each scene.

Secondly, the guidance provided by the tracks on the ground, or the "lines", indicates the direction of the characters' progression, from the town to the square, then to the park and church. Along these lines on the ground, the entire story unfolds. However, when the protagonist Pedro deviates from the tracks, the audience can no longer clearly understand the purpose of his actions, symbolizing the theme of the story, "leaving the established path of life".

Lastly, the director creates a focal range for the audience by matching different lighting and colors. Through the contrast of light and dark, strength and weakness of light, as well as spotlights and other forms, the director focuses the audience's attention

on the interactive buttons, guiding the audience's vision and informing them that they need to operate here,

3.4 Music and Sound Design

Sound is a crucial aspect in film and television production, serving to create an ambient atmosphere, evoke emotions, and propel the plot. In animation short films, sound elements consist of score, sound effects, and narration. The combination of different sound elements makes the virtual space more realistic, intimate, and impactful. Compared to traditional films, the sound in VR animation has a stronger sense of spatiality and three-dimensionality, effectively enhancing the audience's immersion experience.

In terms of music, the first half of the film accompanies the protagonist Pedro as he travels through the entire town, with an overall light and pleasant soundtrack style. However, as the story progresses, different plot developments bring about different stylistic changes. In the adventure under the table, when Pedro is about to be pulled into the sharp fan blades, the soundtrack becomes dramatic and tense; after losing his bicycle and the last red flower, the soundtrack turns melancholy and somber; and when Pedro meets Rosa in the flower field, the soundtrack becomes cheerful and relaxed. Different soundtracks correspond to different plots, creating different atmospheres.

The sound effects in this film can be primarily categorized into three types: scene sound effects, action sound effects, and special sound effects. Scene sound effects, such as the sound of a tram horn, the ringing of a church bell, or the barking of a puppy, bring some life to the small town. Although there aren't many people in the entire town, it doesn't feel dead and silent. The echoes generated by Pedro's walking after falling into the world under the table, as well as the "whirring" sound of the sawtooth gear when Pedro is about to be drawn into the sharp fan, evoke a sense of tension in the audience.

The sound effects of actions are reflected in every interactive operation, such as pressing buttons, turning knobs, pulling levers, and rocking joysticks, all accompanied by corresponding mechanical sounds, as if operating an ancient machine from the 18th century. At the same time, the sound of flipping a book at the beginning of the short film, the sound of unlocking with a key, the "creaking" sound of Pedro riding along The Lines, or the "bang" sound of falling into the world under the table, all greatly enhance the realistic feeling of the environment.

Special sound effects are generally sound elements synthesized by computers. For instance, after the first loop in the film ends, a "rewind" sound similar to electronic noise is produced, indicating the end of one loop and the beginning of the next. When Pedro crashes into the table and falls through it, a short-circuit current sound is generated, reminding the audience that the story is just a "game" taking place on the tabletop. This point is also reflected later when Pedro throws a flower into the fan blades, causing a metallic sound as the flower collides with the blades, indicating that the flower is made of metal. This does not conform to reality and further underscores the game-like nature of the story.

In addition, another crucial audio element in this film is the voiceover. As a narrative language, voiceover is used to introduce the background of the story and elaborate on the relationships between characters, while also influencing the narrative rhythm. In "The Line", the entire film adopts the voiceover method to introduce the story. The opening introduces the identities of different characters, accompanied by soothing music, gradually pushing the story forward. The climax and conclusion are also introduced to the audience through voiceover narration, narrating the protagonist's journey from a third-person

perspective. This avoids the cliché of a love story and conveys the core message of the story, "leaving the cycle and making changes".

In VR (virtual reality) films, music and sound effects not only enhance the environmental atmosphere and drive the plot, but also guide the audience's gaze. When viewers are immersed in a virtual three-dimensional world, they are no longer confined to looking straight ahead, as they are in traditional media. The unfolding of the story can occur in any direction, so viewers need a guiding element to determine where to look. For instance, every time an interactive operation arises, a prompt sound will be played to remind viewers to shift their gaze to the corresponding location for interaction.

4. INTERACTIVE NARRATIVE ANALYSIS

In traditional films, the audience, as passive viewers, can only receive the visual content. However, in VR films, the audience can greatly engage in the story, experiencing a strong sense of immersion through various interactive effects technologies. They can even become the "god" in the film, determining the plot's direction.

4.1 Interactive Character Design

In early VR videos, even in first-person perspective, the characters were only non-interactive roles, like "Henry" and "Help". The audience merely watched the story unfold without any interactive communication with the film. With the continuous advancement of VR technology, interactive characters and new ways have emerged, such as Lucy's friend in "Wolf in the Wall" and the companion of the little rabbit in "Invasion". In VR videos, the audience can interact with the characters, enhancing their immersion experience [7].

In this film, the audience plays the role of a third party who enters the miniature town within the story by flipping through a photo album. After the narration of the story background, the audience can interact with the miniature town on the desktop by pressing buttons, pulling levers, ropes, and rotating knobs to change things around and drive the plot forward. Meanwhile, while exploring the world beneath the table, the audience can collaborate with the protagonist Pedro by grasping and pressing objects with their hands to help him escape from the world beneath the table.

4.2 Interactive Scene Design

The immersion brought by interaction primarily stems from the interaction between the viewer and the objects in the scene, which is accomplished through various manipulations of the controller. In terms of interaction rule design, this short film primarily introduces to the audience through narration and subtitle prompts. At the beginning, the main interaction method in virtual space is indicated to the audience through the instruction action of pulling down the rope and the synchronous operation after the virtual palm is constructed.

The interactions in the film are all purposeful, aiming to immerse the audience through multiple

combinations of audio-visual and interactive elements. When the audience wears the headset, the most basic interaction behaviors are formed by the perspective changes brought about by head twists, and controlling the handle to operate the virtual arm in the virtual world in the same direction, giving the audience a sense of being in the virtual world. Further interactive operations include pressing buttons to control the plot development, rotating the joystick to obtain cards, and spinning the button to change the trolley track. These ways of controlling the plot and story progression make the audience feel like they have the identity of a "second director" operating the film. ("Table 4", "Figure 3")

Table 4. Interactive design

Serial number	Interactive behavior	Interaction results
1	Move the head	Perspective shift
2	Mobile handle	Move both hands
3	Use the handle to turn the pages of the book	Pick up the key from the book
4	Pull the rope with a handle	Enter the micro town
5	Press the handle and press the button in front of the table	The narrator begins to tell the story
6	Use the handle to rotate the joystick	Pedro received the card from the organist
7	Use the handle to rotate the knob	Adjust the tram track
8	Press the button	Pedro picked the small yellow flowers
9	Winding the clockwork	Rosa waters the flowers
10	Turn the joystick	Assist Pedro in walking onto the iron can
11	Pull the rope with a handle	Assist Pedro in navigating through obstacles
12	Press the handle	Turn on the hair dryer to blow the flowers open, and meet Rosa



Figure 3 Some interactive operations within the game.

5. NEW CHARACTERISTICS OF VR ANIMATION AUDIO-VISUAL LANGUAGE DESIGN

5.1 Freedom

In traditional animation, the audience is passive and restricted in receiving film information, only experiencing what the director has pre-set within the frame. With the introduction of VR (virtual reality), the use of panoramic cameras to create VR animations has removed the fixed frame, making it difficult for directors to complete narration through changes in perspective. Audience members can choose a freer scene experience mode through VR devices, where the perspective is in the hands of the audience, allowing them to actively receive the visual information conveyed by the director and achieve visual freedom [8]. Furthermore, although similar to traditional animation, sound elements such as music, sound effects, and narration still play an important role, sound in VR animations adds a sense of space and distance. For example, in the film, as the audience moves around, the organist can be clearly perceived, and the decibel level of the organ music changes accordingly. Sound is controlled by the audience, and auditory freedom is also achieved. From the analysis of the audiovisual language in "The Line", it can be seen that after the advent of VR films, audiences are more like spectators than at any previous historical moment. They are no longer restricted to one angle or position to receive information as they do with traditional animated films, but can freely and fully experience various information in VR films from all perspectives, bringing a beautiful audiovisual feast to every audience member.

5.2 Immersiveness

Sound and visuals are two crucial elements in creating an immersive experience with VR animation. Besides immersive surround sound visuals, sound also becomes spatial. In VR movies, sound is always rendered in real-time based on the head tracking of the head-mounted display device, allowing viewers to feel as if they are in a virtual "real space" through the head-mounted display device and surround sound. In VR animation, sound always carries a distinct sense of space, allowing viewers to clearly perceive the distance and direction of different sounds. In VR short films with rich visual information, when viewers focus on local details and ignore the main plot story, the

guiding role of sound becomes self-evident. Viewers can return to the main storyline through sound, and in this process, their immersion and participation are greatly enhanced. In "The Line", it can be seen that musical elements such as music, sound effects, and narration from traditional animation are still applicable to content creation in the VR context. However, the spatial characteristics of VR make the audiovisual language more three-dimensional and spatial, allowing viewers to better grasp the realism and immersion brought by virtual reality.

5.3 Guidance

In traditional animation, the director controls the narrative style and content, guiding the audience's gaze. However, in virtual reality animation, the frame no longer exists, and the shot composition is greatly diminished in the VR context. The flat camera shots are transformed into 360° surround spaces, and the flat composition becomes a dynamic spatial composition, amplifying the narrative function of the scene. The boundaries of the frame disappear, weakening the shot and shot composition, and the light and color of the image composition take over the baton of guiding the audience's vision. In the unfolding of VR stories, the audience is easily attracted by secondary elements in the image. Therefore, the director needs to use certain methods to draw the audience's attention back to the plot when their gaze deviates from the story content. Thus, how to conduct visual guidance becomes a topic that every director needs to pay attention to. Similar to traditional animation, the director acts as a guide during the audience's viewing of the story. However, in VR animation, such guidance methods shift from mandatory observation to gentle guidance. For example, directors often use stage play performance forms, character scheduling, spotlight guidance, etc. to attract the audience, and use sound effects and narration as auditory cues to engage the audience's attention, in order to advance the narrative process. The important reason for setting such various guiding elements in VR films is to allow the audience to find the main thread and plot buried by the director in the rich audiovisual elements of VR short films, thereby achieving the goal of completing the narrative.

5.4 Interactivity

The emergence of VR interactive short films has blurred the boundaries between games and film,

as well as between players and viewers. Traditional games primarily focus on operational experience and various mechanisms. Whether the graphics are beautiful, the controls are smooth, and the difficulty is moderate are the main concerns of players. Only when these conditions are met can players concentrate their attention, feel immersed, and even enter a state of flow. Only then will players identify with the game and its characters, and pay attention to the plot. Therefore, players place more emphasis on gameplay. On the other hand, traditional film and television mainly focus on plot and visual effects, which are the main factors that attract viewers. However, viewers are always passively receiving content and cannot interact or manipulate. VR short films combine both plot and interaction. The interactivity of short films, as one of the new features of VR audiovisual language, is mainly reflected in two aspects: scene interaction and plot interaction. Firstly, scene interaction refers to the enhanced narrative function of scenes in VR short films. Directors often use elements in the scene space to tell stories, weakening the role of camera angles and post-editing. The connection between scenes becomes more important, but frequent transitions can also easily weaken the audience's immersion and experience. Therefore, scene interaction is often designed from the perspective of the film itself to increase the audience's interaction with the scenes. Plot interaction utilizes the interactive characteristics of the VR medium, enabling VR animation to innovate in narrative on the basis of traditional animation. The narrative methods have obvious diversified characteristics and enhance the audience's sense of participation. In "The Line", this interaction is reflected in the emergence of players breaking the cycle, helping Pedro make new choices, and successfully involving the audience in the narrative.

6. INTERACTIVE NARRATIVE AND AUDIO-VISUAL LANGUAGE DESIGN

6.1 Animation Narration and Core Values

The entire film "The Line" is characterized by a light and joyful tone. Despite the introduction of a monotonous and repetitive cycle at the beginning, the story unfolds against a backdrop of pleasant background music and amusing narration. Through interacting with Pedro and other characters in the small town, the audience can perceive that everything seems to be pre-set. The audience becomes like a god in this small town, controlling

the daily cycle behind the scenes. However, later on, the audience helps Pedro break out of the cycle. The film completes its storytelling through interaction with the audience, and through this interactive narrative approach, the core value of the story is also reflected. "What if daily life itself is also a fork in the road, and love is actually a path less traveled?" While seemingly telling the story of Pedro and the small town, it can also be mapped onto every audience member, conveying the idea of breaking conventions and escaping from cycles. VR technology allows the audience to not only pay attention to the protagonist's inner world but also return to a global perspective to understand the plot and background of the entire story. This multi-perspective and multi-dimensional observation amplifies the director's narrative control over the storyline and the audience's information reception of the overall content of the film. The narrative effect is greatly enhanced, reflecting the core value and unique charm of virtual reality animation storytelling.

6.2 Emotional Experience of Audio-Visual Language Design

Animators convey story content and ideological concepts to the audience through meticulously choreographed audiovisual language, establishing emotional bonds. Therefore, emotional experience becomes an important aspect of design. The concept of "emotional design" mentioned by Professor Norman is also applicable to animation production: at the visceral level, it is necessary to pay attention to and enrich the audience's emotional experience in audiovisual terms; at the behavioral level, it is important to focus on the audience's emotional participation and interaction; at the reflective level, it is necessary to enable the audience to identify with the story content, achieve emotional resonance, and even trigger deep-level thinking. The VR animated short film "The Line" embodies the visceral level of animation emotion from the perspectives of visual and auditory language, emphasizing the importance of the audience's audio-visual sensory experience. Furthermore, the interactive narrative technique allows the audience to successfully participate in the narrative, providing them with a good interactive experience, reflecting emotional design at the behavioral level and paying attention to the audience's interactive emotional experience. In the animated short film "The Line", Pedro ultimately succeeds in being with Rosa, allowing the audience to perceive the value connotation that the director

wants to convey, gain emotional identification and resonance, and trigger their own thinking. This reflects the reflective level of emotional design in VR animation, paying attention to the audience's emotional identification and resonance. This interactive emotional experience distinguishes VR animation from traditional animation, starting from the emotional experience in audiovisual language design, which is an important approach to exploring VR narrative.

6.3 Further Development of Narrative Art

In the development of VR animation, its audiovisual language design exhibits new characteristics of free immersion and guided interaction. Regardless of the era or the form of art, audiovisual language design should serve the narrative system. How to tell a story core well and through what methods is what creators should primarily focus on. The emergence of VR technology and VR animation is a redevelopment of traditional narrative art. Different from traditional animation, it brings the audience into a new, all-round space by constructing a "virtual world". Virtual reality still has a long way to go on the road of narrative. Through the analysis of the audiovisual language design of "The Line", it can be found that the narrative discourse power is shifting from creators to the audience, and the narrative system is also being reconstructed. Therefore, there is still much to explore in the analysis of the audiovisual language characteristics of VR animation. The continuous development of audiovisual language design in the VR context is driving the continuous progress of narrative art. Based on the emotional experience of the audience, continuous innovation in audiovisual language design is needed. How to do a good job in interactive narrative will become an important idea for VR animation creation.

7. CONCLUSION

In summary, VR animation, as a product of the fusion of virtual reality technology and narrative art, is reshaping the basic paradigm of traditional audiovisual language. Through an in-depth analysis of "The Line", this article finds that under the interactive narrative system, the audiovisual language of VR animation exhibits new characteristics such as freedom, immersion, guidance, and interactivity. The audience is no longer a passive recipient, but rather a "co-creator" who can actively explore and participate in

interactions within the virtual space, and even influence the narrative progression to some extent. This transformation not only expands the expressive boundaries of animation narrative but also poses higher demands on creators in terms of scene scheduling, gaze guidance, sound design, and other aspects.

Furthermore, the audio-visual language design of VR animation should always serve the narrative core and emotional expression. While technological advancements are indeed crucial, only through carefully crafted audio-visual elements and interactive mechanisms can we truly evoke emotional resonance from the audience, achieving a qualitative shift from "watching" to "experiencing". In the future, as virtual reality media continues to evolve, there remains vast research potential in the audio-visual language under interactive narrative systems. How to achieve a more natural and expressive integration of audiovisual and interactive elements across different narrative types and styles will become an important direction for VR animation creation and theoretical research.

ACKNOWLEDGMENTS

Funding: Research results from the 2021 major project of the National Social Science Fund of China, "Research on Virtual Reality Media Narration" (21&ZD326); Wuhan University of Technology undergraduate teaching reform research project (W2025012).

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