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A Comparative Study on the Game Experience of VR Horror Games and Side Scrolling Horror Games

[1]Qi Yi, [*]Jeanhun Chung

[1]*Doctor, Dept. of Multimedia, Gradute School of Digital Image and Contents, Dongguk University, Korea*
[*]*Professor, Dept. of Multimedia, Gradute School of Digital Image and Contents, Dongguk University, Korea*
[1]*2350161zs@gmail.com,* [*]*evengates@gmail.com*

Abstract

Since 2017, the application of VR technology in the game field has become more and more extensive, and more and more scholars have conducted research on VR games, especially VR horror games. This article will conduct research on VR horror games and scrolling scroll games through comparative analysis, and believes that VR horror games are much stronger than side scrolling scrolling games in terms of immersion. However, due to its unique flat third-person perspective, completely different operation methods and the existence of 'the fourth wall in side-scrolling horror games, Players can clearly realize that they are in an absolutely safe environment, and that they are just manipulators of game characters, not experiencers of terrorist events, so players will not receive excessive fright. Therefore, this article believes that the number of players who like side-scrolling horror games with certain horror elements is greater than the number of players who like pure VR horror games.Many traditional games in this paper have their own advantages in many aspects. For example, many traditional games such as horizontal games also have good development prospects in the future. We should promote the research on games in the academic community from multiple angles, not limited to popular VR games.

Keywords: *Side- Scroll game, VR game, Horror, The Fourth Wall, Game Experience, Distance*

1. INTRODUCTION

VR games are the main direction of future game development. Since last year, the concept of a metaverse based on VR games has also become more and more familiar to more and more people. Although it is now limited by many technologies, it is still impossible to build a virtual world like the "Oasis" shown in the "Ready Player One" movie. but there is no doubt that that will be the direction of future development. It is precisely because of this that most scholars in the game field have devoted themselves to the study of the metaverse and VR games, and the study of traditional games seems to be no longer their focus. But in fact, traditional games also have features that VR games do not have in many fields. This article will compare and analyze horror VR games and side-scrolling scrolling games, to clarify the difference between VR games and side-scrolling games

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Corresponding Author: evengates@gmail.com (Jeanhun Chung)
Tel: + 02)2260-3767, Fax: + 02)2260-3767
Professor, Dept. of Multimedia, Graduate School of Digital Image and Contents, Dongguk University

in the field of horror games. Scrolling games have their own advantages, and horizontal version games also have good development prospects, and promote academic research on games from multiple angles, not limited to popular VR games.

2. HORROR GAMES

Horror Game is a type of video game whose main purpose is to bring horror and fright to the player by creating a scary, tense and frightening atmosphere. Such games usually create a tense atmosphere through sound effects, graphics, plots, and game mechanics to arouse the player's sense of fear and tension.

Horror game design often involves dexterous hostile characters, terrifying locations, terrifying sound and visual effects, and game mechanics that make the player feel helpless and vulnerable. Players may need to solve puzzles, escape threats, or fight hostile characters in terrifying environments. Horror games also often explore horror, psychological, and supernatural elements to heighten the player's sense of dread.

There are many reasons why horror games, horror movies, and horror novels are scary on the one hand and so captivating on the other.

The first and most important point is that it is not a horror story that really happened to the experiencer or around them. There is a gap between it and the experiencer. It is precisely because of the existence of this gully that the experiencer can enjoy horror works in a safe psychological state, and obtain physical and psychological pleasure under high-intensity stimulation.

In Noel Carroll's Philosophy of Horror, he distinguishes "artistic horror" from "realistic horror", arguing that the horror in artistic horror belongs to the emotions of reading horror novels and watching horror movies.

Under the premise of safety, the first reason why horror can produce pleasure is that horror novels, movies and games can bring strong physical stimulation to the experiencer.

"Physiological studies have shown that when people play dangerous games, the pituitary fluid secretes many chemicals similar to narcotics, such as enkephalins, endorphins and other narcotic substances, which are used to slow down the abnormal heart rate and blood pressure caused by adrenaline It can play a sedative effect, reduce the chance of cerebral thrombosis and stroke in the case of terror, and also affect the regulation and response of general nerves, such as weak legs, urinary incontinence, etc. Physiological and psychological scientists point out that it is these effects Substances affecting the sympathetic nerves of the brain, unbalance the peristalsis and excitation of the cerebral cortex, thereby reducing fear in excitement... Because these substances inhibit the neurotransmission of tyrosine, which in turn inhibits the activity of AIO nerves. Human experience Dangerous, the brain is full of this substance, excitement and calming are created at the same time, so the pleasure similar to drug use is created in the medial lobe area of the brain."

3. VR GAMES AND SIDE-SCROLLING GAMES

3.1 VR Games

VR games refer to virtual reality games (Virtual Reality Games), which use virtual reality technology to immerse players in a simulated three-dimensional environment, allowing players to interact and experience with the virtual world.VR games usually require the use of specialized equipment, such as head-mounted displays (Head-Mounted Display, HMD), handles, controllers or sensors. A head-mounted display is usually a glasses-like device that the player wears on the head, and the display covers the player's field of view, allowing them to fully immerse themselves in the virtual environment.Through VR technology, players can feel the immersive gaming experience, they can see, hear and interact with the objects in the game in the virtual environment. This immersive experience can make players feel more personally the action, environment and plot in the game, increasing the realism and entertainment value of the game.

3.2Side-Scrolling Games

Side-scrolling games are one of the most popular game modes nowadays, especially in the era of prosperous mobile games, side-scrolling games have become an indispensable category in the game market. As shown in Figure 1,the games features a third-person side-view perspective while playing. The angle of the player's camera is fixed, and only the side of the game character can be seen. Different from VR games, there are generally no pure side-scrolling games. Under normal circumstances, horror is only an important game component element in side-scrolling games. This is determined by the different game experience methods and characteristics of the two. The following will conduct a specific analysis based on the characteristics of the two games.

Figure 1. Side-Scrolling Horror Games'Limbo'

4. FEATURES OF VR GAMES AND SIDE-SCROLLING GAMES

There is no doubt that the most important feature of VR games is its immersion. This sense of immersion breaks the "wall" between reality and virtuality, so that the virtual world is truly displayed in front of your eyes. But it is also officially because of the collapse of this wall that in the field of horror games, people who like excitement especially like it, and people who hate it will not try it once.If the keyword of VR games is "real experience", then the keywords of horizontal version games are "separation" and "control", which separates the game avatar from the real world and strengthens the way players control the game avatar. The key to this result is the "sense of distance".

4.1 The Immersion of VR Horror Games

There are two main reasons for this immersion. First, the imaging principle of VR headsets is to imitate the imaging technology of the human eye, tricking our brains into thinking that the world seen through VR headsets is the real world that can be seen and touched. The world seen by the left eye and the right eye of the human eye is different, and there is a certain spatial deviation between them, which is called parallax. But our brains are able to combine the slightly different images seen by the left and right eyes into a single image and give us a sense of space. In a traditional video game, we're really just looking at a rendered picture on the screen. But VR headsets do mimic how the human eye works, showing different images to the left and right eyes, and then having our brains combine the two images, giving us a sense of space. The sense of space will undoubtedly bring players a real feeling, that is, immersion. The screen of a VR headset is very close to our eyes, which is very different from traditional video games. In traditional video games, there is a certain distance between the player and the screen, which gives us a sense of distance from the game characters when playing

video games, while the distance between the screen and the eyes in VR games is very short. Distance eliminates this sense of distance, which, combined with its unique imaging approach, gives us an immersive feeling.

The second reason is because of the way VR interacts. Visual perception is the most important of the five senses. It's different from how traditional games interact. As shown in Figure 2, in the traditional game interaction method, whether it is a somatosensory game or a video game, we all need to play against the imaging screen. We see through the screen. The world is not what we see through our own head and neck movements, but the action of manipulating a joystick or keyboard and mouse to control the movement of a heavy screen character. In VR games, the way we observe the game world is that players observe through their own head and neck movements. This interactive method will also enhance the player's sense of immersion, making players feel that they are exploring the world, rather than controlling a characters to explore the world.

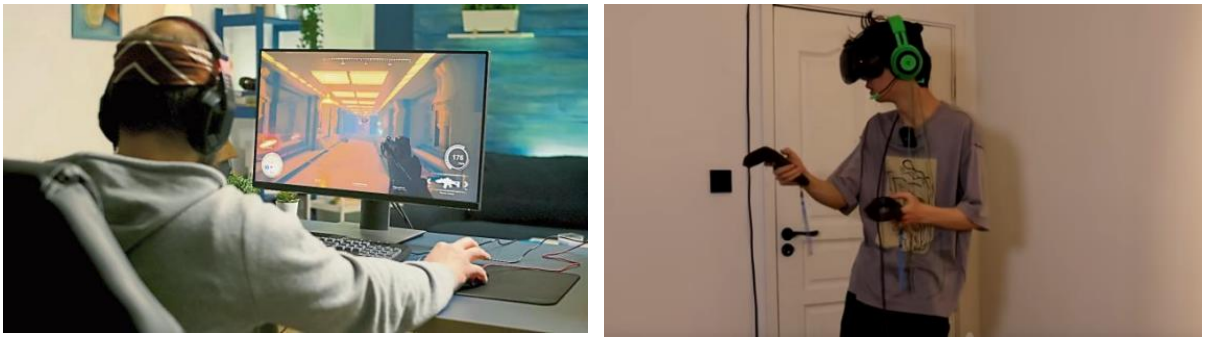

Figure 2. PC games' interaction and VR games' interaction

4.2 The Sense of Distance of Side-Scrolling Horror Games

Unlike the immersion of VR games, the biggest feature of side-scrolling games is its sense of distance. There are two main reasons for this sense of distance. The first is caused by the unique gameplay perspective of side-scrolling games. The game perspective of the side-scrolling game is the side view in the third person, and the player can only see the side of the control character when playing. Therefore, it is difficult to have the same immersive experience as VR games. This sense of distance is always separating the connection between the player and the game at the real level.

Table 1. PC games' interaction and VR games' interaction

	View Control	Command Control	Sound
VR games	Turn the head and neck to control	Body movement and joystick control	Stereo
PC games	Mouse and gamepad to control	Keyboard, mouse, controller to control	Mono,Stereo

Another reason for the sense of distance is the way the game interacts. As shown as table 1, side-scrolling games also require players to observe the game world through the screen. The distance between the screen and the player and the way the world interacts make the player play the role of a manipulator rather than a personal experiencer of the game content, even in a first-person game. Secondly, there are interactive methods such as keyboards. Players often cannot control the actions of game characters very accurately during the game. For example, they may take a small step and cause the death of the controlled character. Because the sense of distance in the game world is different from the real world, so for A game that has no familiar players, is very prone to such a situation, and the occurrence of this situation will strengthen the sense of distance between the game world and the player.

It is because of this sense of distance that the horror element is not so scary in a side-scrolling game, and deep lovers of horror games may not find it exciting enough. For most players, they get a relatively exciting experience during the game without being overly frightened. Therefore, the audience user group of this kind of game is larger than the audience of VR horror games as a whole.

4.3 The Role of the Player in VR Horror Games and Side-Scrolling Horror Games

- **VR games.** It is precisely because of the way VR imaging technology and game interaction that it is difficult for players to distinguish between virtual and real. Therefore, in the process of VR game experience, the role played by the player during the game is not the spectator and controller of the game character, but the personal experiencer of the game story. It is precisely because of the way VR imaging technology and game interaction that it is difficult for players to distinguish between virtual and real. Therefore, in the process of VR game experience, the role played by the player during the game is not the spectator and controller of the game character, but the personal experiencer of the game story. But not everyone likes horror games, and because VR technology blurs the boundary between virtual and reality, many players who don't usually play horror games can easily forget that they are in a safe and realistic environment when playing. so as to get more negative emotions. For thrill-seeking horror game lovers, VR horror games are a great way to experience the game. Players transform into characters in the game and experience everything that happens in the game world. If you've played multiplayer VR zombie shooters, you must have had a similar experience. The player standing in front of you will keep retreating in real space as the game progresses until it collides with you.But not everyone likes horror games, and because VR technology blurs the boundary between virtual and reality, many players who don't usually play horror games can easily forget that they are in a safe and realistic environment when playing. so as to get more negative emotions. For thrill-seeking horror game lovers, VR horror games are a great way to experience the game.
- **Side-scrolling games.** Players have two main roles in a side-scrolling game: bystander and manipulator.This unique perspective of the game distances the player from the character, as if watching the actors on stage perform, so when playing a side-scrolling game, one of our roles is a bystander, and it is 'The perspective' of a bystander enables us to deeply understand that we are a bystander in an absolutely safe environment when we play horror-type side-scrolling games, so there will be no negative emotions such as excessive fright. As shown in Figure 3, this bystander is different from the audience watching horror movies, because horror movies will use a lot of montage editing techniques and lens language to break the boundary between reality and horror and enhance the sense of horror felt by the audience. But watching stage art is a completely different experience. Even if you watch a terrifying stage performance, you will not be overly frightened. Because stage art doesn't suddenly give you a close-up to scare the audience, the audience just sits under the stage and watches the normal performance from the same perspective.

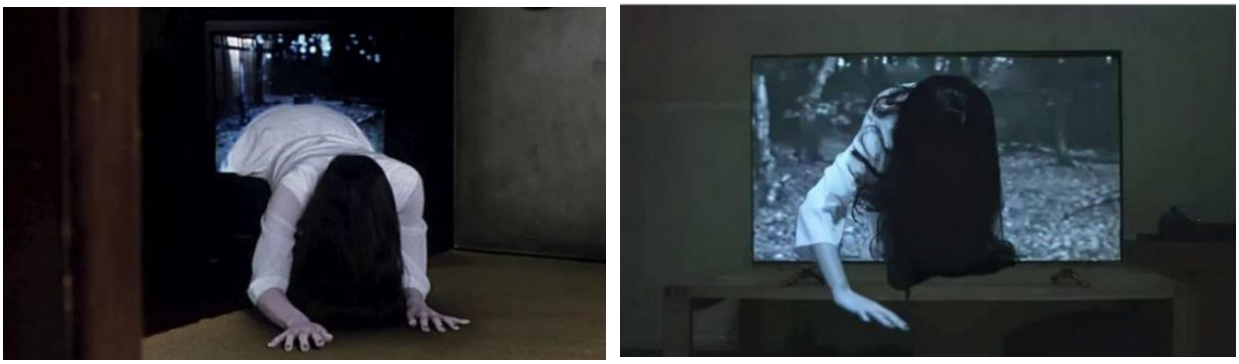

Figure 3. 'The ring' Sadako

The second role the player plays in a side-scrolling game is the game's manipulator. This feature is used in most traditional video games, but side-scrolling games amplify this feature due to its unique third-person

perspective. If a VR game is a 'experience' game, a side-scrolling game is a 'play' game. In addition, in these types of games, commands are input through devices such as keyboards, mouse handles, etc., so the sense of operation obtained by players when playing games will be further expanded. And the sense of control will split the gap between the player and the character. So no matter how terrifying things happen to the characters they control, the players won't be overly frightened, because it's just the characters they control.

5.CONCLUSION

Through the comparative analysis of this article, we can draw some conclusions. Due to VR imaging technology and interactive methods, VR games achieve a sense of immersion far beyond traditional games, blurring the direct boundary between virtual and reality, and the player's role in the game is a personal experience of the game story. Therefore, players are playing horror games When playing, you will receive more horror stimulation, so basically only serious horror game lovers will continue to play. The unique perspective of the horizontal version of the game and the interactive mode of the game give this type of game a sense of distance. The sense of distance allows players to play the role of manipulator and bystander during the game, so even if it is a horizontal version of the game with horror elements, ordinary players will not be overly frightened. Therefore, the number of players who like VR horror games will be smaller, but the fanaticism will be higher. The number of players who can accept horror-themed side-scrolling horror games will be more, but their purpose of playing such games may not be for the pursuit of horror experience, but for other reasons.Through this research, we believe that many traditional game types have characteristics that cannot be replaced by new game types represented by VR games in many aspects, and these traditional games are also worthy of our in-depth research.

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