Article

A Comparative Study of Audience Experience in Traditional and Interactive Movie

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Abstract: Traditional movie offers audiences a "movie myth" experience through the comprehensive use of sound, light, and electricity and realistic narratives.With the advancement of scientific levels and the emergence of new media, movie art has derived more forms and content.Interactive movie is considered a new form of movie. Through literature research, the article conducts a comparative study by comparing the representative works of traditional and interactive movies as an example after sorting out the development history of traditional and interactive movies. Focusing on the dimension of audience experience, the article puts forward the differences between traditional and interactive movies in three main aspects: narrative structure, emotional mode and interactive form, and uses a relationship diagram to reflect the differences in the forms of interaction between traditional and interactive movies and the audience. Finally, the article reflects on the creation of interactive films from the perspective of audience experience, and proposes that the creation of interactive movies should pay more attention to the issues of logic, the limits of audience freedom and interface design.

1. Introduction

Movie is the product of modern science and technology, and every breakthrough in the art of movie can bring the audience a brand new experience of perceiving the world and way of thinking. Since its inception as a black-and-white silent short movie, movie has undergone tremendous changes in terms of artistic techniques and narrative modes. Interactive movie, which is called the "third generation movie (Sun & Liu, 2011)", has the obvious feature that the audience can continuously participate in the movie environment and intervene in the plot of the characters, and the creation of interactive movie has changed the creator-centered mode and shifted the focus to serve the audience. At present, the research on interactive movie in the academic world mainly focuses on two topics: first, the research on non-linear narrative means of interactive movie, and second, the research on gamification of interactive movie, both of which are based on the discussion of movie creation methodology, while the focus on the audience perspective of interactive movie is less commented on.

Comparative research is an academic research method of examining things that are connected and searching for their similarities and differences. Comparative research is of high value in exploring the general and special laws of movie creation, and can summarize the progress of the creation of works in time and reflect on them. With the evolution of the media, the art of movie continues to innovate and revolutionize the audience's viewing experience, and the study of the audience's experience can provide a valuable reference for the progress of movie art in terms of theory and creative practice. Therefore, from the perspective of audience experience, this paper intends to compare and contrast traditional movies and interactive movies, and explore the differences between the two in terms of narrative, emotion and interaction on audience experience.

2. From Traditional To Interactive Movie

The "traditional movie" referred to in this article is a type of movie that has been accumulated over a long period of time, and the shooting, editing and narrative techniques follow the tradition within a certain range, which is commonly known as the "traditional movie", and the relationship with the audience is manifested as the unilateral output of the movie creator and the passive acceptance of the audience. 1895, the Lumiere brothers developed the "moving picture machine", which pioneered the art of cinema. In 1895, the Lumière brothers developed the "movable movie machine", which created the art of movie (Zheng & Hu,1995).The short films they made adopted a realist style, showing the pursuit of the possibilities of the means of film expression and narrative form, and were the prelude to the narrative of the movie. 1902 Edwin Bowater directed The Life of an American Fireman, which

became the first film to use the technique of time and space cross-cutting, opening the way for narrative movies and the beginning of the art of movie editing (Zheng & Hu,1995). In 1915, D· W· Griffith's The Birth of a Nation was the first full-length narrative movie, marking the formation of traditional movie art (Zheng & Hu,1995). The movie used a lot of moving camera in the shooting, which made the audience feel the strong rhythmic motion and war atmosphere in the movie, and the rich editing skills also pushed the movie montage technique to maturity.

With the development of science and technology in society, digital technology has empowered the movie industry, allowing creators to utilize more tools to explore breakthroughs in the narrative and interactive means of movies. The term "interactive movie" became popular in Europe and the United States in the mid-1990s and early 2000s (Li, 2023). It refers to an emerging form of movie in which the plot moves towards interaction with the audience, and is also considered to be a product of the combination of new media technology and traditional movies. The development of interactive movie can be traced back to the 1960s, and roughly divided into theater interactive period, DVD interactive period, Internet online interactive period and virtual reality interactive period.

In 1967, director Raduze Sinsela's work Automatic Movie: A Man and His House was exhibited and screened in the Czechoslovakian Pavilion at the Montreal Film Festival in Canada, where the crew influenced the key plot by arranging red and green buttons for the audience to choose from, based on the principle of majority rule. This movie is considered one of the first interactive movies (Zhong,2022). The birth of the DVD also had a certain impact on interactive movies, for example, in 1995, Bob Gale's Mr. Vengeance made use of DVD as a medium to bring interactive movies out of the cinema, where the audience used the TV remote control to manipulate the plot choices during the interactive process. With the development of the Internet, the past theater viewing has been able to be transformed into daily behavior on mobile terminals, and the context of "watching a movie" has changed. 2018, the video website Netflix launched the interactive movie Black Mirror: Pandasnakee, which is the first time that interactive movies have caused a wide range of discussions on the Internet. The popularity of new interactive technologies such as virtual reality has also brought innovation to the development of interactive movies. At this stage, interactive movies have taken on the characteristics of movie-game fusion, such as Detroit: Changeling, a movie interactive game launched by Quantic Dream Games in 2018, which can be operated not only on PCs, but also controlled using VR headset glasses and a joystick.

3. Differences In Audience Experience Between Traditional And Interactive Movie

In the study of movies, the study of audience experience is a very important dimension. Audience experience refers to the comprehensive experience of emotions, attitudes, and cognition that the audience feels when participating in movie watching activities.In the early 1820s, the Soviet school of montage took "audience participation" as an important research theme. According to the Soviet movie theorist Sergei Eisenstein, the ultimate goal of attraction montage is audience participation(Anna Hedberg Olinina, Jiang & Wang, 2023). The German cultural philosopher Gadamer put forward the theory of "aesthetics of reception", emphasizing the importance of the role of the audience in artistic creation (H.R. Jauss & R.C.Holub, 1987). Audience experience is the illumination of movie works, but also the direction that movie has been pursuing, which studies what kind of works, forms and narratives can bring better viewing experience and value conveyance to the audience.

The experience presented to the audience by movie works can be divided into multiple angles, and when traditional movies and interactive movies are compared horizontally from the viewpoint of audience experience, the most significant differences can be summarized into three aspects: narrative experience, emotional experience and interactive experience.

3.1 Differences in Narrative Experience

The difference in the audience's narrative experience in traditional and interactive movies stems from the difference in narrative structure between the two. Traditional movies present a linear structure in the narrative, while interactive movies are non-linear.

The famous French film theorist André Bazin put forward the theory of "complete movie myth". Movie myth is characterized by the search for "completeness", an illusion of completeness, an illusion equal to reality (AndréBazin, 2008). Under the influence of this school of thought, realism became the norm followed by most traditional movies. Classical Hollywood narratives usually use a causal linear structure, where the story unfolds along the chronological chain of beginning, development, climax, and ending. If we use geometry to reflect the narrative characteristics of traditional movies, it can be understood as a "single-point-to-single-point" narrative, i.e., from the only beginning to the only ending. Screenwriter Syd Field, in his Fundamentals of Movie Screenwriting, divides this general narrative structure into three acts: set up, confrontation, and resolution (Zhu, 2017), as shown in Figure 1.
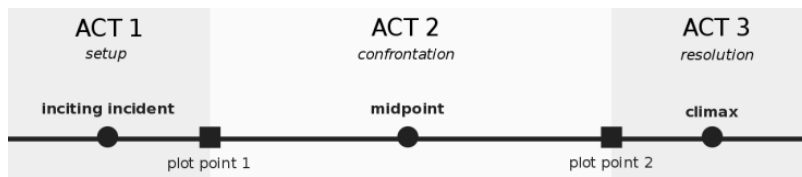
Fig.1. Three-act structure (Wikipedia, 2016)

The "three-act" narrative structure is to advance the plot step by step through setting up the background, conflict, and climax, and the audience can easily obtain the narrative experience of "movie myth" pursued by Bazan under this rhythmic movie narrative structure. During the development of traditional movies, the narrative technique has evolved from a single timeline narrative to a combination of various narrative techniques, such as flashbacks, chronological synchronization and circular narrative. However, no matter which narrative technique and which direction is chosen, the plot of a movie is arranged according to linear logic and eventually forms a closed loop, presenting a complete narrative process to the audience.

The narrative structure of the interactive movie is also described in geometrical terms, as a "single-point-to-multipoint" narrative, i.e., from a single beginning to multiple undetermined endings. Its structural characteristics can be summarized as a diffuse, tree-like "hypertext narrative". Hypertext is a kind of data system characterized by non-linearity (Huang, 2001), and its narratives are mostly composed of several intertwined individuals. Taking the narrative structure of the interactive movie Black Mirror: Pandasnakee as an example, as illustrated in Figure 2, the audience starts from a single starting point and navigates the movie plot through different hypertext paths, finally reaching three possible endings.

Fig.2. The Narrative Structure of the Interactive Movie Black Mirror: the Pandasnakee (Robinson,2018)

The figure shows that multiple bifurcation structures form a large tree-like narrative roadmap, which means that the audience has a binary choice at each interaction point as it occurs, and does not follow a single route through the movie. The nonlinear character of hypertext narrative is also reflected in its ability to reorganize reality and readjust the relationship of things. The hypertext narrative of the interactive movie is open, uncertain and reversible, thus granting the audience autonomy and control. The audience can jump between different "points" in the tree structure of hypertext narrative. When the audience is going through a certain narrative route and still wants to explore other unknown branches, they can control the progress bar to go back to a certain interaction point to make a new choice. For example, in Figure 2, the movie protagonist Stefan is faced with two options of "accepting" and "declining" the job offer. After choosing "accept", the audience can still rewind to the plot and try the "reject" route. The movie restructures the plot according to the audience's behavior, allowing the audience to freely construct the movie journey, and this kind of personalized narrative experience cannot be provided by traditional movies.

3.2 Differences in Emotional Experience

"Spectatorship" and "participation" are the significant differences between traditional movies and interactive movies in terms of what they convey to the audience on an emotional level. Canadian scholars Nicolas Dulac and André Gaudreau have proposed

the concepts of "spectator mode of attraction" and "participatory mode of attraction" in their article. When operating an optical device, the audience becomes part of the device through the medium of the body, which is the embodiment of "participatory   mode of attraction"; whereas in optical theater, the audience no longer operates the device directly, and the images broadcast are completely independent of the audience, which is the "spectator mode of attraction. This is the "spectator mode of attraction (Zhong,2021) ". These two modes are equally applicable to describe the emotional triggering of audiences in both traditional and interactive movies，As shown in Table 1, the emotional patterns of the two forms of movie can also be defined by "Spectator" and "Participatory".

Movie is an art of "seeing", and the greatest emotional stimulation for the audience in traditional movies is visual. Laura Mulvey, a famous American film theorist, said: "Movies offer several possible pleasures, one of which is the fetish of seeing. (Laura Mulvey & Zhang, 1992)" The way of watching on the screen allows the audience to watch the lives of the characters in the movie from a spectator's point of view, passively accepting the content that the creators want to convey and immersing themselves in a "daydream"-like narrative process. At this point, the audience's perspective is relative to the movie screen, and their own sense of "role" is short-lived. Different from traditional movie, audiences watch interactive movie in the form of active manipulation, as shown in Table 1.

In contrast to the traditional movie, the interactive movie will trigger not only the narrative immersion of visual participation, but also the role immersion of embodied participation in terms of the audience's emotional stimulation,as shown in Table 1. For example, when Stefan, the protagonist of Black Mirror: Pandasnake, faces the screen and asks the question "Who is manipulating me?", the audience immediately develops a sense of tangible participation in the conversation with the character and the psychological stimulation of peeping off-screen. The audience seems to be using a "God" perspective and ability to decide the character's behavior, from "which breakfast to eat" to "whether to kill him" a series of decision-making questions to let the audience in control of the character in the process of obtaining psychological satisfaction. The series of decision-making questions, from "which breakfast to eat" to "whether to kill him", allow the audience to gain psychological satisfaction in controlling the characters.

Table 1. Comparison of Audience Emotional Experience between Traditional and Interactive Movies

Comparative indicators	Type of Movie	
	Traditional Movie	*Interactive Movie*
Emotional Mode	Spectator Attraction	Participatory Attraction
Movie Viewing Format	Passive viewing	Active manipulation
Emotional Immersion	Emotionally engaged narrative immersion	Embodied participatory character immersion
Emotional Stimulus	Visual, auditory, narrative	Visual, auditory, participatory narrative, interactive behaviors

In addition, the undefined and diverse narratives of interactive movies also trigger an emotional call to the audience on another level. Issel, in Studies in Aesthetic Processes, introduces the concept of the "implied reader" in a work and argues that the work has a mechanism for summoning the reader (Issel, 1988). In the interactive movie, the audience appears as the role of completing the narrative structure, and the "unknown" of the plot triggers the audience's curiosity, thus attracting the audience to explore different branches, and calling the audience to fill in the "blanks" to achieve the completeness of the narrative structure.

3.3 Interactive Experience Differences

The difference between traditional movies and interactive movies in terms of their interaction with the audience can be summarized as "indirect interaction" and "direct interaction". The interaction between traditional movies and the audience is indirect and non-real-time. As shown in Figure 3, a traditional movie activates the audience's body, guides the audience's gaze, coordinates the audience's sensory channels, and guides the audience to go through emotional and cognitive transformations through the narrative and audiovisual inputs, and the audience's evaluation and experience are fed back to the movie creator in a period of time after the movie is over. This feedback takes place over a long period of time, and it is possible for the creator to change the plot of the movie's sequel based on the feedback, or to stop there. Therefore the audience does not get a significant interactive experience in a traditional movie.
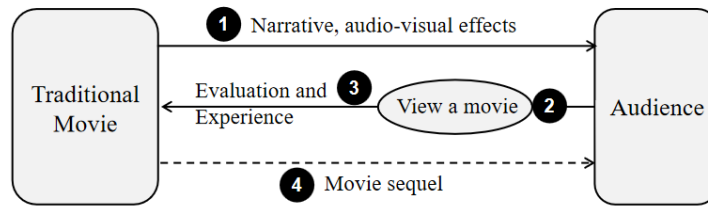
Fig.3. Forms of interaction between the traditional movie and the audience.

The audience's interactive experience in an interactive movie is direct and real-time. As shown in Figure 4, the audience clicks on the options, and the movie plot instantly jumps to a specific line according to the choices, in which the audience obtains a direct interactive experience. Wanda Straffen describes the mode of viewing interactive movies as "participatory attraction" as well (Wanda Straffen, 2018), meaning that the audience dives into hands-on image viewing, even as the appeal of the movie's plot content is diminished, and what is more appealing is the interactive tension between the audience and the movie.
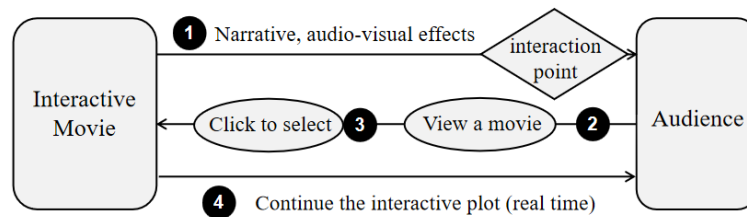
Fig.4. Forms of interaction between the interactive movie and the audience.

The audience interaction experience in interactive movies has another unique feature: gamified feedback mechanisms. This feature is dependent on the development of new media forms. In the previously mentioned interactive theater period, DVD interactive period, the Internet online interactive period of most interactive movie works in the interactive form: creators pre-designed interaction points and let the audience to react to the storyline, rather than based on the specific audience action participation.The breakthrough development of AR, VR technology has changed this limitation, some interactive movies combined animation and game engine, let the audience in the role of perspective to participate in the movie plot interaction and more complex spatial interaction, put the user in a participatory role in the movie plot interaction and more complex spatial interaction. Some interactive movies combine animation and game engines to put the audience in a role-playing perspective to participate in movie plot interactions and more complex spatial interactions, placing the user in a participatory role in the movie narrative.

At this stage, the boundaries between interactive movies and games are blurring, and the term "interactive movie" can correspond not only to the "audience" but also to the "player". Quantic dream's Detroit: The Changeling is an interactive movie that is narrated from the perspectives of three different bionts, with the player's decisions altering the game's storyline and ending," said David Cage, founder of Quantic dream Studios. storytelling, giving players more freedom to play, and a more immersive experience, is a direction we are exploring (David, 2019)." It is foreseeable that the integration of interactive movies and games is a prominent trend in the future.

4. Rethinking From Audience Experience To Interactive Movie Making

Compared with traditional movies, interactive movies break through long-standing limitations in narrative and interactive methods, explore more artistic possibilities, provide fresh practical and theoretical value for the development of the movie medium, and broaden the dimension of emotional communication for audience experience. However, interactive movie is still in the exploratory stage, and the challenges and limitations arising from its development process are particularly prominent. In order to pursue the creative goal of constantly improving audience experience, movie creators need to think about how to maintain a good narrative rhythm, how to maintain the audience's emotional involvement, and so on, and to draw feedback from the audience's experience and reflect on it in the real creation.

4.1 Plot and Logic Design

Interactive movies are characterized by multi-point lines and hypertext narrative structures, which require creators to make more complex plot arrangements and more rigorous logical designs to ensure the rationality of movie narratives. If the richness of the plot design of such movies is not enough to support the interaction, it is difficult for the audience to generate curiosity in the interactive process, and at the same time, the form of interactive movie loses its essential advantages. If the logical relationship of the plot design is confusing, the audience will have difficulty in exploring the plot, thus affecting the movie-going experience. In

addition, overly complex and scattered narrative lines tend to weaken the main plot and core values of the movie. Creators should clarify the main line of the movie and design reasonable interactive branches based on the main line, so that the plot can serve the transmission of the core values.

4.2 Limits of audience freedom

Although interactive narratives are open-ended, the degree of freedom for the audience in them needs to be limited to an appropriate range. If the scope is too small, the audience's freedom of choice will be too limited, which will lead to the audience's sense of exploration and participation being greatly reduced. On the other hand, if the scope of audience freedom is too large, it is also easy for the audience to get "lost" in the process of watching the movie. This requires the movie to design clear interaction guidelines and feedback when interaction points occur to ensure the smoothness of the audience's experience.

4.3 Interaction points and interface design

The appearance of untimely interactions or overly dense interaction points can easily destroy the immersion of the audience watching the movie. How to ensure the continuity of the audience's attention while watching an interactive movie is one of the problems that creators need to consider. The corresponding solution is to control the location and frequency of interaction points, and to design a comfortable interactive prompt interface based on design psychology, such as paying attention to the flashing intensity and font size of the prompts, etc., in order to minimize the audience's feeling of being interrupted during the movie. It is also important to understand that in movies, the purpose of interaction is to immerse the audience in the narrative, rather than focusing on the interactive gameplay, so as not to put the cart before the horse and make the movie lose its essential aesthetics of the narrative.

5. Conclusion

The differences between traditional and interactive movies have different impacts on the audience experience at three levels: narrative, emotional and interactive. On the narrative level, the linear narrative structure of traditional movies provides the audience with a coherent and complete narrative experience, while the hypertext narrative structure of interactive movies gives the audience autonomy and control, allowing the audience to have a personalized narrative experience. At the emotional level, the main stimulus to the audience of traditional movies is visual, which triggers the narrative immersion of visual participation through the "spectator attraction mode", while the "participatory attraction mode" of interactive movies triggers the role immersion of audience's embodied participation, whose "uncharacterization" is the most important factor. The "unqualified" nature of interactive movie leads the audience to explore on their own at the same time. In terms of interaction, traditional movie interaction is indirect and non-real-time, while interactive movie interaction is direct and real-time, and is gradually merging with game mode.

However, no matter how the technology develops and how the forms of viewing change, narrative is at the core of movie creation. For movie creators, both traditional and interactive movies need to adhere to the essence of cinema as a narrative art. The suggestion for movie creators is that the techniques, aesthetics and cultural connotations of movie creation need to be maintained in a reasonable and balanced state. At present, most interactive movies are created for commercial gain, bringing audiences a novel "fast food" viewing experience. If we want to achieve continuous progress in interactive movies, we need to reflect on and improve the technology of interactive movies in all aspects of logic design, audience experience design, and interface design.

Interactive movie is a concept with great creative potential, we can expect that, combined with the current development of science and technology, such as artificial intelligence, virtual reality technology, augmented reality technology progress, interactive movie can bring the audience a newer and more immersive experience. And with the continuous practice of movie creators' understanding in the future, movie creation will give birth to richer forms and embody more diversified values. In the future, the combination of movie and technology is a breakthrough point worth exploring.

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