

Interactive Movies: Narrative and Immersive Experience

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Abstract: Interactive movies have gained popularity due to their innovative viewing mode and have undergone considerable development in recent years. However, the constraints of technology itself have hindered the progress of interactive movies along a singular technological path. Exploring interactive movies within the context of technological challenges reveals new insights. Understanding how interactive movies engage with their audience, including audience interaction and behaviors, offers a fresh perspective. This approach opens up a new avenue for studying interactive movies through the lens of audience experience.

Keywords: Interactive Movies; Movie Experience

1. Introduction

The development of digital technology has endowed media interaction with increasingly diverse implementation methods, emphasizing both on user-media interaction and direct interaction between users and media content. Interactive movies, which consider both aspects, have gained increasing attention. The setup of interactive segments in interactive movies significantly enhances the viewing experience, providing audiences with a more immersive film experience. Wexler even suggests that interaction itself constitutes an experience. Interactive movies, with their higher degree of freedom and larger information content, offer users more interactive choices, akin to the "more open world" description in the gaming field. Therefore, although audiences can only make choices within a pre-set framework, this limitation is often overlooked. Most of the time, the richer text of interactive movies brings differentiated feelings. Digital technology truly empowers us to break through the screen and interact directly with the text, combining interaction and narrative in a way that allows user actions to shape the text, and even making the user movements a driving force in the narrative.

2. From Innate Frameworks to the Constraints of Technological Resistance

Interactive movies have demonstrated robust development in the digital era. Under the backdrop of rapid digital technology advancement, interactive technologies have gained more possibilities and for realization. Human-computer interaction has brought interactions between human and movie texts closer to its essence. However, due to the innate framework of technology and the phase of development, interactive technologies, serving as human prosthetics, still struggle to support the realization of genuine and thorough interaction in interactive movies. Today, interactive movies still reflect dissatisfaction originating from the innate technological framework. Often, the interactive strategies of interactive movies draw inspiration from games. In the digital era, video games operate through information capture, feedback, visual presentation, and environment purification, achieving a superior user experience on digital platforms.

In interactive movies, the origin of interaction between people and texts or machines, where as operators (or presenters) of technological objects, interact with machines and texts through mouse clicks and perspective shifts, are all behaviors within a predetermined framework. These are of pre-set choices. In the specific field of interactive movies, user interactions can be regarded as a limited freedom within a framework. The innate nature of technology and the inherent technological logic of movies determine that human-computer interactions in interactive movies are fundamentally constrained by the technological framework. Interactive movies borrow the thinking and methods of

engagement and communication from games, where games are already in a completed state upon release, and the player's game behavior represents a limited freedom within a preset framework. Every choice and minor movement occurs within the confines of the work, all based on algorithm-driven constrained actions. Users' actions cannot escape the pre-set framework, often encountering multiple-choice questions with pre-determined answers. A testament to this is the game developers' creation of "patches" to fix "bugs" with the purpose of reinforcing and repairing the framework, preventing players from challenging the "rules" of the game or exploiting its flaws, essentially making the framework a fundamental guarantee for the overall system operation.

As humans navigate a digital world with the aid of technology, they frequently encounter disconnections between themselves and technology or the "world," ranging from forgotten accounts and passwords to using incorrect methods to edit documents, or encountering unset functions. These instances of technological refusal, where human agency is denied by technology, highlight a critical challenge. When envisioning a better future based on the current state of human society and personal cognition, how can human cognitive activities be realized, and what are the practical challenges of thinking activities? During creative and inventive cognitive activities, technology serves as both a force of the individual and an intrinsic context of societal development, profoundly impacting the thought activities generated at various stages of human society. Whether in scientific inventions or artistic creations, technology forms the backdrop of human thought activities, with judgments based on the current understanding of technology. The development of technology fundamentally frames human cognition of real life, determining the possible scope for judgment. In this context, technology fades into the background, replaced by a kind of feedforward in human society, with technology often serving as a pre-existing reality backdrop, existing before events occur without emphasizing the temporal aspect but rather on an ontological level, presenting a "future perfect" aspect relative to technological events or human cognitive activities.

After cognitive construction of events on a conceptual level, based on technological context, the next step of materializing these concepts into reality exposes them further to technological negation. Designs in hand, imagined beautiful colors, principles awaiting experimentation, or envisioned stunning story visuals all encounter technological challenges: be it material properties, hardware response capabilities, or machine efficiency. Technology, thus, brings its judgment upon humans: through its existence as a human proxy, technology assesses humans under its discursive hegemony. This judgment is not based on universally accepted standards, rigorously debated criteria, or multi-faceted exploration but on the limitations of contemporary technology, a mechanical judgment of technology itself and technological phenomena. "Today's level of technology" acts as a decisive judge, but more akin to a cold dictator, dismissing the essence of matters and only considering if an event can operate within the current technological context to determine feasibility. Facing human cognitive activities driven by subjective agency, modern science and technology assume the role of an auditor of human thought, replacing "reality" in its name and rejecting the subject. Faced with this reality, people appear powerless and are forced to accept the results and pin their hopes on technological progress, although some people with a clear sense of self-awareness strive for breakthroughs in methods or technologies through hard work. However, behind this seemingly creative return lies the struggle of those considered hopeful, still unable to escape acting within the context of technology—despite shifting their attitude from passive waiting to active engagement, they still seek technological validation.

The negation of technology manifests as a judgment of human activities by technology, and an intervention of technological rationality into human cognitive activities. This specifically appears when the technical characteristics of an object are highlighted upon receiving technological rejection, that is, things that are technological in nature exist as wholes in their everyday state, being "what they are" within the user's cognition of technology as a mediator between humans and objects. From the perspective of interactive movies, when audiences use game controllers or mice in front of monitors to interact with texts running on personal computers or gaming consoles, they often overlook the existence of the technological object due to the smooth connection between human and technology and the immersion of consciousness, creating an illusion of direct interaction with the text. However, when a technological object malfunctions, users then realize they are holding objects named mice or game controllers, wearing head-mounted devices. At this moment, the retreat of the "Zuhandenheit" (readiness-to-hand) and the emergence of "Vorhandenheit" (presence-at-hand) occur, making users aware that the technological object is "in hand" and not merely an extension of their body as it seemed originally.

3. From Movie Experience to Exploring Interactive Narratives

The expansion of films into the domain of human-computer interaction represents a revolutionary change in film genre, inevitably leading to an update in narrative modes, as interaction itself is a form of narrative. Movies that incorporate interactive modes from games, a genre mainly inspired by video games, naturally adopt the narrative modes of video games, which have been altered due to interaction.

The narrative methods of video games primarily fall into two branches, which also represent the mainstream narrative modes of interactive movies today: traditional linear narratives and the "sandbox narrative mode" commonly found in sandbox games. The traditional linear narratives encompass point-line narratives, fractional narratives, parallel narratives, and network narratives. The narrative modes extending from linear narratives often link important narrative elements through clues or relationships, where interactive movies borrowed from video games present narrative progression brought by interactive segments. The point-line narrative mode considers narrative lines to be segmented by interactive segments, revealing the next block of text only after the user has completed an interactive action. This format emphasizes the interactive action itself and, when applied to interactive movies, significantly enhances the narrative's interactive properties. It provides users with a sense of participation in the text, though it may not introduce deep interaction within the actual text and may break the narrative chain, it indeed offers new narrative options for streaming platforms. Fractional narratives set options at key nodes, with the user's choice of differentiated combinations leading to different text blocks, giving users a sense of participation in the plot and creating a feeling of being able to influence the direction of the story, a narrative mode highly regarded in academia today. Parallel narratives fundamentally resemble the parallel montage narrative of movies, adding one or more narrative chains on the basis of parallel narratives. Network narratives construct complex narrative chains, focusing on the event itself and examining the narrative object from different angles, embodying the essence of exploration and decryption.

Originating from board games and card games, sandbox games have become popular in the digital age when combined with personal computers, offering an open-world view. This sandbox narrative mode, providing a simulated world for explorers to freely roam within set rules, offers a strong participatory experience due to its pre-designed high degree of freedom. Sandbox narratives, compared to the aforementioned linear narrative modes, are more distinctive and offer more possibilities for internal exploration and extension. Games like "Grand Theft Auto," "The Sims," and the recently popular "Cyberpunk 2077" are based on this narrative structure. Compared to the traditional narrative process of storytelling, the sandbox narrative mode is more flexible, allowing experiencers greater freedom. Moreover, the construction of information focuses more on external presentation. In this narrative mode, the inherent compulsory factor is the presence of interactive actions because in the relationship between individuals and their environment, interactive actions are the foundation for establishing connections, with technological prosthetics undoubtedly forming the backdrop. Incorporating technological prosthetics into oneself, meaning allowing technology as a prosthetic to become part of one's body, users then act within such sandbox narratives, where technology structures the potential for interactive exploration inherent in the story text, allowing users to engage in relational interactions with the environment through their actions. The setting of options for selection often exists as a tangible form of interaction; in the sandbox narrative mode, this aspect often includes exploratory interactive actions. Direct dialogues with the text in sandbox narratives are not always apparent; some interactive series have experiencers interact with interactive segments presented to them, a natural phenomenon in linear narratives after the previous text block is presented, but sandbox narratives allow experiencers to find the next text block on their own, making their exploratory actions the link between narrative segments. Represented by open-world sandbox games such as "Grand Theft Auto", it provides guidance for the main mission, but allows the experiencer to stop at any time while playing the game to explore other corners of the game world; "The Sims" players can freely explore the virtual city, try different jobs, decorate their houses, choose partners, etc. Although interactions occur within a preset framework, the sandbox narrative mode constructs stories more three-dimensionally, covering the category of narrative behind the choice actions, significantly enhancing the immersive effect and the quality of experience gained through interactive actions for experiencers.

3.1 Interactive Experience vs. Movie Experience

For audiences, the digital technology underpinning today's interactive movies acts as a prosthetic presence, compensating for human inherent shortcomings, redefining the concept of "wholeness," and facilitating the process towards completeness. Rooted in the contemporary era, evolving with

technology phenomena updates our understanding of the relationship between humans and technology. Appropriately positioning technology within human society deepens our understanding of prosthetics, explores its rational application, and reveals its potential. Reevaluating interactive narrative strategies of interactive movies, in light of the current state of digital movies and human-computer interaction phenomena, is crucial for refining skills—the application of technology—and essential for genuinely integrating interactive movies as a prosthetic part of the human body.

Ryan suggests that a key aesthetic goal of interactive narrative is to achieve narrative immersion^[1], highlighting that movies are adept at providing immersive experiences to audiences. Incorporating interactive segments that foster immersion, it is undeniable that audiences might still feel detached during interactive movie experiences. This detachment arises not only from the need for more realistic interactive image designs and the misalignment of interactive segments highlighting the media's presence but also from the necessity to rewrite existing narrative modes and logic paradigms within the new context of interactive movies. From the audience's perspective, their motivation to engage actively with interactive movie texts sets the stage for the entire process. They might concentrate on the process of human-computer interaction, akin to most video game players, or view the resulting interactivity as an enhancement to their movie-watching experience. In essence, does this interactive behavior become the main attraction within specific works, or does it blend into the movie as a catalyst? Even in works like "Detroit: Become Human," considered to provide a game-like thrill and released on a gaming platform like Steam, it's the process of "exploration" and the decryption involved that more effectively triggers users' dopamine—not just the exploration action itself but the joy derived from the collision between thought processes and narrative progression brought about by interactive outcomes.

The concept of 'fake' possibility for interaction emerges as a new path in the exploration of interactive movie narratives, emphasizing a "fictitious" sense of interactivity within the form of interaction.^[2] This experience is deemed "fake" because the user's actions do not impact the overall text; interactive segments merely serve as narrative nodes. Yet audiences can derive an illusion of interaction, leading to an immersive experience that enhances the movie-watching experience. In this model, audiences face nodes where choices seem available, offering the illusion of interaction with the text, but these choices do not influence the subsequent direction of the work—not even altering a single detail of the narrative progression, unlike in "Kinoautomat: One Man and His House," where the male protagonist cannot escape his dire situation. This form allows audiences to experience interaction through programmed triggers, undergoing a false interactive process without any impact on the text, yet even simple linear narratives can make users feel a sense of interaction, equating to the viewing experience of a genuine interactive movie.

Jesper Juul revisits the concept of the "avatar" in video games, an indispensable element where players embody, operate, and immerse themselves in characters to gain an identity within the game. However, early video games like "Missile Command" and "Tetris" lack human characters, yet players are still motivated to invest themselves and their emotions.^[3] Without a movie-like immersion or characters, a constantly present human actor—the player in front of the screen—emerges. Juul argues that the strong appeal of games lies in the "evaluation" of the player, attracting not just to the movie but continuously drawing in players already engaged.

Thus, interaction does not necessarily empower audiences (or users) to alter the text or affect the storyline. As for interactive movie viewers, the sense of participation in the text and the world behind the movie is as crucial as the ability to impact interactive outcomes. This implies that audiences primarily gain a human-computer interaction experience from interactive movies, with the attraction of the experience and its results to interactive movie engagement being equally significant, even highlighting another aspect of "narrative desire." Their satisfaction with the movie's "narrative desire" rather than a directed desire for specific story outcomes is significant.

3.2 Interactive Behavior and Embodied Perception

1) In traditional movie viewing, audiences are not required to actively control their bodies; passive viewing suffices, as filmmakers meticulously arrange mostly logical events in an understandable manner for projection. The audience's role is to "ride the flow" of the narrative, acting as attentive listeners. While the movie plays, audience consciousness often remains highly active, distinct from their physical stillness, constantly rewriting and activating memories, yet always as passive recipients of information before the screen (or monitor), with the film's information delivered by creators to the audience.

2) However, in what's termed the "post-cinema era," the mode of movie consumption has

undeniably changed, with traditional cinema and streaming services on mobile devices coexisting. Due to differences in internal structuring methods, the reception of interactive movies naturally differs from the traditional cinema viewing mode. The passive mode of information reception, once adept at navigating through movie worlds via the screen and experiencing time in a non-linear fashion due to montage, is incompatible with the interactive segments of interactive movies. This disruption can even disturb the smoothly crafted narrative flow intended by directors. Interactive movies, borrowing narrative strategies from video games, present information to audiences without further action, waiting for them to step forward for discovery, selection, or exploration. Although the information in interactive movies is pre-set, it becomes a "presence" awaiting capture and discovery in this relationship, presented for the audience's gaze. For instance, in "Black Mirror: Bandersnatch," audiences make choices for the character based on story options presented before them, with the system playing corresponding outcome videos based on those choices. Interactive movies combine narrative storytelling with active exploration by the audience through interactive segments and text blocks awaiting assembly, enriching the narrative depth of interactive movies by including the audience within the narrative scope, thus fulfilling the desire for storytelling and communication.

3) Building on Deleuze's "L'Image-Mouvement" and "L'Image-Temps," Daly posits that in the digital age, the film audience has transformed from the passive "Viewer" to the active "Viewer," highlighting a shift in movie engagement across multiple platforms. This transition emphasizes the interaction between contemporary audiences and films in what he terms "Cinema 3.0," introducing the concept of "InteractiveImage." Daly's assessment of this new form of cinema is grounded in the unique medium specificity of digital films, distinguished by its technological context. Interactive movies prominently feature a "modular" operation mode, where understanding and viewing films often indispensably require supplementary information from other media or texts. Within this modular information reception system, the film itself comprises multiple modules, which are internally interconnected but isolated from the external world. ^[4]Daly suggests that Database cinema, characterized by modularity, focuses less on narrative and visual elements and more on cognitive and navigational aspects. ^[5]Interactive movies represent such a form, where audience interactions stem from processing, understanding, and making directional judgments about information. While the importance of narrative remains undeniable, it is generated through audience interaction, yet the traditional core elements of cinema, narrative, and visual factors, are subordinated to interactive behaviors and the cognitive elements they entail.

4. Conclusion

The future does not lie directly ahead on an extension of today's apparent trajectory. Optimism pervades the field of digital-era film studies, buoyed by the rich possibilities presented by digital cinema, which is believed to have the power to turn imagination into reality through technological empowerment. However, technological determinism has quietly climbed aboard the chariot of film progress, and more perilously, the limitations of science and technology in some views seem to exist only in the dimension of time. The gap between beautiful visions and reality is attributed to the developmental stages of technology, with hopes pinned on the vigorous advancement of future technologies, as if the challenges at hand will eventually be overcome by evolving technology. Yet, the phenomenon of interactive cinema facing obstacles in both the industry and academia serves as a stark reminder, highlighting the need for a reevaluation of the relationship between technology and humans. On this basis, research into interactive cinema, with a focus on the film experience, harbors new opportunities for development.

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