

A study about Narrative Structure and Immersion Theory on Interactive Game

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Abstract

Under the influence of postmodern narrative theory, the boundaries between film, game and drama have begun to blur, and new types of immersive drama, interactive film games, and first-person perspective films have emerged, all of which are bold breakthroughs in traditional narrative models. As a form of entertainment with strong interactive capabilities, games are becoming more and more popular among the public, and their use of different narrative structures gives players a dreamlike sensory experience. This article mainly discusses the immersive experience of the game in the interactive narrative mode, and analyzes the reasons for its immersion through the immersion theory.

Keywords: Interactive games, Narrative Structure, Immersion Theory

I. INTRODUCTION

Many people say: The game tells bad stories because it conflicts with the gameplay. Is this correct? It is worth thinking about. First consider books and movies: books can allow people to read quietly, display their imagination, and are poetic and pictorial. They are a good narrative medium. Movies are noisy, the narration is not easy to write, and the character psychology is difficult to describe. Does that mean that the movie tells bad stories? Obviously not. Movies have more audiovisual dimensions, which seem to destroy the quiet atmosphere, but in fact they are not "contradictory" with the narrative; instead, incorporating audiovisual into the narrative can create a lot of good and unique things like action movies, horror movies, documentaries, etc. The experience of "movie narrative" is mostly impossible with "book narrative". Looking at the game again, the same situation and reasoning: Compared with movies, games increase the dimension of the player's "interaction" with the game. At first glance, it destroys the traditional linear narrative method, but it does not contradict the narrative. Incorporating interaction into narrative can create a good and unique "game narrative" experience, which is mostly impossible for "film narrative". The narratives of these three media have their own merits and uniqueness. This uniqueness is not well done by other media. Using the uniqueness well can show the strengths of the medium.

Currently on the market, last year's "Detroit Become Human" has set off the first wave of interactive games, allowing many players to immerse themselves in the storyline of the three protagonists. "The Invisible Guardian" immediately followed, creating an "immersive experience" for Chinese players. The history-related plots and familiar Asian faces also made domestic players feel more immersive. It has to be said that this wave of victory and pursuit is also one of the reasons for its praise. In fact, many well-received interactive games have been published before this. For example, "late shift" and so on. And Netflix even aimed at the appeal of "interactive" to the audience, and produced an interactive movie: "Black Mirror: Bandersnatch". It can be seen that the "interactive" type of trend is so large that it is extremely likely to represent a trend in future games.

The game has always been called the "ninth art". Interactive games have established a bridge linking movies and games, allowing players to stand on this bridge and become the master of the story. Different choices determine the different development of the story. Because the ending of this story is the result of the player's own choice, it is like the player has experienced a "mirror life" instead of simply completing a game. And interactive games built on complex story lines have more diverse plots than movies and a more complete sense of substitution.

II. IMMERSION THEORY

The immersion theory was first put forward by Csikszentmihalyi in 1975. He explained the subjective state of people's devotion, selflessness, and high concentration of attention when people perform some activities in daily life. He pointed out that the state of "immersion" is accompanied by positive emotional experience, which is a high level of enjoyment and satisfaction. Later Csikszentmihalyi himself in the 20 century, 90 complete years of research immersion theory, put forward the theory of immersive three-channel model, the difficulty of the challenge, the individual skill level that is immersive and activities related to the emergence, but the best experience is when the challenge activity When the difficulty is balanced with the individual's skill level. The research and expansion of later generations of immersion theory are based on the research of Csikszentmihalyi, such as the eight-channel model proposed by Massimini et al. The

theory of immersion was applied to the game field afterwards, and it was applied by game designers to the research on the player's pleasure in the game, and tried to make the players obtain this pleasure through various methods and channels.

Early immersion theory states that " the challenge (challenge) and skill (skill) is the main factor affecting immersive if the challenge is too high, users will lack the ability to control the environment, and produce. Anxiety or frustration ; on the contrary, the challenge is too low, use People will feel bored and lose interest. The immersive state mainly occurs when the two are balanced (Csikszentmihalyi, 1975) . In 1985, Massimini discovered that when challenges and skills must be at a certain level, immersive experience can happen. Both When both are low, the user's mentality is indifferent (quoted from Huang Qionghui, 2000). Subsequent research has begun to focus on the positive self brought about by immersion experience , which promotes the user's subsequent learning behavior (Csikszentmihalyi&Csikszentmihalyi, 1988; Csikszentmihalyi&LeFevre, 1989) . " immersed in this article apply theory to challenge ideas and techniques also focused on the balance between the two.

With the development of computer technology, immersion theory extends to the human-machine interactive discussion on, Webster , who view such interaction with games (playful) and exploration (exploratory) qualities (Webster, Trevino & Ryan, 1993) . Ghani and Deshpande (1994) , in order to influence the work of human-computer interaction research, presented the main characteristics of the two immersion: in the event completely dedicated (concentration) and activities are guided out of the psychological enjoyment (Enjoyment) . Novak , Hoffman, and Yung, etc. began in 1996 to conduct a series of research and model development on network immersion. Different from the original immersion model, the primary antecedents of immersion in human-computer interaction , except for challenges and Skills must be added to a certain degree with focused attention .

Afterwards, Novak et al. modified its model and studied more carefully (Hoffman & Novak, 1996; Hoffman, Novak &, Yung, 1998, 2000) , and tested the immersion model for different network behaviors. The research found that in network usage behavior, Information seeking is the easiest to enter immersion, followed by reading and writing . Different types of online activities, such as online games, online shopping , E-mail, etc., will also bring differences in immersion experience.

The occurrence of immersive experience is accompanied by nine factors: each step has a clear goal; there is rapid feedback to the action ; the balance between challenges and skills; the integration of action and consciousness; the elimination of distracting thoughts; no need to worry about failure; self-consciousness disappears; time Feeling distortion; action has its own purpose.

II.I GAME IMMERSIVE EXPERIENCE

'Immersive experience, also called immersive experience, refers to when people are engrossed in a certain activity, ignoring the existence of external things, and even reaching a state of selflessness, and this feeling can be involved in a certain activity Time, giving people a sense of fulfillment and happiness, therefore, this experience is also called a deeper user experience . ' In fact, the focus of research is different for immersive experience in different fields. In the field of information systems, immersive theory studies users' online shopping, online learning, instant messaging, and virtual worlds. The complexity of social behavior, interaction behavior, and perception all affect the immersive experience.

The game is also showing the user a virtual world, showing the user an environment completely different from reality. The user is in the virtual world of the game, his emotions are completely controlled by the development of the game, the concept of time is weakened, and he is not even aware of the passage of time. " Studies have shown that changes in the external environment will have a certain impact on the immersive experience of mobile users . "

Game is a form of entertainment centered on virtual experience, and immersive experience as a form of virtual experience runs through the entire game process. The interpretation of Immersion in The Law of Design uses flow theory. The basic point of flow theory is very simple, but it explains the concept of immersion very powerfully, explaining the state of people devoting themselves to one thing. Flow theory can strongly explain the theoretical factors of immersion, but the excellent state of flow during the entire game is often in the process of the game. The coexistence of challenge and feedback makes it easier for people to develop the state flow. Stream experience. Throughout the game, the range of immersion appears more extensive. It will appear before and after the game starts. Players can get involved in the game and obtain a full range of visual, auditory, and tactile sensory experience. The process is transformed into the process of own experience.

II.II IMMERSIVE EXPERIENCE CONTENT

Speaking of the content of immersive experience, first start from the perspective of user experience. Abraham Harold Maslow, an American humanist social psychologist , put forward the theory of human needs hierarchy in The Theory of Human Motivation. He divided human needs into five levels.

The level of human needs is divided into primary stage, intermediate stage and advanced stage. Based on the level of human needs, from the perspective of the interaction process between products and people, the functional requirements at the initial stage only consider the functions and characteristics of the product. This is the traditional demand of the product. In the second stage, the actual stage of the product is transformed into an experience product. Intangible service. Through this intangible service, the image of the product itself can be established. This intangible service can be the current situation, emotion, touch, realization of self-worth and so on.

The level of needs of user experience can be divided into five levels based on hierarchical theory of needs. The first is the sensory needs. The sensory needs include vision, touch, hearing, smell and taste. It is the first feeling of a certain product and the first step for users to contact the product. The experience value of the product is often a synthesis of these sensory elements. These elements enhance the user's sense of communication with the product, highlight the sensory characteristics of the product, make the product easily perceptible, and create a better emotional experience. The second level is the interaction demand. People need to interact with the product during the process of using the product. A good interaction process is also a criterion for judging a product experience. Specifically, it can be expressed in the time to complete the task, efficiency, whether it is helpful, learning, efficiency, memory, satisfaction and fault tolerance during operation. The third layer is emotional demand, which emphasizes entertainment, meaning, interaction and story. In addition to the appearance of the product, it should make people feel attractive, moving and interesting. The fourth level is social needs. People are social animals that live in groups and need to be recognized and understood by others. For example, the social recognition that people bring through branding is also a status symbol. The fifth level is self-needs. Self-needs return to people's self-knowledge, self-worth, self-realization, self-recognition, etc. Self-needs are unique and different from others, so products that meet self-needs are first of all customized design, Based on uniqueness.

For the content of immersive experience, there are two main aspects. The first is the elementary sensory experience, "sensory experience is the use of sensory organs to capture the physical and psychological changes brought about by objective things." Sight, hearing, touch, smell, and taste are the five senses of human beings. The sensory system is the primary way for people to contact the outside world. We rely on the senses to keenly capture some shallow-level experiences and obtain basic survivability. For example, in amusement parks, many game activities have certain challenges to people, but they mainly use human sensory experience to make visitors feel refreshed or stimulated from sight, hearing, touch and even smell. The immersion achieved is short-lived, it may disappear after the game is over, and it is difficult to last. The sense of immersion that sensory experience can achieve is short-lived and easy to fade away.

The second is the immersion brought by cognitive experience. Cognitive experience is considered to be an emotional experience produced in the cognitive world. Each emotional experience is a blend of psychological and behavioral process experience. Specific mental and behavioral patterns in a specific situation generate emotional awakening. The law of action is used in new situational models. "The unconsciousness of cognition, the experience of mind, and the metaphor of thinking are the basic principles of cognitive experience philosophy." "The mind is the mind. For a complete individual, the physical body and the mental mind are inseparable. The experience we obtain from the natural world is through mental exploration and reasoning to gain experience, which shows that the mind has the nature of experience. It is obtained through the precipitation of

experience, so it can also be said that the experience of the mind is the value of cognitive philosophy research." In our daily life, cognitive experience participates in all aspects of our daily activities. For example, strategic games such as chess, minesweeping, etc., and teaching activities to human skills and challenges mainly use human cognitive experience. Cognitive experience can enable people to achieve a long-lasting and continuous sense of immersion in a gradual manner.

Sensory experience brings people a short-term flow experience, while cognitive experience creates flow from a long-term perspective. The flow created by the combination of the two is committed, continuous and permanent. In the game design, through the game's visual effects, auditory effects, and interactive feedback, it gives people a sensory flow experience, and then through the game story design, level settings, game skills, difficulty, etc., to give users recognition The flow experience of knowledge, the combination of the two to achieve the best sense of immersion.

III. NARRATIVE STRUCTURE

Narrative structure is an important element in game design, especially for games that focus on plot and rich interactive elements, narrative structure is often used as a skeleton to support the overall framework of the game. A good narrative structure not only promotes each other with the gameplay, but also controls the player's emotions and strengthens the immersion of the game.

III.I LINEAR NARRATIVE

Linear narrative is a narrative structure that is connected end to end and a coherent story. It is characterized by the unity of time and space, a single ending, a single clue, and strong causality. Because the logic is complete and the plot is coherent, linear narrative is the most common, and the player is easiest to mention that even if the narrative contains flashbacks and interspersed narratives, as long as it serves a single main line, it can be counted as a linear narrative.

Linear narration: The trilogy of "God of War" emphasizes the gameplay and basically adopts a linear narration structure. As long as the player cuts well, the plot is simple and easy to understand, and the rules are satisfactory.

The "Uncharted Seas" series has a high degree of repetition and requires narrative skills to attract players. Graphic illustration of the "Uncharted Seas" series linear regression narrative: flashbacks can create suspense in the plot, create a small climax at the beginning of the story, and help capture the players' attention. "Sea 2" uses a linear flashback structure.

"Call of Duty: Modern Warfare" ("Call of Duty: Modern Warfare"). Linear interpolation: Interpolation indicates the narrative method of temporarily interrupting and inserting a related story or memory when narrating the main story. In the "Sniper Past" level in the middle of the game, it borrows Captain Price's infiltrating memories to shape this wise and

brave warrior. It is one of the classic interludes in the history of the game.

III.II NON-LINEAR NARRATIVE

Non-linear narrative technique is a narrative technique that sacrifices the coherence of the story to achieve certain goals. Non-linear narrative techniques are diverse and can have the following characteristics: chaotic time and space, multiple endings, multiple, strong contingency, and so on. , Non-linear narrative is complex and eclectic. It requires designers to initiate creativity and spend more energy to control the structure. It is more common in independent games and is also a common narrative method for large-scale games with scripts.

Single perspective and multiple clues: Single perspective and multiple clues are commonly used narrative methods in open world games. Usually the player plays a role, wandering between various characters and forces on the map. The multi-clues design creates a degree of freedom in the game narrative. Generally, players can choose whether to trigger an event, or they can lead to different endings through their own behavior.

The multi-line narrative structure is relatively complex, but multi-perspective dating can effectively bring freshness to players. The difficulty of multi-line narrative design is how to make the player need to play the role of victim, police, reporter, private detective and other roles to solve a bizarre disappearance case in "Rainstorm".

In "The Extraordinary Twins", the game starts from adulthood, and then continues in the protagonist's childhood, the story of the teenager: Random narration: Random narration refers to the original chronological order of the story is shuffled, and then purposefully reorganized into a new order Narrative techniques. , The flashback of the youth accelerated, thus showing the protagonist's broken and complicated life. Random narration is a narrative method with dazzling technical colors. If handled properly, this illogical expansion method will bring a profound Lucas Pope new work "The Return of Oberadin" that uses this narrative method. Won a very high evaluation. The difficulty of disorderly design is that while grasping the overall framework of the story, it is necessary to connect every seemingly irrelevant segment together, otherwise it will arouse the player and the players will feel inexplicable.

Multiple time and space: In multiple time and space narratives, designers usually shuttle the protagonist in multiple time and space to achieve certain narrative purposes. Common multiple spaces include dreams, hallucinations, time travel and so on. Through the contrast of different time and space, the game often conveys a sense of illusion and division, suitable for suspense, horror, and terror destruction, such as "Silent Hill", "Evil Possession" and so on. In the game "The Age of Silence" in the picture, players need to travel between two different time and space to solve the cause of human demise in the future.

Layered structure: Generally speaking, it is "play in play". Similar to "Inception", one layer of dreams is surrounded by one layer of dreams. The layered structure extremely tests the skill of screenwriters. The difficulty lies in the fact that there

are independent events and causal relationships between all levels, and they must influence each other, which can be described as affecting the whole body. This kind of narrative structure is more common in film and television works, but it is hard to find a trace in games. "World in Painting" is a rare masterpiece of layered narrative. The little boy played by the player travels through the space of the game layer after layer, experiencing birth, aging, sickness and death, and finally getting what he is looking for.

The ring structure is an exquisite narrative structure, often with a sense of fatalism. In "Life is Strange", if the player chooses to sacrifice the ending of his good friend, the game will return to the beginning scene, allowing the player to witness the shooting again, but there is no way to save the friend again.

Repeating narrative: Repeating narrative means that every clue in the narrative restarts from a fixed point in time. In "Neil Mechanical Era", after the player uses the heroine to complete a series of missions to defeat the last BOSS, they also use the heroine to go through the same process again. The significance of repeated narration is that although the process is roughly the same, the designer can deliver different information due to different perspectives, making the narrative objective and complete, and can gradually approach the truth. "Is a classic work with repetitive narrative.

IV. INTERACTIVE NARRATOLOGY

Interactive narratology was born in the first ten years of this century. It is a discipline formed by the intersection of narratology, media studies, semiotics and game studies. The discipline aims to explore the narrative performance on digital media and the design norms of digital media narration. The research objects are mainly computer games, interactive novels, and interactive movies. The research direction has also formed a more detailed branch:

Reception research: explore the relationship between interactive narrative texts and players. Including text function, text value, player acceptance and interpretation methods, etc.

Comparative study: Explore the relationship between interactive narrative texts and other texts. Including the representational relationship between the fictional world and the real world, and the differences between interactive narrative texts and other types of texts.

Internal Research: Explore the internal form and structure of interactive narrative texts. Including the basic elements of interactive narrative, the performance of interactive narrative, and the operation mode of interactive narrative.

Among them, the American independent scholar Marie-Laure Ryan is the most important researcher, and her research results cover almost all of the above aspects.

Ryan is the author of "Possible Worlds, Artificial Intelligence, and Narrative Theory", "Narrative as Virtual Reality", "Avatars of Story", etc. It is an earlier work that laid the foundation for the study of digital narrative and interactive narrative. Ryan also edited Narrative Across Media (Narrative

Across Media), which was published in 2014, and further explored the narrative of digital media.

The second editor of "The Transformation of Stories" focused on digital narratives and clearly put forward the concept of "interactive narrative": interactivity comes from the interactive and reactive nature of digital media. When interactivity is connected with narrative, it produces Interactive narrative. [1] This definition is also the starting point for the definition and research of interactive narration in this article.

In the book, Ryan proposes a basic model for the plot of digital narrative and the representational form of discourse.

Secondly, Ryan believes that digital narrative is "analog rather than representational, self-generated rather than scripted, participatory rather than receptive, and synchronous rather than retrospective", starting from a comparative analysis of the characteristics of digital media The difference between digital narrative and classic narrative.

Thirdly, Ryan has put forward many unresolved problems for the subsequent interactive narratology. Among them, the focus of this article is "description of various types of game narratives".

IV.I CHATMAN'S CLASSIC NARRATIVE THEORY

In classical narratology theory, Chatman pointed out that the narrative text is composed of two parts: "story" and "discourse", which refer to the content of narrative and the way of narrative expression (Fig 1). "In short, the story is the 'what to say' in the narrative, and the discourse is the 'how to tell' in the narrative." Then, the story is divided into two types of "event" and "existence" to further distinguish the story involved Time representation and space representation of arrival.

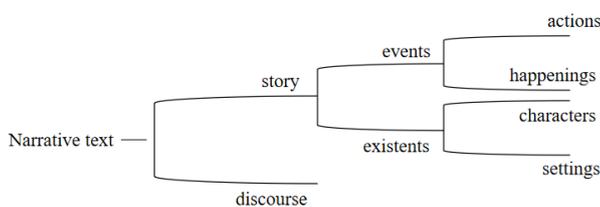


Fig. 1. Elements of Narrative, Chatman, 1978

With the distinction between the structure of story and discourse, the communication model of narration can also be further discussed. Chatman also proposed a schematic diagram of the narrative structure:

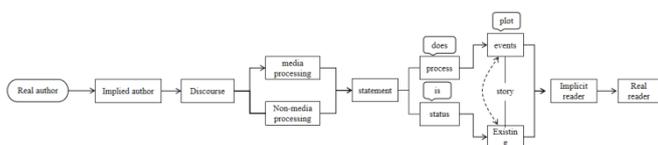


Fig. 2. Schematic diagram of narrative structure, Chatman, 1978

The concepts of implicit author and implicit reader are derived from the insinuation of the text to the real author and the real reader, and are concepts that exist in both of the texts. It implies that the author establishes the discourse, that is, the organization and expression of the story. After mediation or non-mediation, the discourse is expressed in the form of written statements. There are procedural statements (such as "someone did something") and state statements (such as "there is a dog", "this dog is black"), which make the event elements of the story and Existing elements are characterized. Finally, these stories and discourse statements need to be given to a reading position, the implicit reader of the text. In connection with Jacobson's theory, if the communication is understood as the context, information, connection, coding and other elements as the background of information release and understanding, then the narrative structure implies the links between the implicit author and the implicit reader It can be regarded as communication.

Deduction based on the theoretical framework of classic narratology such as Chatman, should be able to consider narration as a cross-media phenomenon of human behavior. That is to say, the act of "telling a story" does not depend on a specific medium. It only needs to have two elements: words and stories. Whether it is written or imitated, or even one's own inner monologue can be seen. Make a narrative. Narrative researchers such as Marie-Laure Ryan, a cross-media narrative researcher, also tend to define narrative based on cognition, but she also believes that the expansion of the narrative concept should be avoided, so she limits the narrative concept. Here we do not carry out too in-depth discussions, and still adopt the position of "narrative is story and discourse".

IV.II THE INTERNAL STRUCTURE AND COMMUNICATION MODE OF INTERACTIVE NARRATION

To start the discussion within the framework of Chatman's theoretical system, we should first notice that the narrative of a computer game requires players to participate in the narrative. In most cases, the game requires the player to give instructions to the character or customize a certain characteristic of the character in order to continue the game. This means that the narrative text does not simply represent the author's idea to the player, but simulates according to the player's input, and presents the specific simulation result to the player.

Therefore, in computer game narratives, the communication between the narrative text and the real player is two-way, rather than one-way communication in media such as novels and movies. Because of this two-way communication, the narrative text's reference to the implicit player is particularly obvious. When the author develops the game, he actually delivers the interactive functions contained in the text to a space where the real player is responsible. It should be considered that this space within the narrative text is the implicit player.

Since the text also refers to the author, the narrative text also has the concept of implicit author. However, there may not be a two-way communication relationship between the real author

and the implicit author, so there is the following communication mode. Among them, the solid line represents open communication, and the dashed line represents implicit inference communication

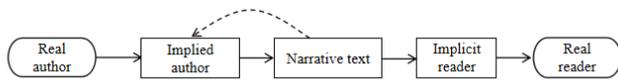


Fig. 3. The entities involved in computer game texts and their communication modes

The purpose of proposing this model is to characterize the systematic law of interactive narrative text. If the elements of narration are viewed from the concept of classical narratology, the elements of narration in computer games will certainly not exceed the original framework, but the narrative form of computer games is different from that of classical narratology. After discussing the difference between the two, it can be found that the difference is caused by the way of communication between the elements, that is, the relationship between the elements. In other words, the special feature of interactive narration lies in the interactive communication inside and outside the narrative text.

V. INTERACTIVE NARRATION AND IMMERSION

The plot of traditional movies is linear, and interactive movies are often tree-like or net-like multiple ending stories. When video games first tried to set multiple endings within the story line, branch trees were the first choice. At the point of major plot divergence in the story, the player is asked to choose one of two or one more operation, each choice leads to a different plot or ending. Even in video games, this small and direct multiple-choice method has been gradually abandoned, replaced by a more subtle and discrete quantitative system. This new selection system is based on dialogue selection, and the player The seemingly inconspicuous subtle choices are superimposed to cause the plot to change. A typical example is the favorability system of "Dragon Age: Origins". The player's dialogue choices during the game will affect the rise and fall of the favorability index. The development of the relationship between the protagonist and the game character depends on the data hidden behind the program. This quantitative method was introduced into "Detroit: Become Human" and achieved good results. The plot development of Connor's story line in the play is affected by the two indicators of "software instability" and the degree of goodwill with Hank. If Connor and Hank are in a hostile state, Connor will be killed by Hank in a particular chapter. dead. The "Life or Death" option will not pop up in the interface, and the result of the branch is gradually determined during the early viewing process. Connor can frequently confront Hank in the chat with Hank. Although this will reduce the goodwill of the two, the player can also ask Connor to help Hank and respect life instead of just completing the task at a critical moment. Human feelings still remain the possibility of reunion. The

player can create a rebellious but kind-hearted Connor according to their own preferences.

You can make him a machine that seems gentle and friendly but only uses the optimal solution to complete the task. This discrete and large number of dialogue choices not only keep the player in a state of "forward leaning" excitement at any time, but also provide the player with more free choices. The player can control what the character wants to say and do what they want to do , And then hand the story to the program algorithm.

V.I AN ANALYSIS OF THE NARRATIVE STRUCTURE OF "DETROIT: BECOME HUMAN"

The story of the game is set in Detroit in 2035. After the declining old industrial city of Detroit went bankrupt, the government brought in a large number of technology companies. Kamsky came to Detroit and founded a company called Model Control Life, dedicated to the research and development of bionic robots. In just a few years, the model-controlled life has risen rapidly. They have designed robots with different characteristics according to different social divisions: servants, nurses, manual workers, prostitutes, security guards, doctors, etc. Bionics are highly popular in the city of Detroit, but in human hearts, bionics are always just tools and machines. And some citizens are hostile to bionics, believing that they have encroached on jobs. With the increase in intelligence, bionics gradually possess emotions and individual consciousness, and they gradually feel the unfair treatment they have received. The conflict between humans and bionics has intensified, and there have even been incidents of bionics attacking humans.

In this context, the game is divided into three story lines, each telling the situation and choices of three bionics: Cara is a domestic service robot, she is full of sympathy for the situation of the host's daughter Alice; Marcus is used for A painter served, and a wise old painter was very friendly to him and guided him to discover his self-awareness and artistic talents, but Marcus's fate fell into the clouds because of the painter's death; Connor partnered with an old policeman who hated bionics , Scouting the truth about the case of bionics in Detroit. Players advance gradually in the three story lines, and each choice made may affect the direction of the subsequent plot. Players' choices will not only affect the fate of different characters in the game, but also the development of the main line contradiction (Marcus will obtain equal rights through peaceful protest or armed struggle).

Unlike the semi-open endings in movies and TV series, "Detroit: Become Human" has reached an unprecedented degree of openness in the story structure. It not only allows players to make choices at different plot points, but also produces completely different endings based on the player's tendency. There are often no endings in film and television works. For example, the spinning top in "Inception" has caused numerous discussions among fans. However, the imagination left by this setting is limited after all. "Detroit: Become Human" greatly expands the space outside the story for players. David Cage set six main endings for the game. These

endings are only the main characters' moving lines, not including the fate of the secondary characters. In addition, its openness far surpasses the interactive movie "Black Mirror: Bandersnatch" launched by Netflix in 2018.

The choices made by players in "Detroit: Become Human" will have an impact on the phased tasks in the game, and will also have a profound impact on the subsequent encounters of other game characters. When Carla tries to take the little girl Alice across the border to a safe Canada, if Marcus resorts to violent protests, border security officers will dismantle Cara because of the fear of bionics, and Cara and the little girl will face the risk of death; If Marcus takes a peaceful march, the security inspectors will release Kara and Alice out of sympathy. The choice of "Black Mirror: Bandersnatch" is more like a gimmick, and will not really affect the development of the plot. From this perspective, the openness of "Detroit: Become Human" is based on the real impact of the plot. David Cage and Multidream Studio are trying to simulate the complexity and change of the real world, and are trying to restore reality. The butterfly effect that every decision in life may produce. This kind of openness makes the narrative of the game full of unknown mystery, and players can find new interest in every review.

V.II AN ANALYSIS OF THE NARRATIVE STRUCTURE OF "BLACK MIRROR: BANDERSNATCH"

Katie Seren Turkimbas and Eric Zimmerman pointed out when studying the identity composition of players in video games: "The relationship between a player and the game character he controls is not a simple identity. The game character is a personality mask of the player in the virtual game world;

The relationship between characters can therefore be tense and emotional. At the same time, however, the character is a tool or puppet that can be manipulated according to the rules of the game for the player. In this case, the player knows very clearly that the character is a man-made device. "The game color of the interactive game determines that its viewing process is similar to this "Clearly recognize the character's tool nature, but at the same time temporarily suspend distrust of the virtual world through this character, thereby immersing in it "The experience.

The problem with "Black Mirror: Bandersnatch" is here. If the ideal form of interactive game works should absorb the advantages of movies and games, while ensuring that the player is immersed in the narrative, it allows the player to play a subjective role and intervene. Narrative and influence the development of the plot, so "Black Mirror: Bandersnatch" happens to absorb the common flaws of games and movies, and it forces the player to continuously interrupt the traditional viewing experience of "leaning backwards" during the viewing process, using the mouse or Touching to perform an alternative operation not only disrupts the continuity of the film's narrative, but also fails to realize the player's sense of substitution for the character and the sense of immersion in the environment brought by the game. While choosing an

interactive narrative method, it denies the player's involvement in the viewing mode, as if its original intention was not to use the interactive feedback between humans and machines to let the player experience the story, but to irony with avant-garde methods. When the protagonist increasingly feels that he does not have free will and his every move is controlled by a god-like mysterious force, the player has the opportunity to have a direct dialogue with the protagonist-the player can follow the internal algorithm of the narrative, so it is mysterious. To guide the protagonist to believe that their life is being monitored by the government, you can also try to break through the "dimensional wall" and communicate directly with the protagonist. Once the player chooses to jump directly into the story, try to communicate directly with the protagonist, and inform the protagonist that he is being watched by people from the 21st century through an entertainment media platform called Netflix, the causal chain of narrative will be destroyed and the story will be directed. Two absurd endings with dark humor: the protagonist discovers that he is actually an actor on the set, and all his experiences are a performance; or in an illogical action scene, he asks the player whether it is exciting enough.

Through this absurd plot, "Black Mirror: Bandersnatch" deconstructs the interaction in an interactive way. The player's right to choose is not only restricted by the director, but also restricted by the internal algorithm of the narrative. Once the player tries to violate the algorithm, the story The continuity and rationality of the story is destroyed, which leads to the collapse of the story logic. While the protagonist suffers from his inability to control his own behavior, so does the player who manipulates the protagonist. This actually inherits the theme of the origin of technological development that has been reflected in the "Black Mirror" series. When this theme is presented to the player in an interactive narrative way, it cannot receive good feedback. If interactive games want to gain the player's approval and not just stop at pioneering experimental creation, they must guide the player to use characters as their avatars and enter the "magic circle" belonging to the game.

V.III COMPARE "DETROIT: BECOME HUMAN" AND "BLACK MIRROR: BANDERSNATCH"

From the four points of story text volume, interaction method, player's subjectivity and game experience, compare the two games "Detroit: Become Human" and "Black Mirror: Bandersnatch", and make the following table (Table 1) :

	DETROIT: BECOME HUMAN	BLACK MIRROR: BANDERSNATCH
Story text volume	Single flow time is 10-12 Xiao Shi , if you want to experience a variety of different stories, and even take hundreds of hours .	The single process is about 90 minutes and the total amount of materials is 5 hours .

interactive mode	To the players to provide more opportunities for freedom of choice, and the player can control the role say want to say, do want to do, then the story to the program algorithm.	The player's right to choose is restricted by the director and the internal algorithm of the narrative. Once the player tries to violate the algorithm, the continuity and rationality of the story will be destroyed and the logic of the story will collapse.
Player subjectivity	Players can influence what kind of person the character becomes at the end of the story by choosing different plots.	If the player chooses to meet the author's expectations, the story continues, and if the player chooses not to meet the author's expectations, he chooses again.
Game experience	As long as the player chooses properly, they can reap the perfect endings of "Marcus Leads the Bionics to Freedom", "Connor and Hank Reunion", and "Carla and his team start a new life in Canada".	No matter what choices the player makes when facing differences in the plot, the protagonist Stephen will not escape the tragic fate in the end.

Table. 1. Compare "Detroit: Become Human" and "Black Mirror: Bandersnatch"

Comparing "Detroit: Becoming Human" and "Black Mirror: Bandersnatch", we can see that the amount of text plays a decisive role in the quality of an interactive movie. The single process time of "Detroit: Becoming Human" is 10-12 hours. If you want to experience various story trends, it may even take hundreds of hours; the single process of "Black Mirror: Bandersnatch" is about 90 minutes, the total amount of material is 5 hours. The abundant text reserves of "Detroit: Become Human" ensure a variety of branch options and fault tolerance. The former can enhance the player's sense of immersion and substitution, while the latter guarantees that even if the main character dies, the rich plot line can continue the story. The limited amount of text in "Black Mirror: Bandersnatch" makes it impossible to give the player more choice and decision-making power. Due to the lack of advance preparation by the director, once the player chooses a certain option, the narrative will end hastily and remind the player. Return to the selection point and reselect. Similar semi-forced selection exists at multiple points of difference in the plot.

In terms of interaction, the plot development of Connor's storyline in "Detroit: Becoming Human" is affected by the two indicators of "software instability" and Hank's

favorability. If Connor and Hank are in a hostile state, Connor will be killed by Hank in certain chapters. The "Life or Death" option will not pop up in the interface, and the result of the branch is gradually determined during the early viewing process. Connor can frequently confront Hank in the chat with Hank. Although this will reduce the goodwill of the two, the player can also ask Connor to help Hank and respect life instead of just completing the task at a critical moment. Human feelings still remain the possibility of reunion. Players can create a rebellious but kind-hearted Connor according to their own preferences, or they can make him a seemingly gentle and friendly machine that only uses the best solution to complete the task. This discrete and large number of dialogue choices not only keep the player in a state of "forward lean" excitement at any time, but also provide players with more free choices. Players can control what the character wants to say and do what they want, and then hand the story to the program algorithm. And "Black Mirror: Bandersnatch" deconstructs the interaction in an interactive way. The player's right to choose is not only restricted by the director, but also restricted by the internal narrative algorithm. Once the player tries to violate the algorithm, the continuity and rationality of the story It was destroyed, and the story logic collapsed. While the protagonist suffers from his inability to control his own behavior, so does the player who manipulates the protagonist.

In "Detroit: Become a Human", Connor appears as a "assistant bionic assistant who assists the Detroit police in investigating homicides." In the follow-up story, players can decide that Connor is a machine dedicated to accomplishing tasks. Still gradually gaining humanity. In these works, the player's subjectivity plays a decisive role in the characterization and the flow of the story. And as long as the player chooses properly in "Detroit: Become Human", they can reap the perfect endings of "Marcus Leads Bionics to Freedom", "Connor and Hank Reunion" and "Carla and His Entourage Start a New Life in Canada".

"Black Mirror: Bandersnatch" is a negative example. Its viewing process is that the player chooses to meet the director's expectations and the story continues, and if the player's choice does not meet the director's expectations, he re-selects. The interactive method that has been repeatedly rejected and relaunched has deprived the player of the player's subjectivity. No matter what choice the player makes when facing differences in the plot, the protagonist Stephen will ultimately be unable to escape the tragic fate. The frustration of "no matter how hard you work" will induce a state of "learned helplessness" in the player's heart. Learned helplessness often has a very high correlation with depression. A very unpleasant experience of negative emotions.

VI. CONCLUSION

Interaction has advantages that traditional linear narratives do not have. It can give full play to the audience's subjectivity, allowing players to experience a stronger sense of substitution, immersion and accomplishment than in linear narratives, as well as the sense of responsibility generated by choice. Better

pray for the education and discipline of narrative. The premise for these advantages to work is that the player's subjectivity can be respected in the process of watching and participating, and the player can complete the subjective intervention in the narrative.

For interactive narratives, neither the creator nor the player has ever expected an interactive movie to reach the tuber-like state depicted by Deleuze. Narratives cannot be without boundaries and limitations, compared with endless possibilities. , The sense of substitution and immersion is the charm of interactive narration. Interaction can allow the player to better empathize with the character and generate identification with the character. The player can better immerse themselves in the world created by the narrative by implanting their own thoughts into the character. If you mechanically introduce interactive elements into traditional movies with a mentality of mourning the fall of the movie to the altar, the result is just a piece of nondescript monster.

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