

Research on the Phenomenon of Empathy in Games and Its Influence on the Behavior of Player

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ABSTRACT

Video games are now closely associated with the daily lives of many people. Games have also become an important way to influence younger generations - the role-playing, immersive experiences and identity shaping in virtual environments that take place in games can influence players' thoughts, behaviors, perceptions, etc. At the same time, this sensory stimulation from images, audio, and video often has a more profound impact on players than traditional media, which also tends to bring a deeper emotional experience to gamers and even makes them empathize. This study focuses on the attribution of empathy phenomenon in games and the shaping and influence of empathy phenomenon on players' behavior. Through literature analysis and empirical research, this paper shows that players' empathy in games will change players' cognitive and behavioral patterns, thus making games have a certain social influence.

Keywords: *game emotion; game behavior shaping; phenomenon related with empathy aroused by video games; immersion, involvement*

1. INTRODUCTION

In recent years, the video game industry has developed rapidly, and video games are now closely related to many People's Daily life. Games have also become an important way to influence the younger generation -- role-playing, immersive experiences, and identity shaping in virtual environments can influence players' thoughts, behaviors, and cognition. Therefore, the study of how games influence players' behavior and personality has become an urgent issue to be expanded. Through a series of games and empirical research, this paper will analyze the attribution of players' empathy in games, and deeply discuss the shaping and influence of empathy on players' behavior.

Most Chinese psychological studies related to the Internet have covered the influence of social media and the Internet on young people's personality formation and behavior shaping, but have not extended the research results to the level of games. Bruce D et al. believed that repeated and long-term experience of violent video games would increase players' aggressive behaviors, and the increase of players' aggressive behaviors was positively correlated with the playing time and frequency of violent video games^[1]. However, empathy is a potential moderating factor in the shaping of violent games on

players' behaviors. Hilgard J et al. found no evidence that violent video games can induce and stimulate aggressive behavior^[2]. The role of empathy in video games is controversial. One accepted view is that empathy in games increases a player's ability to empathize, to perceive injuries to others^[3]. Therefore, how the empathy generated by players in games can shape players' game behaviors and influence their real behaviors is an urgent problem to be solved in the field of game psychology, and how games make people empathic is a psychological problem worth studying.

2. EMPATHY AND ATTRIBUTION IN GAMES -- BASED ON SPECIFIC CASES

2.1. Definition of empathy

Empathy has different definitions in different contexts. Empathy is widely believed to be the ability to feel the emotions of others. The definition of empathy in this study refers to Hagman George's definition of empathy in real life to define empathy in digital games^[4]. It defines empathy as "the capacity to expand humanity and freedom". Empathy is "one's emotional response to observing another's experience and emotional experience". Applying this concept to video games, this

study defines empathy in video games as the corresponding emotional responses generated by players observing the experiences of characters in video games. Although characters in video games may appear to have emotions because of their actions, characters in video games, on a rational level, do not have emotions. Therefore, the definition of this study does not state that players must respond to the emotions of the characters in the video game, nor does it require players to respond accordingly.

2.2. Case analysis

a) *The Walking Dead*: *The Walking Dead* is an interactive adventure game developed by Telltale Games. The game has two seasons, each consisting of five episodes. *The Walking Dead* takes inspiration from the comics and takes place in the same fictional world on stilts. In the game, players play as a criminal named "Lee Everett". The main goal of the game is to protect an orphan named Clementine. The game emphasizes character growth and storytelling. The player's dialogue choices and actions affect the outcome of the story.

In *The Walking Dead*, the character you control is the main character, Lee. What the player is watching is what Happens to Lee in the game. In the first scene of the game, Lee is handcuffed to a police car leaving Atlanta. A conversation with the police officer behind the wheel reveals something about Lee's character. He was from Macon, convicted of killing a senator, taught at the University of California, etc. Although Lee is a fictional character with a personal story designed by the designer and a character identity within the story, his key actions that affect the storyline are controlled by the player. This allows players to build their own personalities in the virtual world. In a sense, the designers want the player to inject their own personality, morality, etc., into the character, and the choices the player makes when interacting with other characters can change the outcome of the story. This process is very important to the creation of the empathic experience in games. As a result, there is a connection between the player and the character he controls, and the player feels empathy. On the one hand, the player can simulate the character's thoughts and emotions from the information he has about the character. On the other hand, the player's control over the character extends the player's identity in the game, making the character become the representative of the player in the game and the extension of the player's identity.

Simply put, the main determinant of player empathy is the "construction" of the character's behavior, that is, the character's behavior and personality are determined by the player, and the character is the "avatar" of the player in the game.

b) *Beyond Two Souls*: *Beyond Two Souls* is an interactive action adventure game produced by Quantic

Dream and released by SONY Entertainment in October 2013. The game has two playable characters -- Judy Holmes and an invisible entity attached to her named Aiden. Throughout the course of the game, Judy grows from childhood to adulthood, gradually learning to control Aiden and his mental powers. The game features a non-linear narrative that divides Judy's life into 26 chapters.

Instead of controlling just one character in *The Walking Dead*, *Beyond Two Souls* requires the player to control two characters, Judy and Aiden. The game narrative revolves around two characters. In addition, Lee's portrayal in *The Walking Dead* was largely decided by the players, while Judy's portrayal in the *Beyond Two Souls* was decided by the game designers. Through a lot of animation and narration in the game, the character of Judy is clearly portrayed by the designer, and the player has very limited control over Judy. The other main character, Aiden, has more freedom. Throughout the game, most of Aiden's actions are controlled by the player. Like Lee in *The Walking Dead*, Aiden is a player-given character who controls the main action. However, Aiden's actions must be related to Judy's personality, because in the setting, Aiden is attached to Judy, and the main motivation of Aiden's behavior is determined by Judy's basic emotions.

Thus, different from the main factor of empathy in *The Walking Dead*, the starting point for players to experience empathy is "identification". The player identifies with the character rather than shaping it. Players understand Judy's behavioral logic and personal emotions, and players make choices based on Judy's personality, resulting in empathy. This kind of empathy is similar to the reason why readers feel empathy when they read a novel or watch a movie.

c) *Old Man's Journey*: *Old Man's Journey* is an adventure game that tells the story of the life of an old fisherman who lives in a seaside village.

In *Old Man's Journey*, the player's main object of observation is the experience of the old man the player is playing. Similar to *Beyond Two Souls*, the player does not shape the personality of the character they play. The player is the recipient of the emotions conveyed by the game. The game conveys hope, happiness, and regret. The game has been widely recognized as a "game that touches the heart" and has won many industry awards. Players are moved by the efforts of the elderly to reach their grandchildren. Players experienced the difficulties of the characters' journey and thus empathized with them.

d) *Lifeline*: *Lifeline* is a text adventure game where you have to talk to your characters in order to move the story forward. By default, the game has two time modes, one is synchronized with real time and the other is fast-forward mode.

Unlike the previous games, the player does not take on the role of the main character "Taylor" in the story, nor does he directly control the character. In the story, players observe the experience of "Taylor", communicate with Taylor through the device, influence Taylor major decisions, and participate in and influence the development of the story. "Taylor" has a personal history, a story, a character, and that's not what the player decides. Throughout the game, the story is mostly presented in text paragraphs and text options. There are few or no graphics in the game. True narrative is an important part of the immersion that games bring. In addition, the game's default time synchronization mode is innovative and enhances authenticity and immersion. The overall atmosphere of the game shapes a narrative truth. This sense of immersion, participation, and psychological guidance together shape empathy.

e) *Resident Evil: Village*: Highly similar to *Old Man's Journey*, *Resident Evil: Village* is mainly about the story related to family. In this work, the player plays the role of the character named Ethan, as a father, need to go to save his daughter. In the previous game *Resident Evil 7*, the player base had a mediocre response to the role of Ethan, while *Resident Evil: Village* highly rose the popularity of the character Ethan in the player base. Players do not shape Ethan's character personality; Ethan's character portrayal is determined by the designer. Players gradually empathize with this character by observing Ethan's personal experiences. Players experienced Ethan's experience of death again and again, but also a battle after battle of the party, is the most understanding of Ethan to save his daughter's not easy. And Ethan finally chose to die with the boss in the plot, to give his daughter to Chris this bridge, the game narrative, the player's empathy for Ethan, to the climax.

2.3. Summary

Overall, immersion is an important factor that leads to empathy. Immersion can shape deeper emotional experiences, stronger emotions. Also, immersion makes a game's narrative more compelling. In addition to immersion, empathy in a game has to do with how engaged the player is in the game. The player participates in the game, and the game generates feedback. Feedback in a game derived from player participation also enhances the empathic experience that games can provide. In addition, the flow generated by the player during play and the overall atmosphere created by the game are also important factors in enhancing the player's empathic experience.

3. ANALYSIS OF THE MAIN CAUSES OF PLAYER EMPATHY

3.1. Sense of immersion

The main driver of player immersion is technology, closely related to advances in computer hardware and related fields. Computers have enhanced graphic and auditory authenticity, resulting in a more interactive experience, and enhanced the sense of immersion that games can bring. Arguably, the main way to enhance immersion is to enhance the audio-visual performance of the game.

Identity is an important aspect of immersion, and a game's "persuasiveness" is an important part of that identity. This "persuasion" means that the game has a tension that persuades the player to believe that what appears in the game is happening or could happen. Clearly, narrative authenticity and persuasiveness are important factors in determining immersion in most narrative-related games.

3.2. Sense of participation

At its core, games are interactive art. The idea that "people don't learn by being taught, they learn by experiencing the consequences of their actions" applies very well to game design^[5]. Games can not only convey information, but also add experience. Unlike immersion, which emphasizes immersion, engagement emphasizes player participation. Traditional media can shape immersion, but most do not require audience participation. Compared to traditional media, games are more focused and empathic thanks to the added sense of engagement. Player engagement is determined by the following aspects: feedback authenticity, narrative engagement, emotional engagement, sensory engagement, and group engagement.

The authenticity of the feedback generated after a player performs a game is a major factor in determining whether the player will feel well engaged. In games, this feedback can be emotional, it can be somatosensory, and so on. There needs to be logic behind any type of feedback. To enhance the authenticity of feedback, we need not only good cooperation between program and art, but also logic in narrative and operation.

Narrative engagement refers to the extent to which players participate in the narrative flow of a game that involves narrative. Obviously, the more involved the player is, the more freedom the player has in the narrative of the game, and the more involved the player feels. A game that has a lot of choices and ramifications, and the player's choices are connected to those ramifications, is a game that has a high sense of engagement.

Emotional engagement refers to the involvement of the player in the emotional experience of the game. Sensory engagement refers to the player's sensory involvement in the game. Including but not limited to the player's visual experience, auditory experience, somatosensory experience, spatial engagement, etc. Group engagement refers to the degree to which groups of players participate in the game.

3.3. Flow

Closely related to the sense of engagement and immersion is the concept of flow. Some game scholars have argued that games create intense engagement and immersion because the player enters a state of flow. Flow is a state of intense concentration and concentration^[6]. "Flow" arises as the player's individual skill level increases, and the challenge level increases accordingly. There is a dynamic balance between a game that is too hard and leads to frustration and a game that is too easy and leads to boredom, and this balance creates flow in the game, causing the player to focus on the game, lose the sense of time, and enjoy it. The concept of flow has also been applied to educational games, where this state of mind is a great aid to the acquisition of knowledge by game players.

3.4. Psychological hint

The game itself provides a psychological cue that leads the player to voluntarily stay in a fictional world designed by the game designer. Players' willingness to participate in the game is the realistic basis for players to generate empathy.

In the game, this psychological cueing guidance is divided into three main aspects: positive feedback, rule qualification, and authority corroboration. Positive feedback refers to the positive rewards players get in the game, including but not limited to pleasant emotions, satisfaction in the game, etc. Positive feedback motivates and induces players to behave accordingly. The game rules invariably limit the players' behavior and thus side-guide them to perform game behaviors that are mostly expected by the game designers, and may even be deliberately done by the game designers. The authority seal not only covers the rules of the game, but also relates to the game publicity outside the game. Out-of-game propaganda can appropriately provide players with a psychological expectation of the game and thus assist in inducing empathy in the corresponding situations designed by the game designer.

4. THE SHAPING AND INFLUENCE OF EMPATHY ON PLAYER BEHAVIOR

4.1. The persuasion game and the editorial game

As a term coined by game scholar Bogost, persuasive games are often considered a subclass of serious games, deliberately designed as a way to talk about a problem or as a way to advocate for action. "Editorial games are expressive games" to distinguish those areas of gaming that "encourage players to experience ethical and moral choices and understand the consequences of those choices". Then introduce some case studies.

In the game of *train*, the player has to move the train to get the people on the train to their destination. Only by doing this can the player complete the game. However, it is not until the end that the player discovers the destination is Auschwitz. The experience is amazing. In this game, the relationship between the player and the abuser is an accomplice. Many players choose to replay and stop the train from reaching its destination. The game had a profound impact on players who played it and helped spread anti-fascist ideas.

The game of *Silence* is a game set during the Rwandan genocide. In the game, you play as the mother of a child, and you have to press a button at a certain time to sing a lullaby to keep the child from crying, so that you and the child will not be killed by Rwandan soldiers. It shapes the player's identity -- the bond between mother and child is very strong, and the interaction of comforting the child to stop the child from crying makes the behavior familiar, draws the player into conflict, and leaves the player terrified of the consequences. The game's empathy helped spread anti-fascist ideas by making players aware of the inhumanity and cruelty of the slaughter.

In the game of *My Life as a Refugee*, players have a limited amount of time to make choices that affect the fate of the characters they control. It is a persuasive game designed to focus on the lives of refugees and guide them through legal extradition to other countries by getting players to experience the hardship of being a refugee. After playing, most of the players expressed strong sympathy for the refugees. Through the game, more people learned about the conflict between Israel and Palestine.

4.2. Empirical research

In general, persuasive games and editorial games have two main effects: cognitive change and behavioral change. Since behavior is difficult to observe and behavior and cognition are difficult to talk about separately, the empirical research below is mainly divided into two aspects: individual cognitive impact and mass social

impact. Personal cognitive influence mainly relates to the influence of players' empathy in the game on players' cognition, and partly relates to its influence on players' behavior. Social influence involves the influence of players' empathy in the game on players' individual cognition, behavior, and the derived influence on society.

A person's behavior is consistent with the performance of the personas they manipulate in a video game, regardless of how others perceive them. In the research of Nick Yee^[7], a major experiment was to have college students play a game in which they played the role of the elderly. The experimental results showed that when players role-played in the game, they could increase their empathy for people with similar characteristics of the corresponding characters. In this experiment, participants showed increased empathy for older people and reduced stereotypes after impersonating them.

Researchers at the University of Innsbruck^[8], led by psychologist Tobias Greitemeyer, conducted an experiment to see if video games could increase empathy in participants. They found that video games can be designed to be a powerful tool for triggering empathy in the experimenter. In this study, they examined the effects of playing video games on players' ability to empathize. The results showed that video games with humanistic care and prosocial thoughts at their core enhanced players' empathy and reduced players' enjoyment of others' suffering.

In the research of Hafner M^[9] on empathy in persuasive games and editorial games, he found that empathy creates stronger emotions and deeper personal experiences. The results showed a positive correlation between empathy and player engagement in game narrative. The study focused on persuasive games, and the kinds of persuasive games involved in the study had some social impact. The results of this study suggest that the depth of narrative, the sense of identity of players, and the sense of reality conveyed by games contribute to players' empathic experiences, and these empathic experiences often influence players' later thinking and behavioral decisions in the real world.

5. CONCLUSION

Video games are now part of many People's Daily lives. Games have also become an important way to influence the younger generation -- role-playing, immersive experiences, and identity shaping in virtual environments can influence players' thoughts, behaviors, and cognition. At the same time, such sensory stimulation, such as images, audio and video, tends to have a more profound impact on players than traditional media, which also tends to bring more profound emotional experience to game players, and even make them empathic. This study focuses on the attribution of players' empathy in games, as well as the shaping and influence of empathy on players'

behavior. Through literature analysis and empirical research, this paper shows that players' empathy in games can change players' cognitive and behavioral patterns, thus making games have certain social influence.

The main focus of this article is on the potential of games to create empathy in players and change their perceptions. Compared to traditional media, games are more effective as a means of expressing their themes and have a more profound impact.

Currently, there is limited research on games designed to educate gamers, promote prosocial behavior, and improve the overall moral development of society, and the development of these games is still in its early stages. More research is needed into the potential of games to promote certain behaviors and influence users' cognition.

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