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Study on the Influence of the Language Symbols on Side-Scrolling Puzzle Games ---- Focused on the Players' Empathy

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Abstract

According to whether language symbols are used to solve puzzles, puzzle games can be roughly divided into puzzle games with language symbols and puzzle games without language symbols. Puzzles games with language symbols can be subdivided into dialogue puzzles games and word puzzles games. These different puzzle-solving methods have different characteristics and have different effects on the empathy in the game. In horizontal scrolling games, due to the characteristics of the third-person perspective of horizontal scrolling games, there is always a 'fourth wall' between the player and the controlled character, making it difficult for players to gain a empathy when playing such games .Especially when there is a dialogue between a player-controlled character and an NPC, the sense of distance between the player and the character will be further amplified. As one of the most common game types in side-scrolling games, side-scrolling puzzle games can be divided into language symbols-based puzzle game and non-language symbols-based puzzle game according to whether language symbols are used to solve puzzles, and then promote the development of the game plot. We combine the characteristics of horizontal scrolling games, and analyze the influence of language symbols on empathy in puzzle-solving games by summarizing the game characteristics of two different puzzle-solving methods. The results show that in horizontal scrolling puzzle games, solving puzzles without using language symbols can better expand the player's sense of plot substitution.

Keywords: Side-Scroll Game, Puzzle, Language Symbols, Empathy, Semiotics, Fourth wall

1. Introduction

Today, the most commonly mentioned field of 'empathy' should be video games. Among the many electronic games, side-scrolling games have a very special historical status and very interesting features. Due to the particularity of the perspective of horizontal scrolling games, players are in a state similar to sitting under the stage watching a stage play when playing related games. In this state, there is a 'fourth wall' between the player and the character, so the player feels less empathy when playing this type of game than in a first-person game. However, the empathy is an important element in game interaction, so how to improve the player's empathy under such conditions is a difficult problem. In order to solve this problem, the author chooses one of the most common methods of side-scrolling scrolling games, that is, side-scrolling puzzle games as the research object of this study, and classifies them based on the feature that puzzle-solving games need enough clues Induction, so as to try to find ways to improve the player's empathy. At present, clues in puzzle games are generally conveyed through language symbols, and the language symbols here include words, dialogues, and pictographic graphics. But at the same time, there are also some games that do not rely on language symbols to convey puzzle-solving information, but guide players to solve puzzles based on experience through the logical relationship between clues and items or the atmosphere created, thereby promoting the further development of the game plot. Based on the characteristics of side-scrolling games, this article will start from the interactive method of decryption, and try to find the decryption interaction method that best fits the characteristics of side-scrolling games.

2. Side-Scrolling Puzzle Game and Language Symbols

Side-scrolling game means that the perspective of the game is a third-person side perspective and the dimensions of the game only have two axes, the y-axis representing 'front' and 'back' and the z-axis representing 'up' and 'down', without The game type for the x-axis representing 'left' and 'right'. Because the game screen will change with the left and right movements of the player-controlled character (the 'left and right' here is 'front and back' for the player-controlled game character), like a rolling scroll, so it is called a side-scrolling game. As a kind of gameplay that often appears in most games, puzzle solving is very suitable for the characteristics of side-scrolling games, and has become a more mainstream gameplay in side-scrolling games.

2.1 Features of Side-Scrolling Games

Third Person Side View Game Perspective. The perspective of the side-scrolling game is a third-person side-view game perspective. Compared with the first-person game perspective, in this game perspective, the player is more like a spectator sitting on the game character performance in the stands under the stage, rather than an experiencer. So, the player's empathy is low, which is far inferior to the experience of the first-person perspective game. Then, how to break the 'fourth wall' in the drama, so Let players no longer just watch the game from the perspective of spectators, but can substitute themselves into the game plot, so as to obtain a better game experience is a problem that developers must face and solve. The interaction of other NPCs with the player-controlled character is a great solution in a first-person game, but not necessarily so in side scrolling games. Because of the 'fourth wall' and the third-person perspective, the dialogue and interaction between NPCs and avatars cannot break the wall. On the contrary, it will make the player feel that he is not talking to the NPC, but the avatar on the stage is talking to the NPC, thus strengthening this sense of distance.

Only Two Axes. In a traditional side scrolling reel game, there are only Y and Z axes. At this time, the player can intuitively and clearly identify the location of the character through the game screen. In recent years, some side-scrolling games have had an X-axis. However, unlike the Y-axis and Z-axis, it is difficult for players to truly discern the depth of the X-axis through the game screen. For example, it often happens

that the player feels that he has reached a location, but in fact he is far away from the target location, resulting in a poor game experience for the player. Therefore, only the Y-axis and Z-axis are still the mainstream of side-scrolling games.

With only two axes, side-scrolling games limit the player's room for movement compared to most first-person games. In a first-person game, the player has 26 directions to go. In side scrolling games, there are only eight directions. With only horizontal movement, there are eight directions to choose from in a first-person game, but only two in a side-scrolling game. Therefore, the space for players to move freely is quite limited, but it also provides the possibility to unravel the mystery without explicit decryption prompts.

2.2 Puzzle Game and Language Symbols

Language symbols refer to symbols that can refer to concrete or abstract things in our real life. The Swiss linguist Saussure called the symbols and sounds of language vocabulary that specifically express a certain thing in language a 'signifier', and the specific thing to be expressed itself is a 'signified'. As shown in Figure 1, the real apple is the 'signified', while the English 'apple', its pronunciation, and the graphics that remind us of apples all belong to the 'signifier'. Language symbols allow us to quickly and clearly understand what each other wants to express. Using language symbols in puzzle games is a common way to quickly make players understand the game background and provide players with clues to solve puzzles.
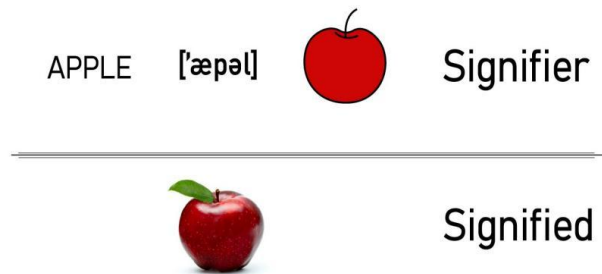

Figure 1. Signifier and signified

Therefore, puzzle games can be classified according to the presentation of language symbols, and the detailed classification and analysis will be carried out below.

3. The Effect of the Way of Solving Puzzles on the Player's Empathy

According to whether there are language symbols in the puzzle-solving clues, side-scrolling scroll puzzle games can be divided into language symbols-based puzzle game and non-language symbols-based puzzle game. At the same time, when language symbols appear in the game, according to the way the language symbols are presented, the language symbols category can be further subdivided into dialogue-based puzzle game and text-based puzzle game.

3.1 Classification of Puzzle Games Based on Language Symbols

Language Symbols-based Puzzle Game. According to the presentation of language symbols in puzzle games, the author divides puzzle games with language symbols into dialogue puzzle games and word puzzle games. In these two main categories, there are not only the written symbols and sounds of the language, but also the graphics. As shown in Figure 2 (left), in the game 'Valiant Hearts: The Great War', the communication between the character played by the player and the NPC is not spoken to the player in

Chinese or English, but to the player in the form of pictures.

Figure 2.   'Valiant Hearts: The Great War' and 'The little red lie' screenshot

The first is the dialogue-based puzzle game. This kind of games are to let the NPC directly tell the player what happened and what the player is going to do through the dialogue between the player character and the NPC. This method can make the player have a strong empathy in the first-person perspective, making the player feel as if he is talking to someone else.

The second is a text-based puzzle game, which usually appears in the form of an item that can be viewed, such as a diary, post-it notes, carvings, etc. As shown in Figure 2 (right), a note is used to tell the player how to unlock the lock. This method is a very common way to tell the player the plot, the background of the game and the clues to solve the puzzle.

Non- language Symbols-based Puzzle Game. Non-language symbols-based puzzle games give players more freedom, and players can explore the world as they please. Players describe the story background of the world in their minds by experiencing one thing and one scene after another, and understand the connection between several objects. For example, as shown in Figure 3, in the game 'inside', at the beginning of the game, the character will encounter a truck in the woods. When the character controlled by the player walks behind the tree, there is no need for the player to operate, the character will automatically change into a bending posture and walk, in order to indirectly tell the player 'we need to avoid this car and the people in it'. At the same time, it will also stimulate the player's imagination and association, 'Why is he avoiding them, why is he driving the truck into the forest, why are they killing this little boy', from this point on, the player enters a more active game experience status.

Figure 3.   'Inside'

3.2 The Relationship Between Different Puzzle-solving Methods and Empathy

Due to the third-person side perspective, the 'fourth wall' between the player and the character always exists, so the empathy of the side-scrolling scrolling game is weak. But the characteristics of the game (role-playing game) itself require the game itself needs to have a certain empathy. If there is no connection between the player and the game character, the player will not be able to be brought into the role, and the game experience will be much worse. The following will combine the characteristics of the side-scrolling scroll game to analyze the ability to bring Give players a more immersive game puzzle solving method.

The first is dialogue-based puzzle game. In this kind of games, the way of dialogue has a strong empathy in first-person games, especially in the case of real-life dubbing, but it is not the case in side-scrolling games. Even on the contrary, this method will increase the distance between the player and the character, and strengthen the 'fourth wall', especially when there is a dialogue between the character controlled by the player and the NPC, the sense of distance will be greater, as if Players sit in the audience and watch their characters perform with other NPCs on the stage. Especially in most cases where the dialogue is triggered, the player will also temporarily lose control of the character. At this time, it will be difficult for the player to gain a empathy. In the absence of dubbing, players still need to shift their attention from character control and the experience of the game environment to the text on the screen. Even in the previous games, players gained a strong empathy, but empathy also disappears with the loss of control over the character at the moment.

The text-based puzzle game will give players a strong empathy, because in this kind of games, the player's perspective will change from a third-person side view perspective that is not easy to get a sense of immersion to a first-person perspective. In the first-person perspective, it is easier for players to get a empathy. Because at this time, even if there is a lot of text to read, it is also the direct interaction between the player and the text, for example, the player is checking a diary, a message, etc. But this kind of experience is temporary and incoherent. Once you finish viewing this text puzzle clue, the player's game perspective will change from the first-person perspective to the third-person side perspective. This switching back and forth will cause the player's game experience to be incoherent. Even in the middle and late stages of the game, players have been 'desensitized' and cannot get a empathy from the first-person perspective when viewing text clues, and even create a sense of confusion.

The puzzle-solving prompts in non-linguistic puzzle-solving games are all in the game environment, character's action response, sound and other game elements. In this case, the player's attention will always be focused on the game, through the game The scenes and the actions of the characters actively generate associations and imaginations, and then solve the puzzles. In this positive experience process, players will put themselves into the game scene, and start to actively interact and think, such as who am I, where am I, what am I going to do, why is that person chasing me, etc. , at this time, the player will have a strong empathy, and it will be a continuous experience, different from text-based puzzle-solving methods, players need to draw their attention away from the game scene and the atmosphere of the game, and focus on the text information. Another important reason why the non-linguistic puzzle-solving method is suitable for side-scrolling scrolling puzzle games is the limitation of the activity space of side-scrolling scrolling games. Since there are only two axes, there are few things that players need to consider. Generally, there are only left and right directions. A few scenes will have up and down scenes, which greatly reduces the difficulty of solving puzzles. This enables players to find clues to solve puzzles and the direction to go without language prompts. If it is in a first-person world with a high degree of freedom, without considering up and down, the player has eight directions to choose from. In this case, if there is no clear language prompt, the player will

fall out of the 'heart flow channel' because the puzzle is too difficult, and will no longer gain a empathy.

4. Conclusion

We found that in side-scrolling puzzle games, due to the unique perspective of side-scrolling games and the fact that there are only two axes, the sense of immersion players get will also vary depending on the interaction method of solving puzzles. Especially when compared with first-person games, this gap is particularly obvious. In side-scrolling scrolling puzzle games, when there are no language symbols, players can fully bring themselves into the game world, and it is always a continuous experience with a high sense of immersion during the game. However, when there are language symbols, the empathy obtained by the player is either very low because it fails to break the 'fourth wall', or because of the incoherent game experience, even if the empathy obtained in some parts of the game is high, but in the overall the game experience is incoherent, which affects the player's overall empathy. In the future follow-up research, the author will conduct further research through the combination of experiments and questionnaires, and then verify the conclusions of this paper. It is hoped that this research can provide certain theoretical references for developers of related games, so as to help them make better game works.

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