

Semiotic Narrative Research in Digital Media Art

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Abstract: *This essay explores the concept of semiotic narrative in digital media art, focusing on three specific examples: "Xu Bing: Book from the Ground," "Rusty Lake," and "Spirited Away." It examines how semiotics, the study of signs and their meanings, can be utilized to convey narratives in various forms of media. The essay delves into the narrative techniques employed in each artwork, highlighting the use of signs, images, and abstract representations to enhance storytelling. The essay emphasizes the importance of semiotic coherence and the need for a story logic that aligns with the expressive meanings of the signs used. It concludes by highlighting the significance of semiotic narrative in media communication and artistic expression, providing insights for future artistic creations.*

Keywords: *Semiotics, Narrative, Digital media art, Signifier, Signified*

1. Introduction and background

Semiotics has a long history and has played an important role in the media communication of people's society since ancient times. "In a semiotic sense, signs take the form of words, images, sounds, gestures and objects" (Eco, 1979)^[1]. "Semiotics are often employed in the analysis of texts, although it is far more than just a mode of textual analysis." (Chandler, 1994)^[2]. Semiotics also has a narrative function. "The shift from metalinguistic semiotics to implicit semiotics reflects the internal logic of the narrative turn" (Barthes, 1972)^[3]. The development of semiotics covers the formation of semiotic narratives. Many scholars have combined semiotic narratives with digital media arts such as movies, advertisements, and VR, and analyzed the research methods of semiotics and narratology.

Therefore, based on these theories, this essay mainly studies how semiotics narrates. Analyze the way of semiotic narrative and the elements of semiotic narrative in the process, and explore how to use semiotic narrative to describe our current media information through the expression of story content. In this essay, semiotics has three characteristics in the way of narrative. 1. Concretize signs, combine signs as word phrases, and connect them into sentences to narrate; 2. As signs themselves, connect signs as clues of images to narrate; 3. Abstract the signs, and use signs as scenes to supplement and pave the way for the main storyline, making the narrative more complete and echoing. The following three digital media arts about semiotic narratives named Xu Bing: Book From The Ground, Rusty Lake, and Spirited Away aim to show their storylines and attract readers to enter and continue to explore. Force on their presentation and methodology in semiotic narratives. It helps us better understand the narrative methods and characteristics of semiotics, and also brings us enlightenment on semiotic narratives in creating more artistic creations in the future.

2. Xu Bing: Book From The Ground

"Book from the Ground" is a readable novel written in a set of "sign language" collected and organized by Chinese artist Xu Bing. "No matter what kind of cultural background the reader is, as long as he is involved in contemporary life, he can understand this book" (Xu, 2007)^[4]. "Book from the Ground" mainly uses clear signs and images to explain a relatively complex and important matter with the least words. For example, the three small pictures on the chewing gum wrapping paper (Figure 1): "Please throw the used gum in the trash can". As long as this simple thing can be understood by people all over the world through these three signs, a complex story can be told with more signs. In fact, Xu Bing's "Book from the Ground" can be said to be a narrative article written with such a set of "new pictographs". In the terms of Peirce's semiotics, these signs use images as modes of text, seeking a semiotics that completely replace spoken language (Short, 2007)^[5]. In this multimodal work is shown "a flexible, experimental and 'high tension' relationship between word and image" (Mitchell, 1994)^[6].

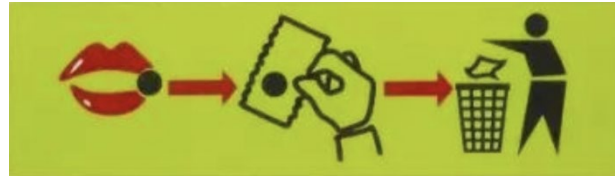


Figure 1: Chewing gum wrapping paper.

It is necessary to study this "Book from the Ground" from the perspective of semiotic narration, subdivide the types of signs according to the connection between signs and meanings, and study how signs narrate. The signs in "Book from the Ground" can be divided into five categories: pictographic signs, symbolic signs, indicator signs, ideographic signs and structural signs. Pictographic signs refer to those signs that describe the shape of things and generate meaning through "similar" methods (Figure 2). Symbolic signs refer to expressing a special meaning with conventional signs, and there is stability between signs and meanings (Figure 3). Indicator signs are signs that are added to signs to express various additional meanings to make the meaning more accurate, but not independent of themselves. For example: expressing excitement, expressing doubts, expressing arcs on the telephone when the telephone rings, etc. (Figure 4). Ideographic signs is formed by adding indicator signs on the pictographic or symbolic signs, and is a combination of two signs. For example, "the telephone ringing" mentioned above, "there are vacancies near the aisle", "there are no vacancies near the window", "airports", "restaurants", etc. (Figure 5). Structural signs refer to those signs that have no real meaning. For examples, commas, periods, parentheses, braces, colons, quotation marks, etc.

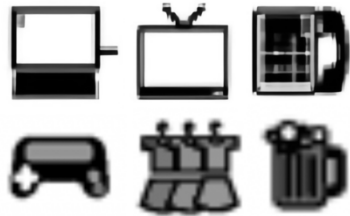


Figure 2: Computer, Television, Telephone, Game Console, Clothes, Beer.



Figure 3: The national flag sign representing a country.



Figure 4: Indicator signs.



Figure 5: Ideographic signs.

These signs are equivalent to verbs, nouns, adjectives, adverbs, and conjunctions in the text, and each has its own meaning and form. In "Book from the Ground", there are a bunch of signs spliced together. When reading, you must understand the meaning from the combination of signs which creates a new meaning for the story line, but this new meaning is not a simple addition. There is not a one-to-one correspondence between signs and words, and a sentence can often be understood only by combining several signs. Therefore, in "Book from the Ground", the signs restrict each other and restrict the signified, which makes the narrative expression of the full text more complete and accurate, and thus helps people understand the work. For example: "A person hails a taxi", "A person sees McDonald's", "An adult kisses

a child", "A person puts a key in a basket", "A book about Australia", "A person thinking he's going to catch a plane", "The alarm went off during the security check", "Walking non-stop to the clothes shop" (Figure 6).



Figure 6: Some combinations of signs to express more complete sentences.

In addition to the combination of signs, there are also a small amount of text assistance and visual processing means in the "Book from the Ground". Text is also a kind of sign. Numbers represented by Arabic numerals can make narrative expressions more accurate and directional. For example, a mathematical operation sign "multiply" followed by an Arabic numeral 3, which represents a cycle three times (Figure 7), it means that three days have passed. Means of visual processing such as shadows, colors, repetitions, annotations, etc. For example, if a light is filled from off to on with gray and yellow fills, this is the color of simulated real light (Figure 8). For another example, the vehicles sign and the sweaty face mark appear repeatedly and alternately, each time the number of vehicles and sweat drops gradually increases, showing the serious traffic jam and the inner anxiety of the protagonist (Figure 9). The more signs people create, the richer the stories that can be told.



Figure 7: The sun rises and sets three times - Three days have passed.



Figure 8: A light is filled from off to on.

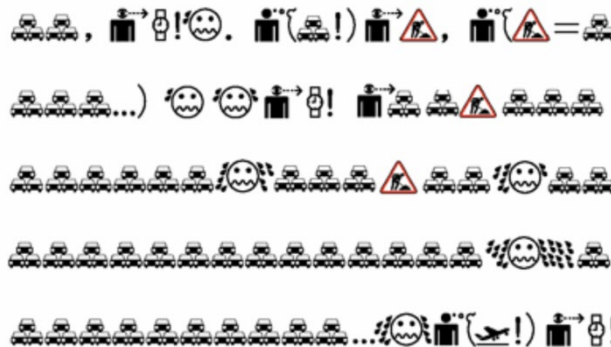


Figure 9: The serious traffic jam and the inner anxiety of the protagonist.

Analyze Xu Bing's semiotic narrative from different perspectives. In terms of humanities, it transcends the boundaries of culture and nationality, and the language barriers between countries and nations. In terms of innovation, he created a new language form, so that his semiotic narrative language can become a translated visual expression. In terms of communication, it can only read in two-dimensional forms such as writing and screen, without other multiple senses, so that narrative information can only be understood but not expressed in words. Discuss the semiotic narrative in "Book from the Ground", and try to provide another perspective for the study of artworks.

3. Rusty Lake

Rusty Lake is a series of adventure puzzle games developed by Dutch independent studio. It tells the story of two families, the Vanderbooms and the Eilanders, in their quest for immortality. The plot of the game is simple and clear. Although a lot of words are not used to explain the development of the story and the ending of the story, the movements of the characters in the screen and the shape, color, and placement of objects all convey the direction of the plot through semiotics. Each sign has its unique meaning in the entire narrative line, and each prop can also be used in unexpected ways for players.

The simple media text information explained the background of the story, and then it was all about semiotics for narrative. Investigating the elements in the screen, the player can find that after clicking the protagonist, a small bubble pops up next to the person's head, and there are four stick figures drawn in the small bubbles (Figure 10). The signified in this paragraph of signifier is: this character needs fishing rod, rope, hook and bait. The player continues to investigate the scene, and can find that there is a person in the window of the door in the middle, and by clicking on this person, we can know that he wants a shrimp (Figure 11). Observe the signifier in the scene, the protagonist is standing by the lake, the signified here has an environment where fishing is possible. Through the connection between the scene and the signs in the bubbles, the player can describe the plot of this game: we need to have fishing rod, rope, hook and bait first, and then hand them over to the protagonist by the lake. The protagonist should catch a shrimp, and then hand the shrimp to the person in the door (Figure 12). It can be seen that the story can be narrated through many related and clear signs such as graphic or pictographic without media text. By studying the composition and signs of this short section of the story, it can be found that the signs here represent all the nouns in the story.

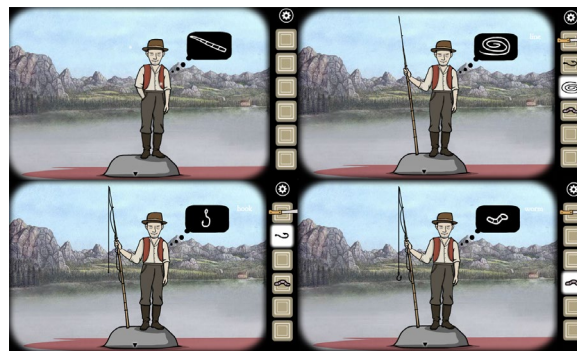


Figure 10: The signs for the four items that the protagonist needs.



Figure 11: The guy in the window wants a shrimp.



Figure 12: The flow of this story.

The Rusty Lake is always in the process of decryption. By clicking on the protagonist in the level, it obtains the thoughts expressed by the protagonist in semiotic images. Understand the props or objects represented by this sign in this scene (Figure 13), and then unlock the mechanism through the decryption operation, obtain the target object, and start the next decryption. In terms of the process, there are countless puzzles within countless puzzles, and the puzzles are always connected by various signs in the scene. Each signifier only corresponds to the signified in this riddle, the media text is all narrated by the short stories connected together by each signified. According to the conjectures for each associated signifier and signified, solve the puzzle while completing the process of the puzzle, and this process is a story told by semiotics.

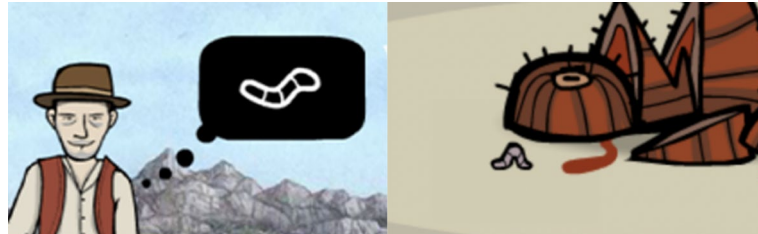


Figure 13: The thoughts expressed in semiotic images represent objects in this scene.

This style and game mechanics run through the entire series of games. Rusty Lake's semiotic narrative not only tells the story clearly, but also has emotions. These are three sheets of identity information about the triplets Emma, Samuel and Albert. On the top of the paper are the avatars and characteristics of the three children, which are to help the player to correspond to the three children in the cradle one by one (Figure 14). The middle part of the paper is object images and liquid imprints with colors. Emma's two flowers symbolize her frivolous future and early pregnancy. The blue liquid represents that her mother feeds her with rain, which indicates her fragile and sentimental character. Samuel's clock symbolizes that he will be a carpenter who makes clocks in the future, and the white liquid represents that his mother feeds him with milk, which indicates his honest and ordinary character. Albert's mask symbolizes that he will have irreparable scars on his face and has to wear a mask. The red liquid represents that his mother feeds him with red wine, which indicates his crazy and brutal character. It can be seen that while the semiotic narrative clearly expresses the plot, it can also convey the character and emotion of the characters through the imagery of colors and objects. Depicting the characters more concretely and vividly helps to shape the character's story line more completely. You can express the emotions of the characters with the help of signs with connotative functions, construct a biography of the characters, and fill in the story line.

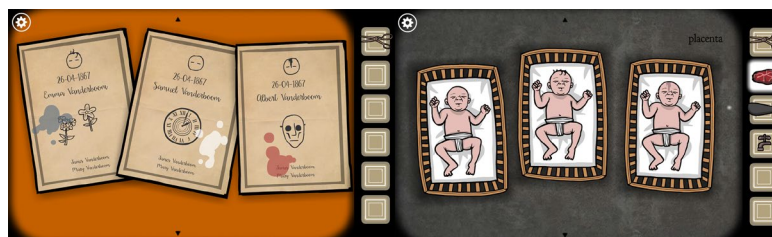


Figure 14: The identity information about the triplets.

Although some comments say that the Rusty Lake has bloody screens, horror styles, psychological darkness and perversion, but this does not prevent it from being a great adventure puzzle game. In the semiotic narrative of Rusty Lake, the signifier is expressed with related and definite signs. The signifier corresponds to the signified in the riddle, and the truth emerges through the stories connected with each puzzle. The signs with strong visual impact make these elements more bloody, immersively allowing players to feel the misfortune of the characters. The signs with connotative functions make the puzzles compact and inseparable from each other, attracting players to linger on the game story.

4. Spirited Away

Spirited Away is an animated film directed by Hayao Miyazaki and produced by Studio Ghibli. The biggest feature of Spirited Away is that it used many elements of the screen to make a lot of semiotic metaphors, vividly and exquisitely reflecting the significance of semiotic narrative. The multimodal metaphors in the film are creative and complex. In Ren's research on multimodal construction(2022)^[7],

it is found that the attitude meaning of the characters in the film is mainly transformed from negative to positive; the scenery and props in the film also have specific semiotic meanings and functions. They complement each other in semiotic narratives, and construct an implicit narrative line, predicting the transformation of characters and the direction of the plot.

In this film, the three typical scenes of "lost", "finding" and "returning" connect the beginning, development and climax of the story in series. These three scenes represent three unique signs that construct the connection between the audience and the film. In the film, the metaphor of scene symbols enhances the narrative effect, and the signs and the meaning of the film expressed are integrated with each other, which has strong psychological hints and subjective associations in semiotic narrative.

"Tunnel" as a scene sign of "lost" refers to the theme of "lost". At the beginning of the film, Chihiro's family step into the tunnel, which expresses their lost situation. At the end of the film, they walk out of the tunnel, expressing that Chihiro's family stepping into the regression (Figure 15). In the film, the tunnel is the link connecting the two worlds. The outside world is the psychological reflection of the ego, and the inner world is the psychological reflection of the id. By entering and exiting the tunnel, semiotic metaphors also tell the audience the current state the protagonist has entered, which helps the audience understand the story line and the protagonist's emotions and behaviors. The tunnel is a metaphor for Chihiro lost in the entanglement of ego and id.



Figure 15: The Chihiro's family step into and walk out of the tunnel.

"Bathhouse" as a scene sign of "searching" refers to the theme of "searching". As far as the exterior design of the bathhouse is concerned, elements such as the square body, arched eaves, red walls, and protruding spires are signs of the spiritual home of the Japanese. On the outside of the castle, there are tall chimneys emitting black smoke (Figure 16), which is a sign of Western technological civilization. As far as the interior design of the bathhouse is concerned, elements such as tall vases, wooden floors, and screens with auspicious clouds are signs of Eastern civilization, while boilers and fireplaces are indicators of Western civilization (Figure 17). Conflict and opposition, harmony and unity in this scene expounds Chihiro's loss in opposition and longing to seek a return in unity. The sign design of the bathhouse is shows that Chihiro's "search" process builds a convincing background for Chihiro's story line of finding herself while working in the bathhouse.

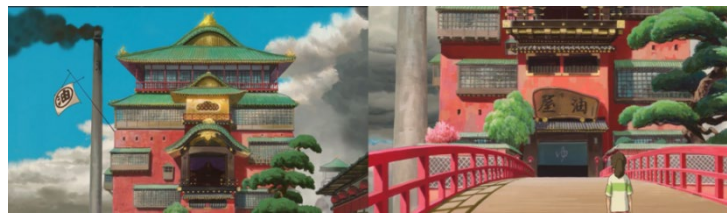


Figure 16: The exterior design of the bathhouse.

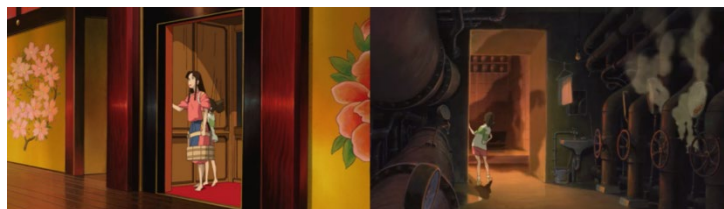


Figure 17: The interior design of the bathhouse.

"Car covered with leaves" as a scene sign of "return" refers to the theme of "return". The car is a tool for Chihiro's family to come and leave, which is a metaphor for Chihiro's lost and Chihiro's return. No matter how many twists and turns lie ahead, this scene will give the impression of hope (Figure 18). And the establishment of this impression is constructed by mobilizing all scene elements. Green symbolizes peace, freshness, freedom and comfort. The bright and soft light makes people feel cheerful and gets rid

of the previous haze. This hopeful sign plays a closing role in the narrative line of the entire film, allowing the audience to feel a happy ending.



Figure 18: The car and the hopeful scene.

Every scene in *Spirited Away* is complete and meaningful. It narrates the entire story line more richly through metaphors, which is worthy of repeated deliberation by the audience, studying the connotation of signs, and paving the way for the storyline. There are great differences between scenes in terms of cultural level and audience perception, and the meaning expressed in the film with this difference gradually shrinks, which strengthens the audience's psychological identity. The symbolic scene design undoubtedly played a role in unifying the form and content, enhancing the theme expression and narrative logic of the film.

5. Conclusions

Book from the Ground, *Rust Lake* and *Spirited Away* are three digital media art works related to semiotic narratives, which reflect different semiotic narrative methods. *Book from the Ground* expresses the story by combining each sign language. Signs have the functionality of language, using semiotic narration to create this new form of language, open up another possibility, and build a communication mode without national boundaries. *Rust Lake* is narrated by clues and puzzles connected by corresponding signifier and signified. Interpret the text through signs, simplify the composition of the text, reflect the charm of the signs, effectively promote the story process, express the plot of the story concisely and clearly. *Spirited Away* relies on scene signs to pave the way for the plot in the form of metaphors, which enriches the plot of the story, shapes the character of the characters, and dominates the ending direction. Let the audience enter the story line at a deeper level, and empathize with the protagonist. Although their narrative methods are different, they all use signs to make people consider the meaning that the sign wants to express, so that people can understand the story that the author wants to present.

Different from traditional text narratives, semiotic narratives require audiences to use their own understanding and experience to consider its metaphorical meaning. And the story that everyone understands is not necessarily exactly the same, and it can better reflect the viewpoint of "a thousand audiences have a thousand Hamlets". According to different media properties, to explore and create more different semiotic narrative methods. Make our media richer and more interesting, attract more audiences to experience, and let them immerse themselves in the expression of media stories. The study of semiotic narrative has become more and more meaningful. We need to use these characteristics to better create, and increase its appeal to audiences in media that will use more semiotic narratives to express stories in the future.

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