

Iconicity: A Basic Characteristic of Signs in Game Text

Research on a Foundational Question of Game Semiotics

Yaopeng Xu^{1,*} Qinxin Yu²

¹ Department of Game, Software Engineering Institute of Guangzhou, Guangzhou, Guangdong 510900, China

² College of Food Science, Sichuan Agricultural University, Ya'an, Sichuan 625000, China

*Corresponding author. Email: xuyy@mail.seig.edu.cn

ABSTRACT

The semiotics of games treats games as symbolic text and provides a set of systematic research methodology for the field of game studies. Based on the semiotic theory of Charles Sanders Peirce, this paper analyzes the essential quality of the smallest unit "act" in the game text and holds that the "act" belongs to "icon", which forms a universal iconicity nexus with the mental imagery of the designer. Meanwhile, such iconicity also endowed games with great artistic potential.

Keywords: Game studies, Semiotics, Icon, Game design.

1. INTRODUCTION: GAME RESEARCH AND SEMIOTICS

In 1999, the Uruguayan game research scholar Gonzalo Frasca distinguished basic concepts in the field of game research between "Paidia" and "Ludus" in the article "Ludology Meets Narratology: Similitude and differences between (video) games and narrative", and compared the structure of "Beginning-Development-Result" in "Ludus" with the linear narrative mode proposed by a narratology scholar called Claude Bremond in detail. It is considered that games are different from narratives, which formally declares the independence of ludology [1]. The establishment of ludology is undoubtedly an exciting good thing for scholars who are dedicated to the research of specialized digital games. However, in addition to joy, the researchers must also see that there is still a methodological dilemma in ludology.

Starting from the first doctoral dissertation (Buckles Mary Ann, 1985) that analyzes a digital adventure game, the research on digital games has actually been developed for more than 30 years. During these decades, the field of digital game

research has been lacking a unified and systematic research methodology. Early digital game research has always been based on literary theory as its own pabulum. For example: in his 1993 monograph "Computer as Theater", Brenda Laure started from Aristotle's drama theory and regarded computers as an interactive digital drama [2]; Janet Murry compared the narrative works of different media from the perspective of narratology in first edition of her monograph "Hamlet on the Holodeck: The Future of Narrative in Cyberspace" in 1997 and believed that digital games will become a new narrative category [3]. After the creation of ludology, the research methods in the field of digital game research became more complicated. For example, Jesper Jull used numerous research methods including game design theory, cognitive science theories, and computer science theories in his monograph "Half-Real: Video Games between Real Rules and Fictional Worlds" [4]. The initiative put forward by Espen Aarseth when the "Game Studies" was launched has now become a reality: today's ludology research methods are indeed in a state of blooming. From an objective point of view, on the one hand, the intersection and coupling of different research methods have indeed injected a lot of vitality into the emerging discipline of ludology; but on the other hand, this situation has

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also caused a dilemma, that is, the lack of common discourse among game research scholars.

The Chinese scholar Zong Zheng first proposed the concept of "The Semiotics of Games". He believes that the reason why ludology has not found a suitable methodological basis is that it lacks a universal theoretical framework as a bridge to connect different academic ideas within ludology, and generalized semiotics can take on this important task [5]. Semiotics, as one of the pillars of contemporary critical theory — the aggregator of formalism theory, is itself a product of multidisciplinary cross-convergence. It has strong universality and operability. The integration of ludology and semiotics is a new attempt to systematically construct game research methodology. In fact, many studies have used formalism methods to analyze digital games. The latest examples such as Alex Mitchell and others have used the classic Russian formalism theory "Defamiliarization" to analyze how video games can defamiliarize player expectations to create poetic effects [6].

2. SIGNS IN THE GAME

Based on the theory of game semiotics, games can be disassembled into four levels from the inside to the outside for analysis: the aspect of system, the

aspect of interaction, the aspect of discourse, and the aspect of context ("Figure 1"). The aspect of system can be understood as the deep structure of the game, that is, a static but full of possibilities of the formal system, including the rules of the game and the static aesthetic elements of the game. The aspect of interaction refers to the player's interactive behavior, which contains two sub-dimensions, including the player's manipulation of the game controller in the real world, and everything displayed by the avatar in the game world after receiving the player's input. Once the player interacts with the aspect of system, dynamic discourses of various forms will be generated. The aspect of discourse can be understood as the surface structure of the game. Zong Zheng calls this layer "Text of game", which includes "all the details produced by the player from participating in the game to the end of the game [7]." The aspect of context is subdivided into two parts: external context and internal context. The external context refers to the actual physical environment when the player reads the system layer and the context when the designer designs the game, such as the social semantic field in which the designer designs the game; the internal context refers to various additional factors carried by the game, such as various comments and reports on the game, etc. Zhao Yiheng called it "accompanying text" [8].

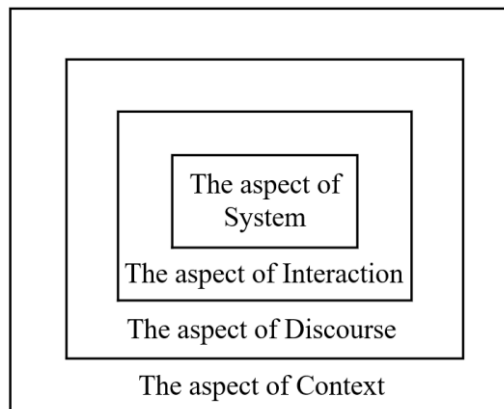


Figure 1 Four aspects of games.

Among the above four aspects, "interaction" is the decisive factor that distinguishes the game from traditional media. Therefore, many scholars believe that the player's game behavior is the basic unit of game signs. For example, Zong Zheng cited the viewpoint of Algirdas J Greimas and believed that "act" (similar to an action like moving a finger) is the smallest unit in the text of game signs [9]; Dong Minglai also proposed that any game is a series of behaviors as symbols, and the object of its denote is

a series of absent acts [10]. Some scholars argue that the basic signs of the game are the rules of the game, but the author believes that the rules are a hidden and unobtrusive sign system. Only when the player interacts with the rules to produce a perceptible "revealable image" at the discourse level, that is, the "act", can they touch the rule itself. Therefore, the "act" is the basic symbolic unit of the game. If "act" is the smallest unit of game sign text, what are its basic properties? How does

"act" express meaning? The following of this paper intends to explore the above issues in depth from the perspective of Peirce's semiotics.

3. PEIRCE'S SEMIOTIC CLASSIFICATION

3.1 Peirce's Triadic Condition of Signs

American philosopher Peirce has conducted in-depth research on signs from the perspective of logic since the 1860s, and proposed a series of "rules of thirds", the most important of which is called the "Triadic condition of signs".

Peirce believes that a sign consists of three parts: Sign/Representatum, Object, and Interpretant: "...I define a Sign as anything which on the one hand is so determined by an Object and on the other hand so determines an idea in a person's mind, that this latter determination, which I term the Interpretant of the sign, is thereby mediately determined by that Object. A sign, therefore, has a triadic relation to its Object and to its Interpretant [11]." Sign/Representatum refers to the perceptible part of the sign, which can be understood as the "signifier" in Saussure's semiotics; Object refers to what the sign stands for, which can be simply understood as the "Signified" in Saussure's semiotics; Interpretant refers to the thought aroused by the sign in the mind of the recipient. Taking the common "shield raising" action in digital games as an example, the sign/representatum refers to the perception of "shield raising" received by the player's sensory channels, such as the animation of shield raising, the sound effects generated by the friction between the shield and the armor, and the controller vibration; the object denotes the superficial meaning referred to by the above series of perceptions, that is, "raise a shield to defend"; the interpretant means a series of derivative thoughts in the player's mind triggered by the perception of "shield raising", such as a sense of security and reliability.

3.2 Peirce's Classification of Signs Based on Representative Character

In addition to distinguishing the basic ternary conditions of signs, Peirce also conducted the practice of sign typology based on different characters, among which the classification of signs based on the representative character is the most famous classification of signs. According to the

relationship between the sign/representatum and its object, Peirce divides signs into Icon, Index and Symbol. When a sign/representatum resembles its object, it is called icon: "I call a sign which stands for something merely because it resembles it, an icon [12]." Index, as the name implies, is that the sign can clearly point to the object, and there is an inseparable contiguous relationship between the sign and the object. Peirce took the wind vane as an instance, thinking that the wind vane as a sign clearly pointed out its object, that is, the direction of the wind. If the sign/representatum and its object show a lawful connection of social conventions, the sign/representatum is called a symbol. The social conventions have greatly improved the ideographic efficiency of signs. Therefore, most of the language and characters are symbols.

Iconicity, Indicative and Conventionality, as the three basic properties of signs, are closely related to the signifying process of mankind. Therefore, clarifying the basic sign of the game — "act" belongs to which category of the above, can help researchers to explore some basic problems related to the signifying process of games.

4. ICONICITY: THE BASIC NATURE OF GAME SIGNS

All actions of the player in the game always seem to imitate objects in reality. Dong Minglai believes that sports games originated from the imitation of military action: "The behaviors of ancient Greek athletes such as running, throwing, driving horse-drawn carriages, etc., directly related or even resembled another behavior, that is, the actual military struggle [13]." Gonzalo Frasca also pointed out in the article "SIMULATION 101: Simulation versus Representation" that digital games are a "simulation" medium that is as important as the traditional "representative" medium. From this point of view, there seems to be no doubt that the behavior of the player in the game is similar to that of the non-present object. However, this argument faces a strong question: With so many forms of digital games today, is it possible that the behavior of players in any game is an iconic imitation of real behavior? This question reminds people of many digital games based on a fantasy world setting. People seem to be unable to find a corresponding object in reality for the player's behavior of casting fireball in "World of Warcraft" (Blizzard Entertainment, 2004).

In order to respond to this question, it is necessary to carefully examine the signifying

process of the game. From a semiotic point of view, the conceptualization stage (that is, the early creative conception stage) of game design is a process of "self-talk" by the designer. At first, the designer faced the chaotic signs in their subconscious. These signs are often determined by his/her life experience (that is, the object of the sign). When the designer derives the interpretant

from these chaotic symbols, specific ideas appear. After obtaining specific ideas, the designer can code their ideas into game rules and wait for players to interact. Once the player interacts with the rules, the sign of the game — "act" will "appear". Finally, based on their own understanding of "act", the player derives the interpretant and enters the "infinite semiosis" ("Figure 2").

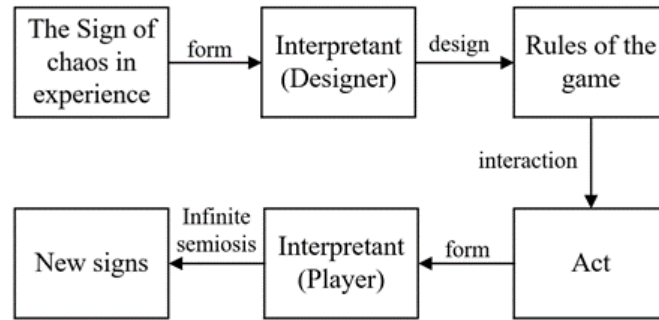


Figure 2 Signifying process of the game.

By observing the signifying process of game signs, we can find that the basic symbol of the game: "act", is the "revealable image" of the rules of the game, and the rationale for the rules of the game directly comes from the designer's interpretant, or "mental imagery". Therefore, any "act" in the game, even if it cannot find an iconic object in the real world, shares some similarities with the designer's psychological symbols. The author calls this iconicity "the universal iconicity" of game symbols. This iconicity is not the "imaginal iconicity", but higher-level metaphorical iconicity, or psychological topology. Zhao Yiheng believes that artistic images can topologically resemble the subjective image of the artist: "At this time, the object of text imitating shifts from external things to the artist's own experience, or the illusion that the artist himself may not be fully aware of [14]." Psychological topology gives the game great artistic potential. The mobile game "Florence" (Mountains, 2018) tells a seemingly ordinary but touching love story ("Figure 3"). In this game, the designer's main narrative tool is "act". At some point in the later stage of the game, there was a disagreement between the male and female protagonists. The designer designed an interactive gameplay point for this, allowing the player to reconcile the male and female protagonists by fitting the puzzle. However, due to the difference in the gap between the two pieces of the puzzle, no matter how the player tries, the broken puzzle will not fit perfectly. At this time, the player feels a metaphorical iconicity in the "act" (to

fit the puzzle through the operation). This iconicity conveys a truth about real life to the player, that is, "it is difficult to reunite a broken mirror".



Figure 3 Jigsaw gameplay in "Florence".

The universal iconicity of the "act" and the "mental imagery" means that digital games are fully capable of conveying the abstract emotions formed by the designer in the experience world like traditional art media. This way of conveying emotions is not to directly reproduce the designer's experience world through symbols, but to allow the player to perceive the "act" through the unique interactivity of digital games, and then to indirectly form a connection between the player's mind and the designer's mind. From this perspective, game designers not only need to consider what kind of "act" each rule they design will "appear", but also need to consider what explanations the player will make to the "act" and whether these explanations will make it resonate at the spiritual level.

Traditional art is the representative medium, and the iconicity between artistic symbols and the artist's "mental imagery" is direct; games are the simulated medium, and designers can only indirectly control player behavior by shaping the "space of possibility" (Eric Zimmerman, 2003) through rules. Therefore, the iconicity between the "act" and the designer's "mental imagery" is indirect. Iconicity means motivatedness. If the relationship between the "act" in a game and its objects is completely arbitrary, it means that the design lacks motivation. Therefore, in most cases, game designers need to constantly pursue the psychological topological similarity between the "act" and their own "mental imagery" in their design practice.

5. CONCLUSION

With the emphasis of many scholars on the rhetoric ability of games (such as the concept of "procedural rhetoric" proposed by Lan Bogost), no one can deny that games, especially digital games, can use their unique rhetoric devices to convey certain points of view, and the metaphor brought about by the universal iconicity of "act" is only one of many possible devices.

From a semiotic point of view, games as a speech tool have extremely powerful potential of ideological communication. This potential needs to be gradually released through continuous analysis of a series of basic properties of games as symbolic texts. This will also be the main direction of the development of game semiotics in the future.

AUTHORS' CONTRIBUTIONS

Yaopeng Xu is responsible for manuscript, and Qinxin Yu contributed to revising and editing.

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