

“Simulation as Means, Representation as End”: The Dialectical Mechanism of Affective Generation in *To the Moon*

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Abstract: This essay examines the 2D game “*To the Moon*” (Freebird Game Studio, 2011) with three game theories: simulation, representation, and the dialectical relationship between them. The analysis concludes that simulation is the operational means while representation is the affective end, rather than opposing forces. “*To the Moon*” is an operable system that requires players to engage actively and ergodically.

Keywords: Simulation; Representation; Dialectics; Procedural rhetoric; Phenomenology; Ergodic literature; Cybertext

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1. Introduction

Existing game studies have discussed the simulation and representation theories, yet the two conceptions are treated separately rather than generated in dialectical relation. In this essay, procedural rhetoric and phenomenology have rarely been integrated with simulation and representation analysis in this 2D narrative-driven game, “*To the Moon*.” This paper focuses on this gap by drawing on the author’s personal experience of the game and bringing conceptions and practical experience together. By doing so, it aims to demonstrate how their interaction enables a deeper understanding of how 2D games generate emotional meaning through only simple 2D dimensions.

“*To the Moon*” is chosen as the topic because of its core mechanics: memory navigation, object modification, and timeline reconstruction, which express a tension between simulation and representation. In the game’s linear narrative, the life memory of a dying man drives the player emotionally to promote and show how simulated actions and representational meanings conflict.

This case study applies three complementary methodological approaches.

First, qualitative text analysis identifies in-game narrative themes, dialogues, and symbolic elements. Second, phenomenological description identifies the player’s first-person conscious experience, such as

how temporal awareness and embodied interaction shape the feeling of “being here” in John’s memories.

Last, procedural rhetoric points out how the game’s rules and mechanics produce and generate meaning and persuade players. These three methods form a logic: from what this game presents (textual analysis), how it persuades (procedural rhetoric), what it feels like to players (phenomenology).

The core finding of this paper is threefold. First, the dialectical relationship between simulation and representation in “*To the Moon*” is not one of opposition but of mutual dependency: the simulation of player freedom makes the fixed representational outcome emotionally effective. Second, the game’s procedural rhetoric operates implicitly, persuading players that “modifying memories can provide peace for people” without just presenting text directly. Third, the phenomenological analysis reveals a dual consciousness in the player: they are not just an active modifier of memories but also a witness to John’s life, which explains the immersive emotional impact that purely textual or visual analysis cannot capture.

The author’s personal motivation relies on the fact that there are many players’ comments (**Figures 1 and 2**) about this game that show a sense of sadness and touching, which brought the same feelings to their own lives: when facing someone’s death, would you change their memories and let them die with fulfillment, or let them pass away with the existing and unchangeable truth? This question leads the author to think about related humanistic ethical issues, which is also the critical question the creator wants the players to think about. Thus, the author’s initial ethical curiosity evolved into a systematic inquiry using these theories in game studies.



Figure 1. The comments on the game reflection video (Source: <https://www.youtube.com/watch?v=mnNl6eAS66U>)



Figure 2. The comments on the game reflection video (Source: <https://www.youtube.com/watch?v=5BR68EiPs1g&t=6s>)

2. Simulation study

In simulation studies, it refers to a rule-based and operational dynamic system, and its meaning comes from the operation process rather than through static interpretation of signs or images ^[1]. As Espen Aarseth points out, a game is a cybertext; its meaning comes from the dynamic interaction between players and rules, not static interpretation ^[2].

There are four features in simulation conception that can be illustrated in “*To the Moon*”:

Feature 1 (Procedurality): the procedurality in John’s whole life memory; players have to search John’s memory actively through mementos throughout John’s life. After players find some clues, the plot will emerge and unfold. Due to the active operation by players, this is not simply a memory scene just displayed to the audience, but encourages players to participate in promoting the character’s storyline actively.

Feature 2 (Rule-driven cross-memory linkage): cross-memory item linkage is based on a rule-driven system, which means some clues in the game will show up several times, aiming to prompt players to think and find ways to promote the storyline (like the tower and the origami rabbit showing up in different scenes); those signals without words have symbolic associations in unlocking new scenes.

Feature 3 (Emergence/Butterfly effect): emergence as one of the theory features; memory modification brings the butterfly effect. In “*To the Moon*,” the player only implants a wish for John: that he wants to go to the Moon, and then the system generates a brand-new life trajectory in which John becomes an astronaut and meets River at NASA, moving to *the Moon* together. This is the typical feature of emergence: the player only modifies one point in John’s childhood memory, and the system automatically generates the rest of his life based on rule computation.

Feature 4 (Meta-simulation framework): “*To the Moon*” uses the meta-simulation framework. Specifically speaking, the game itself is talking about simulation in diegetic terms; what the game players play is what the doctor modifies in memory. Both the player and the doctor are within a rule-based system that reconstructs and modifies memories, which makes the core observation of this game an operable system.

To conclude, these features demonstrate that “*To the Moon*” seemingly is a linear-narrative game, but it focuses on the player’s agency, encouraging them to actively operate by searching for mementos, recognizing the symbolic associations in different scenarios, connecting clues, and then advancing the storyline, which reflects Aarseth’s cybertext: “A cybertext is a machine for the production of variety of expression.” ^[2].

3. Representation study

Representation uses signs, like images, words, sounds, or objects, to mean something that does not exist at present. In game studies, representation focuses on how the game depicts or symbolizes the characters, emotions, ideas, or events through audiovisual and narrative elements.

With examples of some features of representation, the study will illustrate how “*To the Moon*” uses symbolic meaning in objects, visual style, characters, narrative structure, and core imagery.

3.1. Objects as representation

Representation relies on the symbol to refer to something. In “*To the Moon*,” there are a number of symbolic objects that refer to deeper meaning in the game.

For example, in the scenario, River's bedroom is full of blue and yellow origami rabbits (**Figure 3**); the origami rabbits represent the emotional ties between John and River in childhood, and refer to the unfulfilled promise in the future. Blue symbolizes the sky, while yellow symbolizes the moon, which metaphorically represents John's huge desire to go to *the Moon* before death.

There is an object that frequently exists in scenes: the lighthouse, which exists in John's memory, beside John's gravestone, and as a background in many scenes. The lighthouse signifies the inner world in River, isolation, and insistence on being understood. From River's view, she believes the star is the lighthouse in the sky, symbolizing River, like the lighthouse, waiting for John to find his childhood memory.



Figure 3. The origami rabbit in River's bedroom (Source: "To the Moon")

3.2. Visual styles as representation

In this 2D game, the pixel art style is one of its features; the fuzzy screen brings a sense of nostalgia and a dreamlike quality. This old aesthetic precisely matches the storytelling vibe, a whole-life memory, making players immersed in John's memory.

Warm colors represent joyful memories, while cold tones signify moments of loss and isolation. This color code guides players' emotional immersion without word narration.

3.3. Ethical reflection as representation

Signals like objects, audio, color aesthetics, and so on can represent an idea. In this game, the creator delivers an ethical idea through opposing opinions from two characters, which can be detailed in:

The two opposing ethical stances between Eva and Neil represent a strong tension on whether modifying John's memory evokes deeper reflection in the player. Eva holds interventionism, he has the ability to empathize with John's regrets, while Neil believes in pragmatism. Players with these opposing opinions will not only receive a moral answer but also feel the ambiguity brought by ethics.

"I think it plays an important role in providing catharsis by offering different points of view. Also, who doesn't love pointless and annoying bickering that ruins the otherwise sentimental scenes? ...Well, a lot of people, I suppose; but I sure do!" said Kan Gao, answering the question, "Would it be fair to say that their contrasting personalities and beliefs are integral to the story of the game?"^[3]. Kan Gao clearly points out that he intentionally designed these two opposing ideas about death to play an important role in offering emotional catharsis in the game, which confirms the representational effect in the two characters.

The ethical dilemma: "Am I going to modify John's memory and make him believe he already made it to *the Moon* and gathered with his lover? Or do I just let John's memory exist as what is true and real, let him die with the loss of an unsuccessful trip to *the Moon*?"

The affective tension brought by unresolved opposition between empathy-driven and detached

pragmatism evokes within players; many of them comment that this reflection brings them back to their own life experiences and solidifies the game's thematic core as one of its most celebrated aspects.

As the creator Kan Gao stated in an interview: "While there are some rather sad undertones of the game, I think the parts that got many people were actually happy ones... or maybe more accurately, bittersweet. I think it's a theme that, to some extent, most people can relate to. Everyone has their own wish that's somewhere far out there, with someone who's had an effect on them at one point or another. So be it going to the moon or River, it's something that's familiar on one level or another." The feeling he mentioned was that the emotional impact was not only sadness but bittersweet, which emphasizes the ethical ambiguity at the heart of the narrative ^[3].

To summarize simulation and representation, the study concludes that there is a dialectical relation between them. Simulation and representation are not opposed but coexist together and promote each other at the same time: simulation is the means while the representation is the end.

To specify, players operate through MEANS of

- 1. player's action: search, click, modify
- 2. rule-based system: search back to memory, object linkage, butterfly effect
- 3. theories application: simulation and procedural rhetoric

to reach the END

- 1. player's action: understanding, emotions, and personal reflection
- 2. rule-based system: theme and symbolic meaning
- 3. theories application: presentation and phenomenology

4. Conclusions

This paper examines "*To the Moon*" through three theories: simulation, representation, and procedural rhetoric. The analysis reveals the game operates based on an operational simulation system where meaning emerges through symbolic objects and scenes carrying emotional meanings.

The core finding in this paper is that simulation and representation work as a whole function, dialectically interacting with each other: "Simulation is as a means, and the representation is as an end."

From the illustrations of representation theory, this paper demonstrates the operational system in "*To the Moon*," which requires players to actively click objects in scenes and find the clue through linkage logic across memory. Moreover, butterfly effects run through all games.

Through the analysis of representation in this game, it recognizes how the paper-folding rabbit and house light carry emotional and ethical meaning as objects. Representation symbolizes the ambiguity of modified memory, which evokes deep reflection among players.

Procedural and phenomenology, though not the focus of this paper, were used to demonstrate how game mechanics persuade the players implicitly and to refer to how first-person experience shapes the emotional impact.

This paper contributes to academia in two aspects:

First, it offers a perspective to illustrate 2D games with theories dialectically, analyzing simulation and representation separately and integrated together.

Second, it analyses one game example with diverse conceptions of simulation, representation, procedural, and phenomenological, offering a multiple theoretical framework.

In the future, the author would like to extend the paper by focusing on how “*To the Moon*” embodies phenomenology, maybe through the sympathy connection with players, and the experience of time; here are three time dimensions: game time, reality time, and the character’s lifetime. Moreover, the methods should include the comparative method.

Ultimately, “*To the Moon*” demonstrates that even in the simple 2D pixel-art form, it can also generate a profound emotional and ethical reflection on players through a rule-based and operational system. The dialectical integration of simulation and representation brings an affective emotional power that players experience.

Disclosure statement

The author declares no conflict of interest.

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