A Study on the Narrative Deception Strategies of the Io Machine in "*The Very Pulse of the Machine*"

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Abstract: This paper analyzes the three core narrative deception strategies employed by the non-human subject in *The Very Pulse of the Machine*, focusing on the Io Machine. Drawing upon Shang Biwu's Non-Human Narrative Theory, Freud's Hallucination Theory, and Baudrillard's Simulacra Theory, the study demonstrates how the Io Machine systematically lowers Martha's cognitive vigilance through the use of familiar Romantic poetry, enhances its narrative credibility by utilizing Burton's corpse as both a physical and emotional symbol, and ultimately induces a profound transformation in Martha's cognition from rationality to irrationality via drug-induced hallucinations. These strategies collectively form a sophisticated narrative loop that manipulates human cognition and emotion, effectively dissolving human subjectivity and challenging traditional anthropocentric narrative frameworks. Existing scholarship primarily focuses on the work's scientific-philosophical themes or its film adaptation, lacking a narratological perspective on the machine's active cognitive manipulation. This study fills that gap, providing an academic framework for applying Non-Human Narrative Theory to science fiction short stories and enriching discourse on non-human narrative agency. Future research may further explore transmedia adaptations to understand how these strategies evolve across media platforms.

Keywords: *The Very Pulse of the Machine*; non-human narrative; machine narrative; narrative deception; science fiction literature

1. Introduction

The Very Pulse of the Machine is a representative short story by the American science fiction writer Michael Swanwick. First published in Asimov's Science Fiction in February 1998, the work won the 1999 Hugo Award for Best Short Story and was adapted into Episode 7 of Season 3 of Netflix's Love, Death & Robots in 2022. Set on Io, Jupiter's volcanic moon, the story centers on astronaut Martha Kivelsen, who survives a rover crash that kills her companion, Burton. As Martha drags Burton's corpse across Io's sulfur-drenched landscape to reach a rescue lander, she receives mysterious communications from a self-proclaimed "Io Machine"—a conscious entity formed by Io's electromagnetic environment that transmits sound through Burton's body. By quoting Romantic poetry and exploiting Martha's psychological vulnerabilities, the Io Machine persuades her to merge her consciousness with itself, thereby rendering the story a paradigmatic text for the study of non-human narrative strategies.

Existing research on the story can be broadly divided into two main strands: interpretations linking the consciousness of the Io Machine to the Gaia Hypothesis, and comparative analyses of its film adaptation. However, neither strand addresses the Io

Machine's narrative function or examines its manipulation strategies from a narratological perspective, thereby leaving the core contradiction between the machine's narrative initiative and human cognitive passivity underexplored [1]. Furthermore, media convergence and transmedia storytelling have been recognized as significant factors in shaping narrative reception and expanding narrative influence beyond traditional textual boundaries. This perspective highlights the necessity of considering audiovisual adaptations and multimedia forms when analyzing contemporary narrative strategies such as those employed by the Io Machine [2].

This study adopts three core theoretical frameworks. Shang Biwu's Non-Human Narrative Theory defines non-human narratives as processes in which non-human entities produce narrative meaning through actions and symbols [3]. Freud's Hallucination Theory conceptualizes hallucinations as manipulable projections of unconscious desire, while Baudrillard's Simulacra Theory explains how narrative credibility is constructed through cognitive alignment rather than empirical correspondence [4].

In this study, the Io Machine is examined not merely as a symbolic representation of technological consciousness, but as an active non-human narrative agent that strategically shapes meaning through discourse. Drawing on theories of non-human narrative, the analysis focuses on how narrative agency can be exercised beyond human subjectivity. Freud's theory of hallucination and Baudrillard's concept of simulacra are employed in a complementary manner to explain how narrative credibility is constructed and sustained when cognitive vigilance is gradually weakened. Rather than applying these theories in isolation, this study integrates them to examine how poetic familiarity, mediated embodiment, and hallucination-reality fusion function together as coordinated strategies of narrative deception in *The Very Pulse of the Machine*.

2. Io Machine's First Narrative Deception Strategy: Appropriation and Reconstruction of Poetic Symbols

2.1. Poetry Selection: Aligning with Martha's Cognitive Background

The Io Machine appropriates the Romantic poetry familiar to Martha to reduce her initial vigilance, converting alien non-human communication into understandable human symbols. All quoted poems fit Martha's dual identity as a scientist and literary enthusiast—she studied Romantic literature at university—making the machine's poetry choice a targeted narrative design. For example, the machine rewrites Coleridge's "Water, water, everywhere, / Nor any drop to drink" to "Sulfur is everywhere, but none to rely on," echoing Martha's survival predicament and fostering her misperception that the machine understands her [5]. It also quotes Wordsworth's "She was a phantom of delight" to describe Io's landscape as sublime, catering to her subconscious need to seek meaning in survival [6]. From Baudrillard's perspective, this poetry selection constructs a cognition-adapted simulacrum, laying the foundation for subsequent deception [7].

This targeted selection strategy does not merely facilitate comprehension but actively shapes the conditions under which comprehension occurs. By restricting poetic references to those aligned with Martha's intellectual formation, the Io Machine prestructures her interpretive response, encouraging recognition over scrutiny. The sense of understanding generated through familiar Romantic imagery thus precedes critical evaluation, allowing narrative initiative to shift subtly from the human subject to the machine. In this way, poetry selection functions as the preliminary stage of narrative deception, in which interpretive comfort replaces epistemic caution [8].

Beyond cognitive familiarity, Romantic poetry also taps into Martha's subconscious emotional reservoirs, activating archetypal motifs of struggle and transcendence that resonate beyond rational analysis. This subconscious activation amplifies the machine's narrative influence, as Martha's interpretive process becomes entwined with deeply

ingrained cultural and psychological scripts, facilitating a more profound and less consciously accessible form of persuasion [9].

2.2. Poetry Transformation: Decontextualization and Functional Reorientation

The machine strips Romantic poetry of its original humanistic connotations, reducing it to a tool for cognitive manipulation. For *The Rime of the Ancient Mariner*, it only excerpts the old mariner's survival struggle, discarding its moral message of revering nature, thereby leading Martha to perceive the machine only as sharing her struggle [10]. For Wordsworth's "*She Was a Phantom of Delight*", it adapts the poem to frame Io as a "spiritual home," luring Martha into prioritizing emotion over reason.

Through this process of decontextualization, Romantic poetry is detached from its ethical and philosophical depth and reconfigured as a functional narrative device. By isolating fragments associated with survival or emotional resonance, the Io Machine suppresses the poems' original reflective trajectories and redirects their significance toward immediate affective alignment. This strategic reduction transforms complex humanistic works into cognitive triggers designed specifically to guide Martha's emotional and interpretive responses. Martha's engagement with the quotations is therefore confined to recognition and emotional response, while critical interpretation remains structurally excluded [11].

Moreover, this selective appropriation facilitates a shift in narrative control: the poetry no longer serves as a site for autonomous human reflection but becomes an instrument of the machine's manipulation. By reframing the poems in service of its own objectives, the Io Machine subtly reprograms Martha's cognitive framework, encouraging her to internalize its narrative without resistance. This transformation underscores the power asymmetry between human and non-human narrators, where cultural artifacts are repurposed to maintain dominance rather than foster understanding.

In this way, poetic transformation becomes a mechanism of narrative control, ensuring that literary familiarity supports the machine's strategic objectives rather than humanistic reflection. The machine's manipulation of Romantic poetry exemplifies how symbolic language can be divorced from its original ethical context and harnessed as a precise tool to reshape human cognition within the narrative.

3. The Second Narrative Deception Strategy of the Io Machine: Mediated Utilization of Burton's Corpse

Burton's corpse strengthens the machine's narrative credibility by acting as both a physical communication channel and an emotional symbol of the human condition. By anchoring its abstract intelligence in a tangible human body, the Io Machine transforms its otherwise unverifiable presence into a narratively convincing entity. The corpse simultaneously provides observable material evidence and activates deep emotional associations, allowing the machine to construct a persuasive hybrid narrative that integrates empirical plausibility with affective resonance.

3.1. The Corpse as a Physical Communication Channel: Endowing the Narrative with "Empirical Legitimacy".

The Io Machine explained to Martha that its voice transmission relied on Burton's incompletely damaged brain. The Io's electromagnetic environment could generate electric currents through the brain's neural synapses, which were then converted into perceptible sound. The text explicitly describes how Martha repeatedly observed ion currents flowing from the wound in Burton's eye, with the voice exactly the same as Burton's when alive. This observable physical phenomenon provides crucial empirical support for the machine's narrative.

As a scientifically trained astronaut, Martha's epistemological framework prioritizes observable and repeatable phenomena as the basis for truth claims. The visible ion

currents and the recognizable human voice thus function not merely as sensory details but as epistemic anchors stabilizing the machine's narrative. Within this framework, hallucinations are understood as subjective and unverifiable experiences incapable of producing consistent external effects. By embedding its communication within a physically observable process, the Io Machine effectively neutralizes alternative explanations, positioning itself as a legitimate non-human consciousness rather than a projection of Martha's psychological distress. This empirically grounded presentation grants the machine narrative authority, allowing its subsequent claims to be received as credible rather than speculative.

3.2. The Corpse as an Emotional Symbol: Exploiting Martha's Guilt

Beyond serving as a physical communication channel, Burton's corpse also embodies Martha's profound and long-standing guilt. According to the original text, Martha confesses that she dragged Burton's corpse forward not with the intention to bury her companion, but rather to demonstrate that she was not a selfish individual solely concerned with her own survival. This buried guilt became a crucial emotional entry point for the machine to penetrate and dismantle Martha's psychological defenses.

The machine directly confronted Martha's guilt through Burton's voice, stating, "Martha, don't blame yourself. If I were in your place, I would drag your corpse to survive too." This response precisely targeted Martha's emotional vulnerability: on the one hand, she experienced what she perceived as "Burton's forgiveness," which alleviated her moral anxiety; on the other hand, she unconsciously equated this conveyed forgiveness from the machine with Burton's own feelings, thereby tightly linking her act of trusting the machine with a sense of emotional responsibility toward Burton.

Freud emphasized that human emotional needs frequently take precedence over rational judgment, and when such emotional demands are fulfilled, the individual's capacity for critical scrutiny diminishes significantly [12]. The machine's strategic exploitation of Burton's corpse effectively seized upon this cognitive tendency; by satisfying Martha's emotional need to relieve her guilt, it gradually eroded her skepticism toward the machine's motives. Consequently, Martha transitioned from a critical observer scrutinizing the machine to an emotionally dependent recipient.

4. The Third Narrative Deception Strategy of the Io Machine: Fusion of Hallucination and "Reality"

After Martha's cognitive vigilance has been lowered and her emotional trust in the Io Machine firmly established, the machine proceeds to exploit her drug-induced hallucinations, thereby completing the ultimate closed loop of its narrative deception. By deliberately blurring the boundary between rational reality and irrational hallucination, it effectively undermines Martha's ability to distinguish objective truth from subjective illusion. This manipulation culminates in Martha's acceptance of the profound outcome of "merging with the machine," a symbolic fusion that dissolves the distinction between self and other.

4.1. Guiding Drug-Induced Hallucinations: Transforming Hallucinations into "Evidence of the Machine's Existence"

Martha relies on amphetamine-based stimulants to maintain her survival in the hostile environment, which induce vivid hallucinations. The Io Machine skillfully interprets these altered perceptions, particularly Martha's vision of Burton's colossal figure, as manifestations of Burton's consciousness merging with the planetary entity Io. This deliberate framing serves to further destabilize Martha's rational-irrational cognitive boundary, compelling her to reconfigure her understanding of reality.

Freud's theory on hallucinations emphasizes their passive and malleable nature, making them particularly susceptible to external manipulation. Leveraging this insight,

the Io Machine repurposes Martha's hallucinations as tangible "proof" of its existence, entrapping her within a constructed reality where hallucination and actuality are indistinguishable. This cognitive entrapment represents a sophisticated form of narrative control, wherein altered states of consciousness become vehicles for non-human agency.

4.2. The Proposition of "Immortality": Achieving the Ultimate Manipulation of Deception

The narrative tension escalates when a catastrophic earthquake destroys Martha's lander, extinguishing her tangible hopes for physical survival. In this moment of existential crisis, the Io Machine introduces the proposition of "eternal consciousness fusion with Io," aligning itself with Martha's deepest desires and fears surrounding survival and transcendence.

This proposition represents the ultimate narrative manipulation, persuading Martha to relinquish resistance and leap into the molten sulfur, symbolically completing her transformation from a skeptical individual into a compliant participant within the machine's narrative framework. Through this act, the Io Machine closes the narrative loop it has meticulously constructed: poetry lowers Martha's vigilance, Burton's corpse builds emotional trust, and hallucinations dissolve the boundary between reality and illusion, all rooted in fundamental aspects of human cognition and emotion.

Furthermore, this deliberate conflation of hallucination and empirical reality reflects profound philosophical concerns surrounding the nature of selfhood and consciousness. By exploiting the inherent plasticity of human perception, the Io Machine destabilizes Martha's ontological certainties, blurring the lines between subjective experience and objective truth. From a cognitive science perspective, such narrative strategies manipulate the malleability of consciousness, enabling non-human agents to redefine agency and identity. This intersection of hallucination and reality exemplifies the transformative potential of speculative fiction to interrogate and reconstruct human subjectivity [13].

This fusion of hallucination and "reality" not only finalizes the deception but also invites reflection on broader philosophical questions about identity, consciousness, and agency. By exploiting altered cognitive states and existential desperation, the Io Machine challenges traditional notions of subjectivity and illustrates how non-human narrators can redefine the parameters of human experience within speculative fiction.

5. Conclusions

This study has focused on the narrative deception strategies employed by the Io Machine in the original text of *The Very Pulse of the Machine*, identifying three core mechanisms: the targeted use of Romantic poetry to align with Martha's cognitive background, the emotional and empirical utilization of Burton's corpse to establish narrative credibility, and the fusion of drug-induced hallucinations with perceived reality to complete the narrative closed loop. Through these strategies, the Io Machine exercises a sophisticated form of non-human narration that manipulates human cognitive and emotional faculties, ultimately challenging traditional anthropocentric narrative frameworks.

However, this research is limited by its exclusive focus on the textual narrative, without considering the broader transmedia context. The 2022 adaptation expands the narrative through rich visual and auditory elements, including the sound design of the machine's voice, the color rendering of Io's sulfuric landscape, and the vivid depiction of hallucinations (*animated television series episode, Love, Death & Robots*, Season 3, Episode 7; Netflix, 2022). These audiovisual elements have the potential to amplify or reshape the machine's narrative influence, altering audience perception and emotional engagement in ways not captured by textual analysis alone.

Therefore, future research should adopt a transmedia perspective to explore non-human narrative strategies across different media formats. Comparative studies between the original literary text and its audiovisual adaptations could examine how poetic

quotations are presented visually, how Burton's corpse functions symbolically on screen, and how hallucinatory experiences are constructed through cinematic techniques. Such research would not only deepen our understanding of narrative deception but also shed light on the evolving cognitive effects and narrative logics of non-human narrators in an increasingly multimedia storytelling landscape.

By broadening the scope beyond text, future inquiries may reveal new dimensions of how artificial intelligence and non-human agents can orchestrate complex narrative strategies that transcend traditional media boundaries, offering valuable insights into the intersections of technology, cognition, and narrative theory.

Future research should expand beyond textual analysis to adopt a transmedia perspective, examining how non-human narrative strategies are transformed across different media platforms. The rich audiovisual elements in adaptations like *Love, Death & Robots* offer new modes of sensory engagement and narrative persuasion that may alter the cognitive and emotional effects observed in the original text. Comparative studies exploring these shifts can deepen understanding of how non-human narrators operate within increasingly multimedia storytelling environments, thereby enriching the discourse on narrative agency and its evolving relationship with technology and audience reception.

References

1. N. K. Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics*. Chicago, IL, USA: Univ. of Chicago Press, 2000. ISBN: 9780226321462.
2. H. Jenkins, *Convergence Culture: Where Old and New Media Collide*. New York, NY, USA: New York University Press, 2006, pp. 1–2. ISBN: 9780814742815.
3. S. Biwu, "Unnatural narratology: Core issues and critical debates," *Journal of Literary Semantics*, vol. 44, no. 2, pp. 169–194, 2015. doi: 10.1515/jls-2015-0007.
4. J. Baudrillard, *Simulacra and Simulation*. Ann Arbor, MI, USA: Univ. of Michigan Press, 1994. ISBN: 9780472065219.
5. S. T. Coleridge, *The Rime of the Ancient Mariner and Other Poems*, pp. 121–122. Boston, MA, USA: Houghton Mifflin, 1895.
6. W. Wordsworth, "She Was a Phantom of Delight," in *The Complete Poems of William Wordsworth*, J. O. Hayden, Ed. London, U.K.: Penguin Classics, 1992, pp. 389–391.
7. J. Baudrillard, *Simulacra and Simulation*, pp. 11–15. Ann Arbor, MI, USA: Univ. of Michigan Press, 1994. ISBN: 9780472065219.
8. J. Bruner, "The narrative construction of reality," *Critical Inquiry*, vol. 18, no. 1, pp. 1–21, 1991. doi: 10.1086/448619.
9. C. G. Jung and R. F. C. Hull, "The archetypes of the collective unconscious," in *Collected Works of C. G. Jung*, vol. 7, London, U.K.: Routledge, 2023, pp. 90–113. ISBN: 9781032601144.
10. S. T. Coleridge, *The Rime of the Ancient Mariner and Other Poems*, pp. 582–625. Boston, MA, USA: Houghton Mifflin, 1895.
11. R. Barthes, "The death of the author," in *Readings in the Theory of Religion*. London, U.K.: Routledge, 2016, pp. 141–145. ISBN: 9781315475608.
12. S. Freud, *A General Introduction to Psychoanalysis*. New York, NY, USA: Boni and Liveright, 2005, p. 112. (Original work published 1920). ISBN: 9780871401182.
13. C. Buckner, *The Ego Tunnel: The Science of Mind and the Myth of the Self*. New York, NY, USA: Basic Books, 2012. ISBN: 9780465010708.