Rewriting the Script: Navigating Cybernetic Dynamics and Ethical Expression in Modular Narrative Games—The Case of *Storyteller*

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Keywords

Modular Narrative, Cybernetic Feedback, Narrative Surprises, Self limitation, Ethical Expression

INTRODUCTION

Why do player choices in seemingly small, modular storytelling games matter for understanding how systems shape players' expression? As interactive storytelling evolves within digital games, a growing body of research examines the relationship between player agency and system design. Yet, much of this work focuses either on open-world decision trees or complex narrative RPGs. *Storyteller*, an independent puzzle game by Daniel Benmergui, offers a compelling alternative through its modular narrative design and interactive feedback loops. Framed as a theatrical narrative construction tool, *Storyteller* positions players as authors or directors, inviting them to arrange characters, settings, and actions within the pages of a visualized book to fulfill predefined dramatic prompts such as "Story of a Tragedy" or "The Usurper is Forgiven". By reconciling predefined objectives with emergent storytelling, *Storyteller* reflects the complex relationship between system design and creative agency.

This ongoing research investigates how players navigate *Storyteller*'s structures to craft narratives, respond to systemic "surprises," and balance constraints with creative goals. Through the lens of cybernetics, it examines how feedback loops and adaptive prompts foster a recursive negotiation between systemic limitations and player agency. By analyzing modular narratives, player interaction, and game design, the study offers new perspectives on video games as platforms for ethical and creative exploration. It attempts to bridge gaps in understanding the interplay between modular narratives and player expression in interactive storytelling. Focusing on *Storyteller*, it explores how players negotiate meaning within systemic

Proceedings of DiGRA 2025

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constraints, generating creative narratives and ethical reflections. By extending cybernetic frameworks, the study highlights how modular systems simultaneously limit and empower players, offering insights into the evolving dynamics of agency, feedback, and cultural expression in games.

The Cybernetics provides a powerful lens through which to analyze the recursive loops between player action and system response. Ashby (1956) develops first-order cybernetics, focusing on system behavior regulation through feedback mechanisms, while von Foerster (1984) advances second-order cybernetics to explore self-referential systems adapting to user input. In this case, the feedback loops inherent to first-order cybernetics allow the system to constrain and guide players' narrative paths through adaptive prompts and predefined goals, such as "happiness" or "betrayal". Second-order cybernetics, on the other hand, underscores how players actively reframe their strategies and adapt their creative choices in response to systemic constraints, ultimately engaging in a recursive process of negotiation. Cybernetics provides a framework for understanding how systems like *Storyteller* regulate player behavior through feedback, mediating the interaction between systemic design and player agency. It reveals the dynamic interplay between players, games, and co-created narratives, showing how modular systems both structure storytelling and enable creative reinterpretation.

In *Storyteller*, modular narrative design emerges as a key mechanism shaped by cybernetic principles. Modular narratives in games construct highly structured yet flexible storytelling frameworks, offering players constrained yet creative spaces for expression. Modular storytelling fragments narratives into discrete units, allowing players to construct stories interactively by combining these elements. As Lee Sheldon (2023) explains, modular storytelling supports a "nonlinear" narrative approach, where individual narrative modules can be combined, nested, or reordered to create emergent storytelling experiences. This method provides players with significant control while maintaining a coherent overarching framework, balancing between player agency and systemic guidance. Furthermore, Murray (1997) introduces the concept of "cyberdrama", highlighting how modular structures enable emergent storytelling within bounded systems. Ryan (2001) expands on this by emphasizing the adaptability of modular narratives, allowing player input while maintaining overarching coherence. Galloway (2004) further explores how modular systems embed "control allegories", subtly guiding players while leaving room for individualized creativity.

The aesthetic of surprise lies at the heart of modular narratives, challenging and reshaping preconceived notions through unexpected outcomes. Gramsci's (1971) narrative structure theory provides insight into how deviations from expected outcomes can create satisfaction when coherent within broader narrative logic. Aarseth (1997) explores how ergodic literature compels players to navigate structured constraints, redefining narratives through their active engagement. In *Storyteller*, players must align their constructed stories with system-defined prompts, yet deviations provoke moments of ethical and cultural reflection. Bateson's (1972) recursive learning theory offers a framework for understanding how such "errors" drive players to reconsider strategies, fostering creative problem-solving and revealing alternative pathways. Through iterative experimentation, players are

encouraged to think beyond initial assumptions and explore unexpected narrative configurations, transforming storytelling into a dynamic process of discovery.

As procedural rhetoric (Bogost, 2007; 2008) situates these dynamics within intentional game design, systemic constraints guide and challenge player creativity, fostering a negotiation between the player and the game's ruling system. Self-limitation serves as a form of negotiation in this context, where players engage with systemic constraints to shape their gameplay experience. Traditionally, self-limitation in games has been framed through cultural and ethical influences, where societal values shape the stories players construct (Stang, 2019; Guanio-Uluru, 2016). Building on Sicart's (2009) argument that ethical gameplay emerges through meaningful interaction with systems,, self-limitation emerges as an ethical expression—players' deliberate choices to constrain their actions reflect their personal values and interpretations of the game's framework. Unlike constraints imposed solely by systemic design, self-limitation becomes a means for players to align outcomes with their ethical or narrative preferences, transforming predefined structures into opportunities for nuanced personal engagement.

This research employs an intertextual analysis framework, drawing on Kristeva's (1980) foundational theory and expanded by Consalvo (2007) and Jenkins (2006), to examine the interaction between *Storyteller*'s modular narrative design and player agency. It begins by analyzing the game's modular design, focusing on narrative prompts, feedback loops, and structural affordances. By studying predefined goals like "happiness" or "sacrifice", the study explores how these mechanisms constrain and enable player creativity, embedding ethical assumptions within the system. Observant play and external data, such as player discussions, gameplay commentaries, and livestreams on platforms like *YouTube* and *Xiaohongshu*, offer insights into how players navigate constraints and align their decisions with or deviate from systemic expectations. Specifically, the study draws on a curated set of 15 ethically charged levels in the game and analyzes 5 selected player engagements to trace interpretive strategies. These materials are not treated as empirical datasets for user behavior but as cultural artifacts that reveal how players engage the game's system as a site of ethical and expressive negotiation. Finally, the study situates *Storyteller* within broader cultural and ethical contexts, highlighting how modular narratives mediate between systemic control and player agency while fostering ethical reflection. This approach provides new perspectives on the evolving dynamics of interactive storytelling.

Preliminary results reveal how *Storyteller* exemplifies the interplay between modular narrative systems and player agency, offering insights into how systemic design shapes creative expression. Feedback loops in the game, driven by adaptive prompts and constraints, guide player behavior while fostering emergent storytelling. These dynamics transform *Storyteller* into a cyber "Fun Palace[1]", blending creativity and interaction to offer scaffolded yet exploratory narrative experiences (Littlewood & Price, 1961). While the game's modular design constrains narrative choices, it also empowers players to reconstruct stories within predefined boundaries. Unlike traditional modular narratives that rely on fixed structures guiding players to complete predefined logic (Ryan, 2001; Galloway, 2006), *Storyteller* decentralizes

narrative experiences by using modularity as scaffolding. This design enables players to iteratively deconstruct and reconstruct story elements, shifting the focus from coherence and completion to interpretive freedom, allowing exploration of multiple pathways and creative experimentation.

This negotiation between systemic constraints and creative agency is evident in players' deliberate actions to align outcomes with personal values or ethical perspectives. For instance, one female player consistently chose to let male characters die first in every chapter, even when the mechanics allowed for gender-neutral death selection, while LGBTQ+ players prioritized creating same-sex marriages to reflect their identities and values. These actions demonstrate how players reinterpret systemic prompts to express agency, transforming predefined structures into spaces for nuanced ethical engagement.

Storyteller demonstrates this balance through three layers of surprise: causal deviations between modular elements, success or failure in achieving narrative goals, and inconsistencies in applying prior narrative logic to new contexts. Such iterative interactions enrich players' engagement with the system, aligning with Mateas and Stern's (2005) assertion that storytelling in games becomes an evolving negotiation between structure and agency. Bateson's (1972) recursive learning theory further contextualizes this process, as players' iterative "failures" and adjustments foster deeper engagement (Juul, 2011). Players reflect on systemic constraints and their storytelling preferences, transforming modular fragments—such as betrayal, sacrifice, or forgiveness—into conceptual prompts for self-expression. Through this process, *Storyteller* not only invites ethical expression but also challenges players to reinterpret the boundaries of systemic design. By situating modular narrative systems as both limiting frameworks and expressive platforms, *Storyteller* highlights how player-driven reinterpretation can reflect, challenge, and restructure cybernetic ideals. Players are not merely implementing pre-scripted logic but actively reshaping the narrative space through self-reflection and ethical negotiation. This dynamic, shaped by cybernetic feedback and narrative innovation, situates modular narratives within a broader system of negotiation.

All in all, this study demonstrates that even tightly constrained systems can serve as rich sites of ethical and creative engagement. By examining cybernetic feedback, modular structures, and player strategies of self-limitation in *Storyteller*, this study proposes a layered model of narrative interaction where players act not only as problem-solvers but as ethical agents. Rather than viewing systemic control and player agency as oppositional, the game foregrounds their interplay, revealing new possibilities for reading games as ontological platforms for negotiation, surprise, and expressive resistance. Additionally, this study offers actionable insight for narrative designers and indie developers, demonstrating how bounded, modular mechanics can still evoke reflective, value-driven play, expanding the expressive potential of minimalist narrative systems.

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1 The “Fun Palace”, an interactive environment conceptualized by Cedric Price in the 1960s, offers an early example of applying modularity and feedback to facilitate user-driven experiences, forming a precursor to how games like *Storyteller* integrate player behavior with system design (Mathews, 2006).