Constructing a Catbox: Story Volume Poetics in *Umineko no Naku Koro Ni*

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Abstract. A story volume is a mapping of narrative space that encloses a family of storylines. By considering works of interactive narrative through a story volume lens, we can resolve the contradictions that would be present if we tried to analyze them as linear narratives. However, the current discourse around story volumes is entangled with the discussion of narrative emergence. In order to better understand the poetics of story volumes, we need an example of a non-emergent narrative work that unambiguously implements these poetics. *Umineko no Naku Koro Ni* is a popular visual novel that explicitly discusses story volumes as part of its metafictional self-analysis. This diegetic meta-fictional internal cosmology gives us an alternate vocabulary to discuss story volumes. In this paper, we use *Umineko* as a case study to examine an unrolled story volume, allowing us to analyze its properties in isolation. We discuss the shape of story volumes and the connection with probability, and draw connections to procedural content generation and theatricality. As our major contributions, we describe the game for an academic audience and we present a poetics for story volumes.

Keywords: Game studies · Narrative design · Story volumes · Interactive digital narrative · Poetics · Theatricality

1 Introduction

Intro rework outline:

Stories are often thought of as single plot lines regardless of how accurately they describe the experience or structure of the story in question

Story volumes are a view of narrative that acknowledges a single story can be made up of a number of plot lines that may or may not ever converge. Jason Grinblat initially proposed the concept in relation to emergent narratives as "a family of emergent stories, all of which are begotten by a set of carefully curated system parameters" [18].

With this paper we seek to expand the definition of story volumes to work as a lens to view even non-emergent narratives including hypertext and other interactive narratives by using Umineko as a case study

Traditionally, a *story volume* is a mapping of a narrative space that encloses "a family of emergent stories, all of which are begotten by a set of carefully curated system parameters" [18]. By viewing interactive or hypertextual narratives through a story volume lens, we can resolve narrative contradictions that would be present if we tried to view it as a linear narrative. This lets us more effectively discuss shared themes across multiple storylines, systems that produce mutually-exclusive storylines, and narrative that is inferred through inclusion or exclusion of possibilities.

Thus far, the discourse around story volumes has been entangled with larger discussions of interactive narratives. It would be very useful to have an explicit poetics of story volumes to allow us to engage with its nature as a story volume, separate from interactive or emergent narrative. In order to better understand the poetics of story volumes, we need an example of a non-emergent narrative work that unambiguously implements these poetics.

Umineko: When They Cry is a well-known, mostly-linear visual novel that explicitly engages with its nature as a story volume work. Before now, it has been under-discussed in the English-language academic literature, with rare exceptions,[3] making this paper one of the first descriptions of it from a game studies lens. By examining how it presents story volumes, we can gain a deeper understanding of story volumes in general.

Umineko is an exceptionally illustrative example of a story volume: it treats the story volume as diegetic while also engaging in a metafictional discussion of its own structure. While other diegetic story volumes exist (such as some time-travel narratives) they generally shy away from being explicitly meta-fictional, at least in comparison to the extreme degree that *Umineko* takes it.

Using *Umineko* as a case study to gain a clearer understanding of story volumes, we can more easily apply the story volume lens to other works, including those more entangled with other aspects of interactive narrative.

2 Related Works

add more framing to Umineko's place or lack thereof within the academic canon here and possibly discuss VNs finding themselves left out of IDN topics

The concept of *story volume* used here is based on a description from Jason Grinblat's "Emergent Narratives and Story Volumes" [18], which in turn was building on the term introduced in a Project Horseshoe group report [12].

The discussion of Interactive Digital Narrative (IDN) hermeneutics in "Emergent Narrative and Reparative Play," Grinblat et al. contrasts story volumes with the *protostory* concept from Koenitz's *System, Process, Product* model of IDN [31]: unlike a protostory, a story volume puts its "emphasis on the shape of the Product stories and de-emphasis on any narrative cohesion prescribed

[3] Such as the occasional undergraduate or MA thesis [34, 23]. The previous games in the *When They Cry* media mix (*Higurashi no Naku Koro Ni*) have had more attention [35, 1, 41, 21], though that is partially due to the anime adaptation and overall cultural impact rather than the games per se.

by the System" [19]. The distinction between closed story volumes—the volume purports to "fully and cleanly encapsulate their inner spaces" [19]—and open story volumes—where emergent narrative makes it difficult to pinpoint a strong protostory—is particularly relevant for our discussion. On the one hand, *Umineko* has a system that does encapsulate its inner space, but at the same time it refuses to resolve the ambiguity, denying access to the protostory. The *reparative play* framework (borrowing from Sedgewick's *reparative reading* [42]) compounds this: *Umineko* actively encourages the player to engage in reinterpretation at the same time that the characters in the game are actively reinterpreting their own story.

Umineko involves the repeated diegetic "replaying" of the same game board. There have been many discussions of the role that replaying and rewinding have in games:

In the Kleinman et al. analysis of rewind mechanics in narrative games, a framework for discussing rewind mechanics is presented [30]. In that framework, from our perspective as players we can classify *Umineko* as having designer controlled rewind, has either scope 0 or global scope, uses UI and narrative elements in its rewind presentation, has a linear structure at its meta-level, and acknowledges the existence of the rewinding to an unusually meta-fictional degree, even when compared to many other games that have extra-diegetic acknowledgement of rewinding.[4]

In "Reading Again for the First Time: A Model of Rereading in Interactive Stories," Mitchell and McGee "propose a model of rereading in interactive stories in which readers are initially rereading to reach some form of closure" [38]. Separately, Mitchell and Kway discuss replay and rereading in storygames with a rewind mechanic, particularly with the distinction of playing for completeness and playing for closure in the context of *Elsinore* [36]. While *Umineko* continually rewinds to the beginning, the more-linear meta-fictional frame story emphasises reading "in a new way" [36] and presents another form of repeat experience to include in future analyses.

3 What is *Umineko no Naku Koro Ni*?

Umineko no Naku Koro Ni (lit. *When the Seagulls Cry*) is an independently-developed episodic visual novel originally released at the major fan convention Comiket between 2007 and 2010 (including the last four episodes released under the title *Umineko no Naku Koro ni Chiru*) by the doujin circle 07th Expansion [14, 15]. While not a strict sequel, it is a continuation of the series that began with *Higurashi no naku koro ni* [13]. While the *When They Cry* series is a sprawling transmedia franchise, our discussion will be of the original eight *Umineko* episodes, leaving out the peripheral content, sequels, fighting game,

[4] From the *characters'* meta-fictional perspective, the game board has designer dominant control, dynamic scope, and an ontologically complicated narrative justification.

and the rest of the *When They Cry* media mix.[5] Translations are from the 2016 English translation, with the original Japanese included for reference and to better index the citations.[6]

Umineko starts as a realistically-grounded orthodox whodunit murder mystery on an isolated island, portraying itself as a Golden Age detective puzzle novel: the kind of mystery that the reader has a fair chance to solve through examining the clues. In-text it explicitly compares itself to the structure of Agatha Christie's *And Then There Were None* [9].

The initial plot is straightforward: After having been away for years, Ushiromiya Battler visits his occult-obsessed grandfather's private, isolated island of Rokkenjima[7] during a family conference in October 1986. The family's arguments about their future inheritance are abruptly interrupted by ritual murder. While the more superstitious people present attribute the murders to the unseen magical witch Beatrice, most of the family is initially sceptical, unwilling to pass the blame to a presumably-non-existent witch who never appears on-screen. They gradually become less skeptical as the ritual continues, with characters being killed in seemingly impossible locked-room murders. The first episode ends with all of the characters presumed dead and the mystery of the impossible murders unsolved.

So far this mirrors the structure of Agatha Christie's novel, with an extra dash of slasher horror. The story swerves at this point: in an extradiegetic epilogue the characters conclude that the unsolved murders mean that they were in a fantasy novel, with magical murders as the only logical explanation. Battler disagrees, vehemently. At this point the previously-unseen Beatrice walks through the fourth wall and appears on-stage, setting up the metafictional debate that drives the remaining episodes: Were the murders somehow committed by a human culprit or was it a witch's magic? Is Beatrice real? Is this mystery or fantasy?

As befitting a game about the ontological status of a particular murder mystery, the mystery genre itself is a major theme and discussed in detail, particularly the sub-genres that focus on solvable puzzles. Authors such as Agatha Christie, Shimada Souji, and (anachronistically) Ayatsuji Yukito[8] are mentioned by name, as well as the personification of Knox's "Ten Commandments" for

[5] The *Naku Koro Ni* franchise is a good example of an independently-published Japanese transmedia franchise, incorporating the games as well as anime, manga, and other media. While transmedia properties are not unique to Japan, "Japanese media convergence has its own name: the media mix" [45]

[6] Internal citations in videogames is an active research area [27], fortunately in the PC release the games' script files are user-readable.

[7] Which can be read as "Six House Island" in a nod to Ayatsuji Yukito's title conventions (e.g. *The Decagon House Murders* [2]).

[8] Episode 5:
「綾辻行人のデビューは来年だ。」
「魔女のくせに細かいこと気にしますね。」
Beatrice: "Ayatsuji Yukito doesn't make his debut until next year."
Erika: "You sure are picky for a witch."

detective fiction [24], tying it to both the Western Golden Age [25] detective fiction tradition as well as the parallel Japanese *honkaku* and *shin honkaku* subgenres [43, 11].

By borrowing elements of detective fiction, *Umineko* sets up a parallel between what we might term the game of solving a mystery and the game of understanding the story volume. The characters and the player are both trying to understand the same thing: what are the rules that govern this space we find ourselves in?

4 How does *Umineko* illuminate a poetics of story volumes?

In a metafictional move, in *Umineko* discussing the story volume is a central part of the plot. During the Tea Party epilogue of episode 1, the characters break the fourth wall and discuss the ending of the episode in branching narrative terms of "bad endings"[9]. The epilogue initially appears to be a non-diegetic, non-canonical, out-of-character *omake* in the form of a "wrap party," with the characters speculating about how they could do better next time. But when Battler objects to blithely accepting the magical nature of the murders, the witch Beatrice breaks the fourth wall's fourth wall, walking onto the stage and turning the backstage conversation into part of a larger diegesis.

This meta-diegesis sets the stage for the rest of the games: in a tea room in Purgatory, Battler and Beatrice argue about whether the story is fantasy (and the culprit is a witch) or mystery (and a human somehow committed the impossible murders).

Subsequent episodes expand the scope of the inquiry, often addressing questions through embodied personifications of narrative concepts.[10] How do readers deal with ambiguity in fiction? Under what conditions can a fan-written story be a satisfying conclusion?

Structurally (in the Carstensdottir et al. sense of the graph structure [7]), *Umineko* consists of eight episodes, with each episode followed by a "tea party" epilogue. Each episode is introduced with a description of the episode and its difficulty rating.

With one major exception, the episodes are primarily linear visual novels, with no choice structure, though the player has access to a hypertextual "Tips"

[9] Episode 1 Tea Party:
「つまり何だ？　あれは結局、犯人は暴けず時間切れのバッドエンドでしたーってことなのか？」
「うー。きっとバッドエンド。うー。」
Jessica: "So just what happened? Was that basically the 'bad ending', where time runs out before the culprit gets exposed?"
Maria: "Uu-. Definitely a bad ending. Uu-."

[10] Including personifications of the author, the reader, fanfic writers, internet commentators, the roles of certainty and miracles in narrative, detective fiction genre conventions, guns, and duct tape.

menu that is gradually populated with an interactive diagram of character status and relationships, dossier entries about relevant items and documents (such as the letter from the witch), and a feature to toggle character descriptions between an "executed" and "resurrected" state. In contrast, the final episode leads up to the major interactive branching point, putting the question to the player: is it fantasy magic, or a mystery trick?

This mostly-linear structure that nevertheless is intimately concerned with examining story volumes gives us a unique opportunity to consider story volumes without the entanglement with emergent or interactive branching considerations.

4.1 A Diegetic Story Volume

The degree to which *Umineko* discusses its own structure is somewhat unusual, even within the context of metafictional story volumes. The story volume is an explicit topic of discussion as the characters try to figure out the rules of the mystery.

Battler and Beatrice refer to the storylines that play out in front of them as games on a game board. The characters on the island are referred to as game pieces, first as a metaphor and then, in a pataphoric move, as the literal pieces in the game Battler and Beatrice are playing.[11] More pieces show up as new characters are introduced.

The game board that the characters are using emanates, in our terms, a story volume: the game board is a set of rules that express what stories are possible within that story volume.[12] The episodes of *Umineko*, therefore, describe a series of storylines within the story volume, presented as both the repeated in-world tragedy on the game board and as a discussion topic in the metafictional debate.

In *Umineko* cosmology, storylines are visualized as fragments, orbiting in the Sea of Fragments (カケラの海). In-fiction, voyager (航海者) witches traverse this sea in a diegetic exploration of the story volume.

Most of *Umineko* is devoted to a linear progression through a select sample of storylines. This unrolled set of storylines gives us a unique opportunity to examine what a game story volume means, separate from questions of player agency or interactivity. Because it metafictionally discusses its own structure, we can use its own terms to generalize a theory of story volume poetics.

[11] Episode 5:
…そういうことよ戦人ぁ。あんたにはゲームを降りることなんて許されてないの。あんたもベアトも、私たちの退屈を紛らわせるゲーム盤の駒でしかない
Lambdadelta: ...That's how it is, Battleeer. You aren't allowed to step down from the game board. You and Beato are nothing more than pieces on the board that exist to distract us from our boredom.

[12] Episode 5:
「…同じゲーム盤を使う以上、この子に出来ないことは出来ません。……しかし、この子がやらないことはやれます。」
Virgilia: "...Since they're using the same game board, they cannot do anything that this child cannot do. However, they can do things that this child wouldn't do."

In terms of our poetics, the *game board* is the apparatus that generates the storylines, which are the possible ways the game can play out. The sum of all of the storylines is the story volume.

The reason *Umineko* gives for foregrounding the story volume is to get the reader to start thinking about the differences and similarities between storylines.[13] It deploys the metafictional discussion as part of a poetic strategy to encourage the player to look beyond the immediate situation of a single storyline.[14] The games encourage the player to triangulate mystery from multiple angles, with an explicit goal of inducing the audience to reason out the solutions and their implications while avoiding explicitly stating them within the text.[15]

Constructing a story volume requires creating some level of metafictional context—even the somewhat accidental meta-fiction of saving and loading exposes us to think of the volume beyond the single storyline.

The first step of story volume poetics is to convey to the player that there *is* a story volume.

Making the metafiction diegetic is a particularly blunt way to do it, though many other games have experimented with other ways to signal this: "Clementine Will Remember This" in *The Walking Dead* [46] implies a story volume extradiagetically, the time loops[22] of *Ocarina of Time* [39] require diegetic recursion, *Nine Hours, Nine Persons, Nine Doors* [10] includes a flowchart mapping out the story volume, and repeated resurrections in *Planescape: Torment* [4] make the common videogame dying/respawning cycle diegetic.

4.2 The Cat Box and the Game Board

The game board is defined as the events that happened on Rokkenjima over the course of those two October days. As the episodes continue, it is revealed that people outside the island do not know the solution to the mystery either: in-game this unsolved mystery is described as a *cat box*, in reference to Schrödinger's cat. Without the knowledge of the true ending, any of the storylines might be true.

This is simply a clearer version of the poetics that the story volume in a branching or emergent game deploys, making some of the possible procedural rhetorics [5] more visible. For example, *Umineko* frequently makes use of the multiple storylines to give us multiple perspectives on the characters, in a way

[13] Episode 8:
それは、ベアトより言葉なきメッセージを受け取るためのゲームだった
Those games had been a wordless message from Beato.

[14] Episode 7 Tea Party:
伝えたいたった一つのことを、いくつものゲームを重ねて語る。
A single message can be conveyed over several games.

[15] In several ways this is reminiscent of the novels described in Borges' "Examen de la obra de Herbert Quain" [6]—Like *The God of the Labyrinth* the reader is left to discover for themselves that a stated solution is wrong, like *April March* the text branches backwards in time, like *The Secret Mirror*, the characters find themselves in stories written by others, and like *Statements* several of the stories are deliberately calculated to disappoint the reader.

that is difficult to do without a story volume. Changing the mutually-exclusive situations that the characters are subjected to expands our insight into their relationships: we can see both how George reacts to the death of his mother Eva, and how Eva reacts to the death of her son.

Rather than being limited to a single version of the character, we can examine all possible versions. This is a useful device for a writer: since we aren't locked in to a single version of events, we can try out different combinations. As the characters become more fleshed out, they transition into actors playing new roles.

Part of the pleasure of playing the game comes from being able to build up a mental model of the characters through seeing them react to multiple variants of the same situation. This anticipation of behavior and the contrast between characters is accelerated in the context of a story volume. We notice the patterns more quickly: what is always constant about this character? What changes? When confronted with the mutually-exclusive parallel situations, how do different characters react?

By means of two mutually-exclusive storylines, the first two episodes establish a parallel between Natsuhi and Rosa: how does she behave when thrust into the role of being the sole responsible adult, trying to protect her daughter as their family is murdered around them? The different choices they make in their paired scenarios give the player a contrasting picture. We see how they both define themselves through their role as a mother, their sense of failure in living up to the expectations the patriarchal environment has placed on them, and the tragedy this engenders. Their respective roles in the family can be compared across storylines, setting up themes that can't be seen in a single storyline but are visible across the story volume.

On the other hand, the opportunity to show the characters from multiple perspectives shows how the story volume can be used to enrich the characters. Rosa's relationship with her daughter Maria is explored across multiple storylines. A pivotal event for them that occurs early in most storylines is when Maria is caught in the hurricane's torrential rain: we see different ways that it could happen and a range of possible outcomes. Was Rosa neglectful, forgetful, abusive, or uninformed? The different configurations of their relationship are reiterated across multiple storylines, allowing the intertwined horror and love to assume new configurations in each. The different readings and portrayals of each event can be likened to dramaturgs in theater compiling a production history of a particular play to understand the decisions and themes emphasized in previous performances [8].

The general trend in interactive fiction that is centered around discovery is toward what Sedgwick termed *paranoid reading*, focusing on teasing out the "true" meaning from a text [42], *Umineko* deliberately prevents the existence of a singular protostory, inviting the player to instead actively engage in *reparative play*, taking the parts that are deliberately in disrepair and assembling them into a whole [19]. The latter half of the *Umineko* episodes are actively constructed around questions of authorship, readers, and the player's role in experiencing and interpreting the story.

Notably, rather than building up to a "true" ending, the *Umineko* repeatedly emphasizes that every storyline being presented is potentially true, though not equally plausible. In an act of narrative disrepair, the cat box is deliberately left unopened and the meta-fictional implications of this are one of the major themes of the frame storyline, leading up to the final (and most significant) interactive choice in the game: is it mystery or magic?

4.3 Probability and the Shape of the Story Volume

One way the text actively encourages player engagement with this reparative play is through probability and plausibility: some events and storylines are common, and some are rare. One way interactive narratives can create the felt sense of experiencing a miracle is through explicitly invoking the probability: *Disco Elysium* [48] makes use of explicit die rolls to create this sense of rarity.

As an unrolled[16] story volume, *Umineko* invokes a similar effects through the likelihood of a given event being included: of all the possible storylines, how many can this happen in? Because the storylines conform to the rules of the story volume, as players we can anticipate what is and is not probable as we untangle the overdetermined tragedy.

The depiction of probability is an avenue of author expression that is difficult without the story volume but highly effective within it. This is even more apparent when we move from the vanishing probability of a miracle to the certainty of the tragedy.

4.4 Logical Quantifiers

In order to explicitly lay out the rules for fair play in the mystery, the game introduces a mechanic for stating explicit truth: red text. When a witch makes a statement with red text, it is axiomatically true. This allows the mystery narrative to continue without excessive haggling about descriptive details in the clues, but it also sets up a set of logical constraints for the shape of story volume: Something stated in red text is true for all story threads in the story volume. If it is stated in red text that the murders were never done with small bombs, then that is true for all of the story volume, closing off the possibilities.

This applies to *past* story threads as much as future ones: while we readers might be encountering them in a particular order, they are parallel, not sequential.

This sets up a parallel behavior between the characters, who are debating the rules of the story volume, and the players, who are trying to learn the rules of the story volume. The audience is primed to actively participate in the mystery-solving, since the resolution of the mystery and the resolution of the story-volume are intimately related. Further, the reader is actively directed to

[16] *Unrolled* in the sense of an unrolled loop in computer science: code that would have been repeated is instead executed sequentially (e.g. [32]).

think of the game in terms of the story volume. Awareness of the existence of the story volume is necessary to understand the narrative.

As a device, it can also be deployed for emotional effect: the pacing of a reveal can be timed to crush a character's dreams with the realization that such a thing is categorically impossible. Further, discovering absolutes in the story volume can give previously insignificant details narrative weight, giving us another way to retroactively realize the implications of past events.

Notably, none of this requires resolving the ambiguities in the text: the important thing is to grasp the ambiguity, not necessarily to resolve it. The text explicitly encourages engagement with what *could have* happened, perhaps even more than it does to solve the mystery of what did happen.

One of the other colors used is gold text. The exact meaning of the gold text is never made explicit. However, it can be inferred that statements made in gold text are conclusions that can only be made by understanding the story completely. We can think of game in terms of acting as a ritual guide to lead the player to a place where they, too, can make conclusive statements about the shape of the story volume, speaking from the heart of the story volume.

4.5 The Heart of the Story Volume

The storyline in the context of the story volume tells us more about the story than either the individual storylines or the volume by itself. This becomes especially clear when the story volume is viewed as a generator of individual storylines (defining an *expressive range* [44] of storylines that meet the story volume's constraints), in line with what Guzdial et al. [20] have argued in the past. Under this view of story volumes as story generators, the meaning of the individual storyline can be viewed as partially dependent on its positioning within the overall story volume from which it is drawn, much as Kreminski et al. [33] argue that individual artifacts from a generator's expressive range derive their meaning in part from where they fall within this expressive range. We elaborate further on the connection between story volume poetics and the poetics of procedural content generation in section 4.6.

Some events in the story volume are rare, while others are common: what a character will always do and what a character will never do dictates the shape of the volume. After observing multiple storylines, the player is able to get a sense for what is probable, possible, or impossible. The seventh episode takes advantage of the meta-fictional nature of *Umineko* to explicitly address this by combining multiple storylines and discussing the new information we get from looking across storylines, rather than just along them. This is linked to a central theme of *Umineko* as a whole: knowing the facts isn't as important as understanding the heart of the story volume.

Battler's character arc is intimately bound up with understanding the heart of the story volume: his failures when he approaches the solution to the mystery but misses the deeper thematic import, his successes come when he truly understands the heart of the mystery.

The theme of knowing the heart is most explicitly put forward by a character in the seventh episode, Will,[17] an about-to-retire detective who is driven by his care for the people affected by the mysteries: "If you want to play the detective, don't neglect the heart,"[18] in his terminology, referencing the importance of understanding the motivation of the culprit when solving the mystery. Looking at the statistics that describe the shape of the volume as a whole can't tell us what motivates the characters to make the decisions that create that shape.

While a distant read of the shape of the story volume can give us valuable information, we also need the individual storylines to understand the heart of the story. Though Maria being caught out in the rain is a repeated event, the way in which its consequences play out always has deep ties to the themes of that particular storyline. How the characters react *this time* sets a tone for the events that follow.

The meta-fictional nature of the game lets the characters discuss the shape of their story volume, such as when Bernkastel states that an event is so rare that "there's actually a $2,578,916/2,578,917$ chance" against it happening.[19] In contrast, some things are constant: while the characters speculate that Jessica would have been less headstrong and independent if she had been raised in other circumstances, we players know from observing her across the story volume that this aspect of her personality is a constant.

Our knowledge of other storylines gives us a perspective that we can't find in just the global or individual perspective alone. The statistics of the story volume don't tell us about the heart of the story. A common event might still have an emotional impact: as readers we've seen the death of Battler's father before, but from his perspective in this storyline he is confronting his grief for the first time. The many storylines give us a parallax perspective that we can use to perceive the holographic projection of the heart of the story.

Storygameness and Story Volumes Mitchell's work on *storygameness* discusses how it affects player focus: "as players experience a storygame, they shift focus between the narrative and the playable system" [37]. *Umineko* explicitly engages with this question at several points.

In the fifth episode, the role of the detective is taken over by Furudo Erika, and her approach is explicitly contrasted with Battler's quest. By this point, Battler is more interested in the message that he believes the rules are intended to communicate. Erika, in contrast, wants to learn the rules in order to reduce it to a logic puzzle and never have to think about it again. In a deliberate construction, neither is right: Battler is unable to fulfill the message without understanding the rules, and Erika is unable to solve the mystery without understanding the message.

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[17] Willard H. Wright (ウィラード・H・ライト), who is also an oblique reference to the American mystery writer S. S. Van Dine.

[18] 探偵気取るなら、心を忘れるんじゃねェ

[19] ２５７万８９１７分の２５７万８９１６の確率で

This theme continues, and it is extended to the audience: when answers to the mysteries are presented in later episodes, the reveals are structured so that the logic is incomplete without understanding the characters and their motivation in the narrative.

Ultimately, *Umineko* is structured so that the narrative is incomprehensible without understanding the rules of the game board, but the rules are incomplete without also understanding the narrative.

This discussion is emphasized in other episodes: for example, when in-universe authors appear on stage, writing what is—from their point of view—real-person fan fiction [16, 47] about the murders, strictly following the rules of the game board. Or the extended discussion of the role of the author and the reader in the meta-frame story for the meta-world of the game-board in the fifth episode.

In each case, the rules and the narrative co-exist: while an author could, in theory, write anything, there is a limit to a reader's suspension of disbelief, particularly when the story needs to conform to the expectations of the mystery genre. Getting the reader to accept a miracle is difficult. This is part of why *Umineko* focuses on probability: as with the die rolls in *Disco Elysium*, the reader needs some mechanism to accept improbable results, even—or especially—good results.

As it turns out, the author *can't* write just anything: they can only write what fits within the story volume.

4.6 PCG Poetics

There are commonalities in the aesthetic effects of complex systems: some of the tools that we use to analyze the generative space of a procedural content generation system can be usefully applied to the space of the story volume with.

For example, Karth's category of *repetition* in procgen poetics is a useful lens to use for analyzing story volumes, since the parallel story threads have an aesthetic effect akin to repeated similar trees in an orchard. And in a generative context, an *orchard* is a generative space that is characterized by the commonalities between different generative artifacts produced by the same system, similar to how the aesthetic effect of an orchard comes in part from the ordered repetition of the trees [28]. Examining story threads through this lens, we can appreciate that part of the aesthetic effect of different story threads comes from the ritual repetition of some of the events. In *Umineko* some of this repetition is the literal occult ritual to resurrect the witch, but the orchard effect can also be seen more broadly in the other repeated events. The aesthetic result is a kind of chorus-and-verse effect. Or perhaps a call-and-response, as we anticipate how the next unpreventable murder will correspond to the prescribed ritual.

In a generative system, an artifact that breaks the orchard pattern holds out-sized significance, and the same applies in a story volume narrative. We read to discover what is different this time, because differences are what allow us to access new parts of the story volume. Pattern-breaking elements become landmark that we use to orient ourselves.

The artifact in relation to the distribution can communicate something that neither the artifact alone nor the distribution itself can. Without the story volume, we won't be able notice differences, let alone understand what they mean. A distant reading misses the why. Without the individual trace, we won't appreciate the particular uniqueness. We can only understand the heart of the story when we have a sense of both.

We can think of both the story volume and the generative space as latent manifolds. An individual generative artifact is one point on the surface of this manifold. Likewise, a single trace through the story volume is one fragment in a sea of fragments. This implies that tools for analysing generative spaces (such as Expressive Range Analysis [44, 33]) can be applied to interactive narratives, and tools for working with interactive narratives can be applied to generative systems.

This is similar to how tabletop roleplaying games and procedural content generators are systems of rules that describe a volume of possible content. As Guzdial et al. argue, viewing tabletop roleplaying games under a PCG lens gives us a way to describe how roleplaying game systems can produced widely varied content that is nevertheless bounded by its possibility space [20]. In contrast, viewed through the lens of a game between the player and the author, the mystery story is about narrowing that possibility space down to a plausible and satisfying explanation.

Umineko is a mystery story, but it is also a commentary on the puzzle-mystery genre. The concept of the "fruitful void" [3] is particularly interesting in this light: in Umineko, the solution to the mystery is never explicitly stated.[20] Instead, the reader-player is encouraged to discover the thematic heart of the story in circling but never resolving the ambiguity: the multiple endings leave it up to the reader to determine: was it mystery, or was it magic?

4.7 Theatricality

This cycle of replaying the same storyline with minor variations falls under the purview of the definition the theatricality discussed in Junius et al.: "a property of creative works that repeatedly reinterpret and recontextualize a partially fixed performance over a period of time, in such a way that this continual recontextualization is at least partially exposed to the audience" [26].

The way the game of the island mystery repeats is ritual of repeated performance, similar to the structure of a run in *Hades'* roguelike challenge-die-repeat cycle. Through this theatricality, it calls attention to microlevel differences between the storylines, leading the player to pay attention to those details that they would have overlooked without that theatricality. In both cases, the games engage with this theatricality on a meta-level.

Similar to how *Hades* cycles players between the *stage* (a single attempt to escape the underworld) and the *diegetic backstage* (the House of Hades) [26],

[20] Indeed, the writer has stated in interviews that one desire was that the solution would not be presented in such a way as to able to be captured in a screenshot [29]

Umineko implements internal theatricality: it has both a stage (the game of the mystery of the island) and a diegetic backstage (the purgatorial tea room). In both cases, the characters return to the backstage to debrief, where we see them as actors (or playing pieces) rather than characters. In the backstage our collective understanding of the story-volume / play-script increases: diegetically, the actors come to understand their roles better as we players grow our understanding in parallel.

Theatricality, as defined by Junius et al., is about letting the player experience the production process, from early rehearsals to opening and finally closing nights. In episode 8, *Umineko* implements this diegetically, presenting a final command performance, with the characters commenting on the skill in staging the mystery gameboard, while a character tries to come to terms with the meaning of the story volume as whole.

Theatricality, in this sense, is directed to getting you to try new things: the central mechanic of the mystery genre is the player coming up with a theory to explain the mystery; because *Umineko* incorporates this cycle of theatricality, it can diegetically demolish the theories that you formed on previous runs. But the cycle continues, inviting you to form new and better theories. The player's improving skill is invested in acquiring a deeper understanding of the rules of the mystery and the themes of story volume.

Theater and theatricality can be viewed as a search for novelty and "making the old look new" [40], as described by Zeami Motokiyo in his treatises on Nō theater. Our understanding of the characters and their situations is fueled by this cycle of new looks at old things. Characters who are unsympathetic from one perspective are more understandable from another angle.

For one example: We get some familiarity with Maria's interests in the occult in the first episode, a deeper look at her troubled relationship with her mother in the second episode, and much deeper insight how both of them connect later, all of which is necessary for understanding how the conclusion of the fourth episode could be possible. Each cycle gives us a new perspective on old events. Understanding can build up through successive episodic cycles, triangulating insights about the story volume that are never explicitly stated in the text.

5 Conclusion

This paper provides one of the first descriptions of *Umineko no Naku Koro Ni* for the English-speaking academic audience, and certainly the first from a game studies perspective. It uses *Umineko* as a case study to describe story volumes separately from emergent gameplay, by presenting *Umineko* as an instance of an *unrolled story volume*.

The diegetic approach to making the player aware of the story volume is discussed. Story volumes can triangulate narrative elements that aren't explicitly depicted in any individual storyline, and can combine absolute certainty with narrative ambiguity (the cat box effect). Story volumes can use probability (or frequency in the story volume) to convey a sense of certainty and miracles to the

player. Story volumes are also connected with theatricality, particularly in the case of the layers of performances and meta-fiction in *Umineko*. They overlap with research concerns in the PCG community, and analysis tools for one can usefully be applied to the other.

The elements of the story volume system support each other. The game directs the player to think about the parallels between storylines by explicitly highlighting existence of the story volume. This allows the themes of intergenerational trauma to be put in relief in a way that would be much more difficult if we were restricted to a single storyline. It also revels in ambiguity, while still providing answers to the mysteries. Similar to the way that *Dark Souls* [17] implies narrative in a lacuna between item descriptions and environmental setpieces, Umineko presents a solvable mystery without opening Schrödinger's cat box, demonstrating one way to resolve the tensions in plotting hypertext fiction. The logical quantifiers place explicit bounds on the story volume, which in turn is part of its strategy to encourage the player to think beyond the rules and seek the heart of the story.

The tension between the player emphasizing with the story and the player exploring the possibilities of the emergent space is intimately entangled with questions around replayability [36]. *Umineko* offers commentary on the tension, from both a structural and diegetic in-character perspective.

Finally, *Umineko* lets us draw parallels between the mystery genre, hypertext fiction, and story volumes. *Umineko* is a murder mystery, a commentary on the mystery genre, a fantasy story, a commentary on fantasy, a story volume, a commentary on story volumes, and ultimately about looking beyond mystery and magic, finding the heart of the story in the player's own understanding of the cat box.

References

1. Andrews, D.K.: Genesis at the shrine: The votive art of an anime pilgrimage. Mechademia **9**, 217–233 (2014), http://www.jstor.org/stable/10.5749/mech.9.2014.0217
2. Ayatsuji Yukito: The Decagon House murders. Pushkin Vertigo, London (2020 - 2017)
3. Baker, V.: The Fruitful Void (2005), http://lumpley.com/index.php/anyway/thread/119
4. Black Isle Studios: Planescape: Torment (1999)
5. Bogost, I.: Persuasive Games: The Expressive Power of Videogames. MIT Press, Cambridge, MA (2007)
6. Borges, J.L.: Fictions. Calderbook ; CB428, Calder Publications, Paris ; (1998)
7. Carstensdottir, E., Kleinman, E., El-Nasr, M.S.: Player interaction in narrative games: Structure and narrative progression mechanics. In: Proceedings of the 14th International Conference on the Foundations of Digital Games. FDG '19, Association for Computing Machinery, New York, NY, USA (2019). https://doi.org/10.1145/3337722.3337730, https://doi.org/10.1145/3337722.3337730
8. Chemers, M.: Ghost Light. Sothern Illinois UP (2010)

9. Christie, A.: And then there were none. Harper, New York (2011 - 1939)
10. Chunsoft: Nine Hours, Nine Persons, Nine Doors (2009)
11. Crampton, C.: Honkaku: a century of the japanese whodunnits keeping readers guessing (2021), https://www.theguardian.com/books/2021/apr/27/honkaku-a-century-of-the-japanese-whodunnits-keeping-readers-guessing
12. Eiserloh, S.a.E., Forbes, J., Grinblat, J., Holmes, J.H.R., Robertson, T., Schreiber, I., Sellers, M., Swink, S., Law, L.: Group report: Generative systems, meaningful cores. In: The Tenth Annual Game Design Think Tank Project Horseshoe 2015 (2015), https://www.projecthorseshoe.com/reports/featured/ph15r3.htm
13. 07th Expansion: Higurashi no Naku Koro ni Chiru (2002–2006), english release in 2009–2010
14. 07th Expansion: Umineko no Naku Koro ni (2008), english release in 2016
15. 07th Expansion: Umineko no Naku Koro ni Chiru (2010), english release in 2017
16. Fathallah, J.: Reading real person fiction as digital fiction: An argument for new perspectives. Convergence **24**(6), 568–586 (2018). https://doi.org/10.1177/1354856516688624, https://doi.org/10.1177/1354856516688624
17. From Software: Dark Souls (2011)
18. Grinblat, J.: Emergent narratives and story volumes. In: Short, T., Adams, T. (eds.) Procedural Generation in Game Design. CRC Press (2017)
19. Grinblat, J., Manning, C., Kreminski, M.: Emergent narrative and reparative play. In: International Conference on Interactive Digital Storytelling. pp. 208–216. Springer (2021)
20. Guzdial, M., Acharya, D., Kreminski, M., Cook, M., Eladhari, M., Liapis, A., Sullivan, A.: Tabletop roleplaying games as procedural content generators. In: International Conference on the Foundations of Digital Games (2020)
21. Hack, B.: Ominous images of youth: Worlds, identities, and violence in japanese news media and when they cry. Mechademia: Second Arc **10**, 236–250 (2015), https://www.jstor.org/stable/10.5749/mech.10.2015.0236
22. Hanson, C.: Recursive Temporalities, pp. 135–155. Indiana University Press (2018), http://www.jstor.org/stable/j.ctv176q4.10
23. Hattingh, J.: The intellectual hero's representation in anime : an exploration. Ph.D. thesis, University of Pretoria, Pretoria (2016), http://hdl.handle.net/2263/60363, MA Dissertation
24. Haycraft, H.: Murder for pleasure : the life and times of the detective story. Biblo and Tannen, New York, newly enlarged edition, with notes on additions to a cornerstone library and the haycraft-queen definitive library of detective-crime-mystery fiction. edn. (1974 - 1951)
25. Golden age traditions (2005). https://doi.org/10.1093/acref/9780195072396.013.0277, https://www.oxfordreference.com/view/10.1093/acref/9780195072396.001.0001/acref-9780195072396-e-0277
26. Junius, N., Kreminski, M., Mateas, M.: There is no escape: Theatricality in Hades. In: The 16th International Conference on the Foundations of Digital Games (FDG) 2021 (2021)
27. Kaltman, E., Osborn, J., Wardrip-Fruin, N., Mateas, M.: Getting the gisst: A toolkit for the creation, analysis and reference of game studies resources. In: Proceedings of the 12th International Conference on the Foundations of Digital Games. FDG '17, Association for Computing Machinery, New York, NY, USA (2017). https://doi.org/10.1145/3102071.3102092, https://doi.org/10.1145/3102071.3102092

28. Karth, I.: Preliminary poetics of procedural generation in games. Transactions of the Digital Games Research Association **4**(3) (2019). https://doi.org/https://doi.org/10.26503/todigra.v4i3.106
29. Keiya: Saishū kōsatsu umineko no naku koro ni chiru: Answer to the golden witch Episode 5-8. ASCII Media Works, Tōkyō (2011)
30. Kleinman, E., Carstensdottir, E., El-Nasr, M.S.: Going forward by going back: Re-defining rewind mechanics in narrative games. In: Proceedings of the 13th International Conference on the Foundations of Digital Games. FDG '18, Association for Computing Machinery, New York, NY, USA (2018). https://doi.org/10.1145/3235765.3235773, https://doi.org/10.1145/3235765.3235773
31. Koenitz, H.: Towards a specific theory of interactive digital narrative. In: Interactive digital narrative, pp. 91–105. Routledge (2015)
32. Koseki, A., Komastu, H., Fukazawa, Y.: A method for estimating optimal unrolling times for nested loops. In: Proceedings of the 1997 International Symposium on Parallel Architectures, Algorithms and Networks (I-SPAN'97). pp. 376–382 (1997). https://doi.org/10.1109/ISPAN.1997.645123
33. Kreminski, M., Karth, I., Mateas, M., Wardrip-Fruin, N.: Evaluating mixed-initiative creative interfaces via expressive range coverage analysis. In: 3rd Workshop on Human-AI Co-Creation with Generative Models (2022)
34. Landt, M.: Sentiment analysis as a tool for understanding fiction. Undergraduate course final project report, 2014/LIS590AD, University of Illinois at Urbana-Champaign (2014)
35. Mireault, J.: No slaughter without laughter?: music and genres in Japanese popular media. Ph.D. thesis, McGill University, Montréal, Canada (February 2013), https://escholarship.mcgill.ca/concern/theses/mc87pt98z
36. Mitchell, A., Kway, L.: "how do i restart this thing?" repeat experience and resistance to closure in rewind storygames. In: Bosser, A.G., Millard, D.E., Hargood, C. (eds.) Interactive Storytelling. pp. 164–177. Springer International Publishing, Cham (2020)
37. Mitchell, A., Kway, L., Lee, B.J.: Storygameness: understanding repeat experience and the desire for closure in storygames. In: DiGRA 2020 - Proceedings of the 2020 DiGRA International Conference. DiGRA (2020)
38. Mitchell, A., McGee, K.: Reading again for the first time: A model of rereading in interactive stories. In: Oyarzun, D., Peinado, F., Young, R.M., Elizalde, A., Méndez, G. (eds.) Interactive Storytelling. pp. 202–213. Springer Berlin Heidelberg, Berlin, Heidelberg (2012)
39. Nintendo: The Legend of Zelda: Ocarina of Time (1998)
40. Rimer, J.T., Yamazaki, M., et al.: On the Art of the Nō Drama: The Major Treatises of Zeami; Translated by J. Thomas Rimer, Yamazaki Masakazu. Princeton University Press (1984)
41. Ruh, B.: Adapting Anime: Transnational Media between Japan and the United States. Ph.D. thesis, Indiana University, Bloomington, Ind., USA (May 2012), https://hdl.handle.net/2022/15920
42. Sedgwick, E.K.: Paranoid reading and reparative reading, or, you're so paranoid, you probably think this essay is about you. In: Touching Feeling, pp. 123–152. Duke University Press (2003)
43. Silver, M., Herbert, R.: Japan, crime and mystery writing in (2005). https://doi.org/10.1093/acref/9780195072396.013.0348, https://www.oxfordreference.com/view/10.1093/acref/9780195072396.001.0001/acref-9780195072396-e-0348

44. Smith, G., Whitehead, J.: Analyzing the expressive range of a level generator. In: Proceedings of the 2010 Workshop on Procedural Content Generation in Games (2010)
45. Steinberg, M.: Anime's Media Mix : Franchising Toys and Characters in Japan. University of Minnesota Press, Minneapolis, UNITED STATES (2012), http://ebookcentral.proquest.com/lib/ucsc/detail.action?docID=902560
46. Telltale Games: The Walking Dead: Season One (2012)
47. Thomas, B.: Fans behaving badly? real person fic and the blurring of the boundaries between the public and the private. In: Thomas, B., Round, J. (eds.) Real Lives, Celebrity Stories : Narratives of Ordinary and Extraordinary People across Media, pp. 171–186. Bloomsbury Academic, 1 edn. (2014)
48. ZA/UM: Disco Elysium (2019)