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

Isaac Karth[1], Nic Junius[1], and Max Kreminski[1,2(✉)]

[1] University of California, Santa Cruz, Santa Cruz, USA
{ikarth,njunius}@ucsc.edu
[2] Santa Clara University, Santa Clara, USA
mkreminski@scu.edu

Abstract. Many interactive digital narrative (IDN) systems are capable of producing numerous distinct *storylines*, which share some common properties but differ from one another in ways that appear contradictory when attempting to treat them as co-canonical. One theory of IDN poetics therefore positions an IDN system as defining a *story volume:* a generating function that produces storylines, and whose meaning lies not just in the storylines themselves but also in the relationships *between* these storylines. However, the discussion of story volumes has until now been entangled with the discussion of choice and emergence, making the scope of this theory's applicability unclear. To advance understanding of the poetics of story volumes, we examine *Umineko no Naku Koro ni*—a heavily metafictional visual novel series with no emergent narrative component and almost no player choice, but in which the characters explicitly understand themselves as existing within a story volume—as a case study of how story volumes can be used to create narrative meaning.

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

1 Introduction

Many interactive digital narrative (IDN) systems are capable of producing numerous distinct *storylines*, which share some common properties but differ from one another in ways that appear contradictory when attempting to treat them as co-canonical. One theory of IDN poetics therefore positions an IDN system as defining a *story volume*: a generating function that produces storylines, and whose meaning lies not just in the storylines themselves but also in the relationships *between* these storylines.

The theory of story volumes was originally proposed by Jason Grinblat in the context of interactive emergent narrative. For Grinblat, a story volume is "a family of emergent stories, all of which are begotten by a set of carefully curated system parameters" [16]. However, despite its introduction in the context of emergent storytelling specifically, the theory of story volumes also has a broader

applicability to IDN in general, providing a common terminology for discussing issues related to the experience of difference and repetition across multiple stories generated by a single IDN system. It would therefore be useful to disentangle the discussion of story volumes from the specifics of their use to understand interactive emergent narrative in particular.

To advance a more general understanding of the poetics of story volumes, we examine *Umineko no Naku Koro ni*—a heavily metafictional visual novel series with no emergent narrative component and almost no player choice, but in which the characters explicitly understand themselves as existing within a story volume—as a case study of how story volumes can be used to create narrative meaning. *Umineko* is unusually explicit in its discussion of its own structure, and therefore presents an unusually strong exemplar of story volume poetics in a non-choice-based and non-emergent context. Notably, *Umineko* has also seen little discussion in the English-language academic literature to date,[1] making this paper one of the first descriptions of *Umineko* from a game studies lens.

2   Related Works

Our definition of *story volume* is taken from Grinblat's "Emergent Narratives and Story Volumes" [16], which in turn builds on the sense of the term introduced in a Project Horseshoe group report [12]. The story volumes framework is elaborated further by Grinblat et al. [17], who contrast story volumes with the *protostory* concept from Koenitz's *System, Process, Product* model of IDN [28]: unlike a protostory, a story volume puts its "emphasis on the shape of the Product stories and de-emphasis on any narrative cohesion prescribed by the System" [17]. We elaborate further on the connection between story volumes and *Umineko* in the remainder of this paper.

Umineko involves the repeated diegetic "replaying" of very similar events. There have been many discussions of the role that replaying and rewinding have in games. For instance, Kleinman et al. present a framework for discussing rewind mechanics [27]. In that framework, from our perspective as players, *Umineko* has 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 metafictional degree, even when compared to many other games that have extra-diegetic acknowledgement of rewinding.[2]

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

---

[1] With rare exceptions, such as the occasional undergraduate or MA thesis [21,31]. The previous games in the *When They Cry* media mix (*Higurashi no Naku Koro ni*) have had more attention [1,19,32,39], though that is partially due to the anime adaptation and overall cultural impact rather than the games per se.

[2] From the *characters'* metafictional perspective, the "game board" (as discussed in Sect. 4.1) has designer dominant control, dynamic scope, and an ontologically complicated narrative justification.

in which readers are initially rereading to reach some form of closure" [35]. 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* [33]. While *Umineko* continually rewinds to the beginning, the more linear metafictional frame story emphasises reading "in a new way" [33] 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 by the doujin circle 07th Expansion [13,14]. It consists of eight episodes, beginning with four Question Arcs (each of which depicts an alternative version of the same events) and concluding with four Answer Arcs (which present additional backstory and metafictional discussion between the characters regarding what happened in the question arcs).

Umineko's first episode begins 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. Following years of estrangement from his family, Ushiromiya Battler pays a visit to his outrageously wealthy and occult-obsessed grandfather's private, isolated island of Rokkenjima[3] 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 skeptical, unwilling to pass the blame to a presumably nonexistent 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

---

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

Christie, Shimada Souji, and (anachronistically) Ayatsuji Yukito[4] are mentioned by name, as well as the personification of Knox's "Ten Commandments" for detective fiction [22], tying it to both the Western Golden Age [23] detective fiction tradition as well as the parallel Japanese *honkaku* and *shin honkaku* subgenres [11,41].

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 Story Volume Poetics?

Umineko's first four episodes—the Question Arcs—depict four alternative storylines drawn from a single story volume: different versions of the Rokkenjima Incident, in which the vast majority of those present on the island are killed in some way. The final four episodes—the Answer Arcs—shift to presenting backstory and conflict between the characters as to which interpretation of the story volume as a whole is most true or valid. The mystery that the characters (and the audience) seek to solve thus gradually shifts from centering on the question of what happened in *one particular storyline* to the question of what common circumstances are consistent with *all* of the depicted storylines: in other words, what parameters define the story volume.

In a metafictional move, in *Umineko* discussing the shape of the story volume is a central part of the plot. This first becomes apparent in the epilogue of episode 1, which 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 (Fig. 1). 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).

Structurally (in the Carstensdottir et al. sense of the graph structure [7]), *Umineko* consists of a linear sequence of eight episodes. With one major exception, the episodes are linear visual novels, though the player has access to a hypertextual "Tips" menu that enables them to revisit key information about

---

[4] 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."
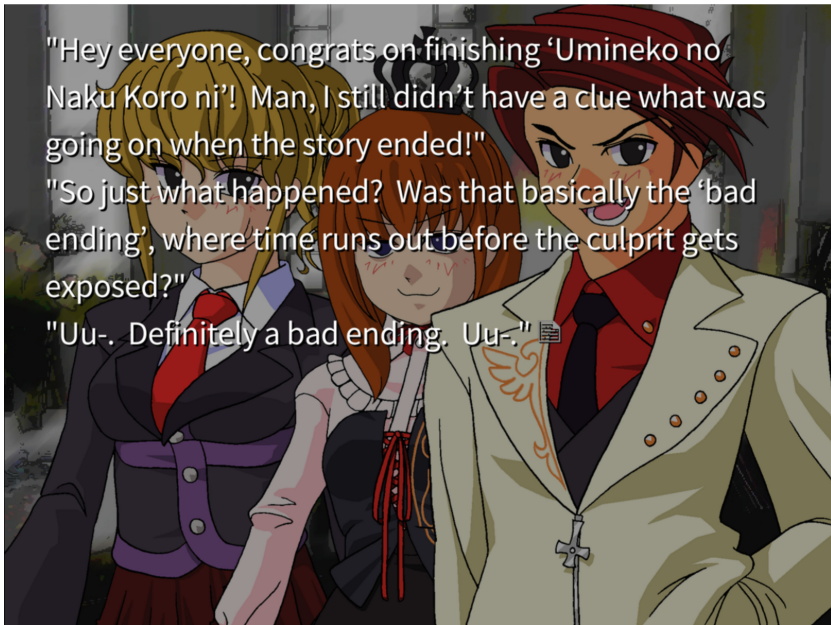Erika: "You sure are picky for a witch.".

Fig. 1. Characters in the first episode epilogue, discussing the ending of the episode in branching narrative terms.

Fig. 2. The game is mostly linear but includes hypertextual information about the characters and clues.

the characters and events of this episode so far (Fig. 2). The final episode contains several opportunities for player choice leading up to a conclusive interactive branching point, which puts 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 in the absence of emergent and choice-based narrative 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.[5] The shape of 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 (as they grow into the diegetic roles of detective-story reader and author respectively).

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.[6] The first four episodes of *Umineko*, therefore, depict a series of storylines drawn from the same story volume, presented as both a repeated in-world tragedy on the game board and a discussion topic in the metafictional debate.

The reason *Umineko* gives for foregrounding the story volume is to get the reader to start thinking about the differences and similarities between storylines. 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.[7] The games encourage the player to triangulate the 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.[8]

---

[5] The character roster eventually includes personifications of the author, the reader, fanfic writers, internet commentators, love, marriage, the roles of certainty and miracles in narrative, detective fiction genre conventions, guns, and duct tape.

[6] 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.".

[7] 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.

[8] 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

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* [43] implies a story volume extradiagetically, the diegetic time travel [20] in *Majora's Mask* [37] and *Ocarina of Time* [36] uses time loops and contrasts between timelines, *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 encompasses the events that happened during two days on Rokkenjima. 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: just as the cat is at once both alive and dead until the box is opened, without the knowledge of the true ending, any of the storylines might be true.

This is an explicit statement of the poetics of a branching or emergent narrative game, 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 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.

By means of two mutually-exclusive storylines, the first two episodes establish a parallel between Natsuhi and Rosa: how does each character behave when thrust into the role of being the sole responsible adult, trying to protect her daughter as their family is murdered around them? 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. Comparing their roles across storylines, we can see themes that would otherwise be less visible.

---

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.

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 player's role as they are exposed to different readings and portrayals of recurring events can be likened to that of the dramaturg in theatrical production, who is sometimes tasked with compiling the production history of a play to better understand the decisions made and themes emphasized in previous productions [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 [40]. *Umineko*, however, refuses to build up to a singular "true" ending, instead repeatedly emphasizing that every storyline being presented is potentially true, though not equally plausible. Thus, the player is invited to actively engage in *reparative play*, taking parts that "arrive in disrepair" and assembling them into a coherent whole [17]. With the cat box left deliberately unopened, it is ultimately up to the reader to assemble their own preferred interpretation of the events on Rokkenjima, drawing on fragments of potential truth that were presented across many mutually contradictory storylines.

4.3   Probability and the Shape of the Story Volume

One way that *Umineko* encourages reparative play is through its depiction of probability and plausibility. Though the events of each storyline can be seen as true, some events take place in a majority or plurality of possible storylines, while some are rare, taking place only in storylines where multiple unusual circumstances intersect.

As an unrolled[9] story volume, *Umineko* can induce a felt sense of probability in the player by literally controlling how frequently a certain event takes place across the storylines that are presented. Because all of the presented storylines conform to the rules of the story volume, as players we begin to develop a sense of what is and is not probable as we untangle the overdetermined tragedy. This can be used to establish some recurring scenes as highly likely, if not inevitable (e.g., Maria being caught out in the rain, which occurs in all of the Question Arcs) and even to create a sense of dramatic irony: 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 multiple storylines that this aspect of her personality is a constant.

---

[9] *Unrolled* in the sense of an unrolled loop in computer science: code that would have been repeated in a loop is instead written sequentially (e.g. [29]).

Simultaneously, through its metafictional elements, *Umineko* is able to *invoke* probability by having characters with greater metafictional awareness discuss it directly: for instance, when Bernkastel (the story volume-traversing Witch of Miracles) states that a particular depicted event is so rare that "there's actually a $2,578,916/2,578,917$ chance" against it happening[10]. Because the player has (by this late stage in the game) directly witnessed the fact that some events are more plausible than others across the story volume, an explicit statement about probability from a metafictionally privileged character can thus be used to create the felt sense of a miracle—just as explicit procedural die rolls can be used in games like *Disco Elysium* [45] to make the player feel that they have succeeded or failed against all odds.

From a storyteller's perspective, manipulating the weight of probability as felt by the reader is difficult in the absence of a story volume but highly effective in its presence. In *Umineko*, this becomes even more apparent when we move from considering the vanishing probability of a miracle to the certainty of tragedy.

4.4   Logical Quantifiers

In order to explicitly lay out the rules for fair play in the mystery, *Umineko* introduces a mechanic for stating absolute 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 on the shape of the story volume: something stated in red text is true of all storylines. If it is stated in red text that the murders were never done with small bombs, then that is true across the entire story volume, closing off previously-perceived possibilities. This applies to *previously encountered* storylines as much as future ones: while we readers might encounter storylines in a particular order, they are notionally parallel, not sequential.

Red text has utility to both 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. Its appearance primes players to actively participate in the mystery-solving (by giving them footholds on which to base their theories) while also actively directing them to think of the mystery in terms of the story volume and its possible shapes.

As a device, absolute statements 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 imbue previously insignificant-seeming details with new narrative weight, provoking players to reinterpret the implications of previously depicted events.

Notably, none of this requires resolving the ambiguities in the text. *Umineko* wants its players to grasp the ambiguity, but not necessarily to resolve it. The text explicitly encourages engagement with what *could have* happened, perhaps

---

[10]   ２５７万８９１７分の２５７万８９１６の確率で .

even more than it encourages players to solve the mystery of what *did* happen—and most often, red text is deployed to rule out a single hypothesized explanation for past events without suggesting any obvious alternative. Thus, absolute statements are used to keep the player in a state of uncertainty, even as the player attempts to uncover the story volume's ultimate truth.

4.5   Storygameness and Story Volumes

Mitchell's work on *storygameness* discusses how the player's understanding of a game as a storygame affects their focus: "as players experience a storygame, they shift focus between the narrative and the playable system" [34]. *Umineko* explicitly engages with the question of whether the story or the system should be the focus of player understanding at several points.

In *Umineko*'s 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 the mystery to a logic puzzle and never have to think about it again. In a deliberate construction, neither is right: Battler is unable to comprehend the message without understanding the rules, and Erika is unable to solve the mystery without understanding the message.

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.

The interdependence of system and story in the mystery as a whole 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 [15,44] 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 coexist: 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

By treating a story volume as a generating function or ruleset for many different storylines, we also gain the ability to analyze story volume poetics using tools that were originally developed to understand the subjective experience of procedural content generation (PCG).

For example, Karth's category of *repetition* in PCG poetics is a useful lens to use for analyzing story volumes, since the parallel story threads have an aesthetic effect via *repetition* [25]: the similarities help the differences stand out, while also making it more obvious what each storyline has in common. Viewed through this lens, the aesthetic effect of the storylines is linked to the ritual repetition of events. *Umineko* makes this explicit with a literal occult murder ritual, but this repetition aesthetic can be seen more broadly as other elements repeat. When viewed together, parallel instances of the ritual have the feeling of call-and-response, as we anticipate the next seemingly inevitable murder.

In a generative system, an artifact that breaks the pattern draws attention. In a story volume narrative, we read to discover what is different this time: a difference signals that there is more story to be found. We use these landmarks to orient ourselves.

The relationship between the individual instance and the distribution of possibility can communicate something that neither could on their own. We need the story volume to be able to notice differences, and the individual storyline to appreciate why those differences matter. We can only understand the heart of the story when we have a sense of both.

We can think of both generative systems and story volumes as possibility spaces, with each individual storyline a point in this space. This implies that tools for analyzing generative spaces—such as Expressive Range Analysis [30,42]—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 produce widely varied content that is nevertheless bounded by its possibility space [18]. In contrast, viewed through the lens of a game between the player and the author, the process of "solving" a mystery story revolves around narrowing a space of possible storylines 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] from tabletop roleplaying theory—the unsystematized central theme at the heart of every tabletop roleplaying game—is particularly interesting in this light. In *Umineko*, the solution to the mystery is never explicitly stated.[11] Instead, the reader-player is encouraged to discover the thematic heart of the story by circling but never fully resolv-

---

[11] 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 [26].

ing 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 conforms to the definition of *theatricality* discussed by 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" [24].

Similar to how *Hades* cycles players between the *stage* (a single attempt to escape the underworld) and the *diegetic backstage* (the House of Hades) [24], *Umineko* implements internal theatricality: it has both a stage (the "game board", on which a particular version of the Rokkenjima Incident plays out) 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. Additionally, in both *Umineko* and *Hades*, this performance/reflection loop calls attention to subtle differences between performances, leading the player to pay attention to details that they would have overlooked otherwise.

For Junius et al., theatricality also enables the player to 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 a 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 the story volume.

Theater and theatricality can be viewed as a search for novelty and "making the old look new" [38], 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   Summing It All Up: The Heart of the Story Volume

Viewing a storyline in the context of its story volume tells us more than either would on their own. The possibility space of a story volume defines an *expressive range* [42] of storylines that meet the story volume's constraints. The meaning of an individual storyline is partially dependent on its positioning within the overall story volume, much as Kreminski et al. [30] argue that individual artifacts from a generator's expressive range derive their meaning in part from where they fall within this expressive range (cf. Sect. 4.6). After observing multiple storylines, the player develops a sense for what is probable, possible, or impossible in the story volume as a whole.

Episode 7 takes advantage of *Umineko*'s metafictional nature to explicitly address this by combining multiple storylines, looking across the entire story volume. This leads to a central theme of *Umineko* as a whole: knowing the facts isn't as important as understanding the heart of the story volume.

The theme of knowing the heart is most explicitly put forward by a character in the seventh episode, Will,[12] an about-to-retire detective who is driven by his care for the people affected by mysteries: "If you want to play the detective, don't neglect the heart,"[13] in his terminology, referencing the importance of understanding the motivation of the culprit when solving the mystery.

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. The shape can't tell us what motivates the characters to make the decisions that create that shape. The statistics of the story volume don't tell us about the emotional impact. We need to experience the storyline for ourselves to feel the emotional impact of Maria being abandoned in the rain.

The importance of understanding the story's heart is perhaps made clearest by the introduction of a new game mechanic in episode 5. Like the red text that is used to make absolute assertions from episode 2 onward, *Umineko*'s Answer Arcs also feature occasional instances of gold text—the exact meaning of which is never made explicit. However, it can be inferred that gold text statements represent conclusions that can only be drawn by someone who understands the story completely, particularly the character motivations that shape the story volume. We can therefore think of *Umineko* as a ritual guide—leading the player to a place from which they, too, can make conclusive statements about the shape of the story volume, speaking from the heart.

---

[12] 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.

[13] 探偵気取るなら、心を忘れるんじゃねェ .

6   Conclusion

By examining *Umineko no Naku Koro ni* from the perspective of story volume poetics, this paper sets out an initial theory of how story volumes can create narrative meaning, independent of player choice and emergence. In particular, we find that distinctive forms of narrative meaning can arise in works of story volume narrative from the presentation of mutually contradictory storylines as equally true; from the player's felt sense of *probability* (i.e., what happens more or less frequently in storylines drawn from the same story volume); and from the existence of *logical quantifiers* (i.e., absolute truths about what is always required to happen, or never capable of happening, in any storyline drawn from the story volume). We also find strong connections between story volume poetics and the conceptual frameworks that have previously been used to make sense of *storygameness* (i.e., the extent to which players understand a game as a storygame); *PCG poetics* (i.e., the aesthetic effects of procedural content generation in games); and *internal theatricality* (i.e., the aesthetic effects of a system-facilitated performance/reflection loop in IDN).

Broadly speaking, this analysis of story volume poetics paves the way for a clearer understanding of any IDN work that encourages replay-with-variation; positions its characters as having awareness of the multiple storylines that might emerge from the system; or makes use of strategic re-presentation of events to achieve aesthetic effects on the player. From a technical perspective, this analysis also begins to suggest a novel, story volume-aware approach to story *generation*: by generating stories that are intended to be experienced as part of a story volume, we can take advantage of story volume poetics to achieve aesthetic effects that conventional forms of narrative might not be able to leverage as easily. We are especially excited to pursue this direction in the future.

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. Yukito, A.: 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 (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 2019, Association for Computing Machinery, New York (2019). 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., et al.: 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: Umineko no Naku Koro ni (2008). English release in 2016
14. 07th Expansion: Umineko no Naku Koro ni Chiru (2010). English release in 2017
15. 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
16. Grinblat, J.: Emergent narratives and story volumes. In: Short, T., Adams, T. (eds.) Procedural Generation in Game Design. CRC Press, Hoboken (2017)
17. Grinblat, J., Manning, C., Kreminski, M.: Emergent narrative and reparative play. In: Mitchell, A., Vosmeer, M. (eds.) ICIDS 2021. LNCS, vol. 13138, pp. 208–216. Springer, Cham (2021). https://doi.org/10.1007/978-3-030-92300-6_19
18. Guzdial, M., et al.: Tabletop roleplaying games as procedural content generators. In: International Conference on the Foundations of Digital Games (2020)
19. 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
20. Hanson, C.: Recursive Temporalities, pp. 135–155. Indiana University Press (2018). http://www.jstor.org/stable/j.ctv176q4.10
21. 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
22. Haycraft, H.: Murder for pleasure: the life and times of the detective story. Biblo and Tannen, New York, Newly Enlarged edn, with notes on additions to a cornerstone library and the haycraft-queen definitive library of detective-crime-mystery fiction (1974–1951)
23. 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
24. 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)
25. Karth, I.: Preliminary poetics of procedural generation in games. Trans. Digit. Games Res. Assoc. **4**(3) (2019). https://doi.org/10.26503/todigra.v4i3.106
26. Keiya: Saishūkōsatsu umineko no naku koro ni chiru: answer to the golden witch Episode 5–8. ASCII Media Works, Tōkyō (2011)
27. Kleinman, E., Carstensdottir, E., El-Nasr, M.S.: Going forward by going back: Redefining rewind mechanics in narrative games. In: Proceedings of the 13th International Conference on the Foundations of Digital Games. FDG 2018. Association for Computing Machinery, New York (2018). https://doi.org/10.1145/3235765.3235773
28. Koenitz, H.: Towards a specific theory of interactive digital narrative. In: Interactive Digital Narrative, pp. 91–105. Routledge, London (2015)

29. 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 1997), pp. 376–382 (1997). https://doi.org/10.1109/ISPAN.1997.645123

30. 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)

31. Landt, M.: Sentiment analysis as a tool for understanding fiction. Undergraduate course final project report, 2014/LIS590AD, University of Illinois at Urbana-Champaign (2014)

32. 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

33. 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.) ICIDS 2020. LNCS, vol. 12497, pp. 164–177. Springer, Cham (2020). https://doi.org/10.1007/978-3-030-62516-0_15

34. 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)

35. 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.) Interact. Storytelling, pp. 202–213. Springer, Berlin Heidelberg, Berlin, Heidelberg (2012)

36. Nintendo: The Legend of Zelda: Ocarina of Time (1998)

37. Nintendo: The Legend of Zelda: Majora's Mask (2000)

38. Rimer, J.T., Yamazaki, M., et al.: On the Art of the Nō Drama: The Major Treatises of Zeami; Translated by J. Yamazaki Masakazu. Princeton University Press, Thomas Rimer (1984)

39. 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

40. 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)

41. 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

42. 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)

43. Telltale Games: The Walking Dead: Season One (2012)

44. 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, 1 edn. Bloomsbury Academic (2014)

45. ZA/UM: Disco Elysium (2019)