

# A Framework for Choice Hermeneutics

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## ABSTRACT

Choices in storygames do more than create narrative branches, and mean more than cause and effect. The structure of hypertext is similar to choice structures, and the way links add semantic meaning to the text they connect is similar to the way choices add semantic meaning to the events they connect. We apply research from hypertext theory to expand the framework of choice poetics presented by Mawhorter et al. (2014), outlining more detail in the choice structure they propose and reframing their discussion of choice idioms. We demonstrate this analytical framework by applying it to a reading of *Sonder* (Focht 2019)—a game in which choices are written to emphasize their semantic function—to show how our framework expands the vocabulary around choices to provide more descriptive ability, and in turn more analytical insight, for critics and scholars analyzing games with choice structures.

## KEYWORDS

Hermeneutics, choice hermeneutics, game analysis, interactive narrative, storygames, choice poetics, hypertext theory

## INTRODUCTION

Choices in storygames<sup>1</sup> do more than create narrative branches, and mean more than cause and effect. Previous research on choice has focused on poetics of choice, the effects choices have on the player, but hasn't addressed hermeneutics, how choices add meaning to narrative and how that meaning can be interpreted. In this paper we expand on and reframe other approaches to choice analysis to construct a framework for hermeneutic interpretation of choices.

Since the goal of this framework is analysis of storygames as textual artifacts, we approach it using classical hermeneutics. In Shleiermacher's theory of hermeneutics, part of what's now typically referred to as classical hermeneutics, he makes a distinction between grammatical and psychological interpretation—grammatical interpretation concerning the language and text, psychological concerning the author's thinking and other extra-textual facts—both of which are required to interpret a text (Schmidt 2006, 12). This framework is intended for grammatical interpretation, showing how choices, as part of the text, influence the interpretation of other textual elements. As an interpretive tool, describing components that make up a choice in more granular detail and common patterns that emerge can open new insights to interpreting the text, as well as insights to how the language of ergodicity is being used in practice.

Mawhorter et al. (2014) have laid out a framework of choice poetics, looking at how choices impact player experience and engagement with an interactive narrative. Their approach is applicable to a hermeneutic analysis due to the complementary nature of poetics and hermeneutics (Mawhorter 2016, 61), but—as they only aim to broadly introduce the theory—the framework they present lacks some important aspects that are necessary for a hermeneutic approach to analyzing choices. In this paper, we expand on their framework of choice poetics to construct a framework for hermeneutic analysis.

Like Mawhorter et al.'s (2014) framework of poetics, the hermeneutics framework we present is limited to discrete, explicit choices. It only accounts for storygames that state options to the player, such as in hypertext. Forms such as parser-based fiction, where options are not stated to the player, or games that feature real-time decisions, in which the timing of a choice affects outcomes, are not covered by this framework.

The structure of a choice, as outlined by Mawhorter et al. (2014)—consisting of framing, options, and outcome—is analogous to that of a hypertext structure, which consists of multiple lexia nodes connected together by links. Similar research in hypertext has been concerned with the semantics of linking structures, such as effects and meaning in the text of nodes, as well as how links affect that meaning in how they juxtapose nodes and how the links create meaning in themselves (Tosca 2000; Mason 2019). We show how these approaches to hypertext can be applied to understanding choices in relation to their framing and outcome.

As a case study, we use this framework to inform a reading of *Sonder*, a text-based storygame whose choices are written to emphasize their semantic function and de-emphasize their causal effects on events in the story. In particular, *Sonder* uses choices to reflect aspects of the character making those choices, so the examples we use to discuss this framework are largely focused on how choice can be used as characterization for whoever is diegetically making those choices.

## **HYPERTEXT THEORY**

Hypertext theory has long used metaphors of transportation to describe the relationship between links and nodes. Because the links of hypertext literature are directional, the text of a link indicates the direction of its destination and creates a causal connection between its departure node and arrival node (Landow 1987). But links also connect their departure and arrival nodes semantically, and literary research in hypertext theory has explored the meaning links create in addition to the way they move a reader through the text.

Tosca (2000) uses linguistic relevance theory, from linguistic pragmatics, to investigate the semantic connection between nodes. Relevance theory, in short, is concerned with how a speaker achieves the greatest cognitive effect with the smallest processing effort. A basic example of this would be asking someone “Do you know what time it is?” It is more common to respond to such a question by stating the time, rather than simply answering yes or no. Such a response conveys more information relevant to the question, and assumes the initial question would be followed by asking “What time is it?”

Links communicate relevance between the text they connect. Because a reader has to interpret the text to select a link before continuing, the meaning of a link is suspended until after it has been traversed in what Tosca (2000) refers to as a double implicature. The first implicature occurs when evaluating a link, where the reader must consider the space of possible outcomes from selecting that link based on what outcomes might be relevant to the link. The second implicature occurs after the link has been traversed,

when the imagined possibilities collapse into one specific outcome and the reader sees the relevance between the two nodes and the way they're linked.

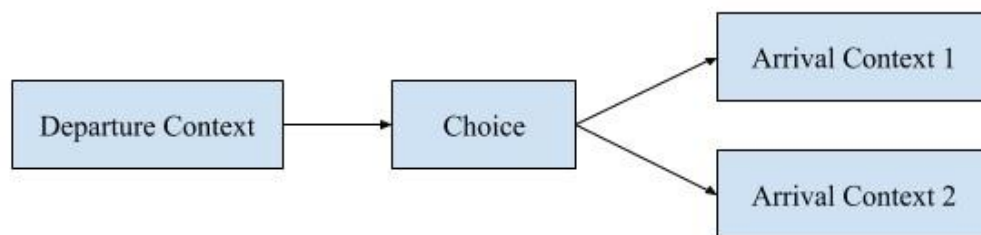
In their causal and semantic connections, links are typically used to orient the reader toward the arrival node, but they are often used to disorient the reader or undermine their expectations as well. Morgan (2002) uses the terms conjunctive function and disjunctive function to describe different ways a link can inform the reader's experience of node traversal and how that experience is used for rhetorical and semantic effects. Conjunctive functionality is the way in which a hyperlink creates meaningful relationships between two nodes, and disjunctive functionality describes ways in which hyperlinks are used for various dissonant effects. Having disjunctive function in contrast to conjunctive highlights the semantic connection links create in themselves, since causal relationships are not always conjunctive. The connection may be confusing, unclear, or disorienting, but that can add semantic meaning where it lacks conveying a causal understanding.

Sometimes traversing nodes is a bumpy ride, and that affects how the text is interpreted.

The structure of nodes and their link connections can have just as much of an effect on how a piece of hypertext is read as the contents of those nodes. Mason and Bernstein (2019) use a short, paragraph-long story to demonstrate how variations of dividing text into nodes and stylistic changes to links change the aesthetic effects and affect the meaning of the text. The dramatic differences in affect between many of their examples occur because of changes in structure, not content, and the reason those variations in structure have such a profound effect is because the relationship between links and nodes plays such a large role in how their contents are interpreted.

## AN EXTENDED MODEL OF CHOICE STRUCTURE

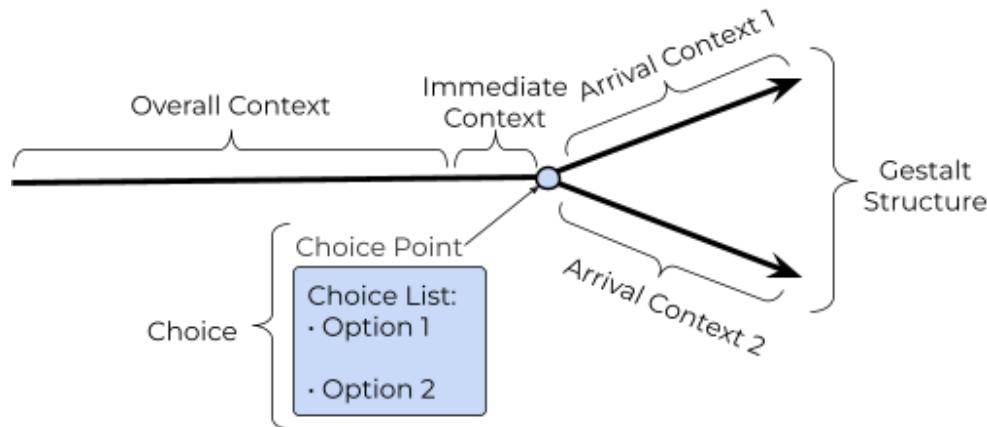
The framework of choice poetics introduced by Mawhorter et al. (2014) outlines the structure of a choice, modes of player engagement, choice idioms, and dimensions of player experience. Modes of engagement and dimensions of experience on the player's part are necessary for a broader theory of hermeneutics, as the player's relationship to the text necessarily affects their interpretation of the text (Arjoranta 2011). However, these aspects are outside the scope of this framework as a tool for hermeneutic analysis, since we are not constructing a broader theory of choice hermeneutics, merely focussing on a particular aspect of hermeneutic interpretation. Our framework expands the choice structure Mawhorter et al. (2014) have outlined to describe more granular elements of choice structure, incorporate applicable elements of hypertext theory, and reframe some of the choice idioms they enumerate using this expanded structure.



**Figure 1:** Simple diagram of choice structure.

We identify elements of choice structure that offer more granular descriptive ability when detailing choices for analysis. The model of choice structure presented by Mawhorter et al. (2014)—consisting of framing, options, and outcomes—accounts for the base of a

choice structure, but each of these three aspects of a choice can be broken down further. The list of elements we propose is as follows: **Departure Context**, which includes **Overall Context** and **Immediate Context**; a **Choice**, which includes a **Choice Point**, **Choice List**, **Options**, and a **Selection**; and **Arrival Context**, which includes **Relevance**, **Character Action**, **World Action**, and **Gestalt Structure**. Using the base structure, we can see how options semantically connect framing and outcomes, like how links semantically connect two nodes in hypertext, but our expanded structure reveals more detail in how choices link events.



**Figure 2:** Detailed diagram of choice structure.

**Departure Context**—similarly to a departure node in hypertext—is the set of events leading up to where a choice is made and the textual elements that contextualize that choice. This refers broadly to the same thing that Mawhorter et al (2014) use framing to refer to—the significance of arrival context as it relates to choice analysis is how it frames the choice—but we see a reason to use different language because framing, as a term, could be understood to refer to more textual elements than just the preceding narrative events. For example, options of a choice can be used to frame how other options are read. Departure context includes the **Overall Context** of everything that has occurred within the narrative leading up to a choice, and the **Immediate Context**, which prompts a choice to occur. To compare this to hypertext would be the difference between every node leading to a given link as opposed to the node in which that link occurs. The framing of a choice predominantly occurs in the immediate context, but there can be significant amounts of framing done in the overall context which affect the way the immediate context frames a choice.

Departure and arrival contexts are connected in the middle by a **Choice**. Mawhorter et al. (2014) refer to this as the options of a choice structure, but options only describe an aspect of this larger structure—like with framing—and in this case it is important to disambiguate. A **Choice Point** is the point at which a choice occurs, or any point at which the player provides some meaningful narrative input. At any choice point, the player is shown a **Choice List**, which is the list of options the player can select from. The choice list is composed of **Options**, the individual elements that can be selected from the list, of which the **Selection** is the option the player traverses to the arrival context.

	Explicit	Implicit
Inclusion	Explicitly included	Implicitly included
Exclusion	Explicitly excluded	Implicitly excluded

**Table 1:** Types of options which can occur in a choice list.

The content of an option is important to its reading, but the way in which an option is presented can affect the reading as well. For example, options can be explicitly or implicitly included or excluded in a choice list. Among explicit options, whether included or excluded, the ordering of options can have significance.

- **Explicit Inclusion** describes options that are stated to the player to be selectable. Any text or options in a menu that can be selected are explicitly included. The way content of options is presented can affect the reading, such as ordering or formatting of options. As we discuss in our reading of *Sonder*, in Chris's first scene he sees a homeless man, named Cornell, being verbally abused. The choice list is composed of Chris sitting with Cornell or walking past him. In this example, the option to sit with Cornell is listed first because it reflects Chris's first instinct, and the moment would read differently if the ordering of the options were reversed.
- **Explicit Exclusion** describes an option that is brought to a player's attention, but the player does not have the ability to select that option. These options can be used in conjunction with explicitly included options to communicate things that a character considers but is ultimately unwilling or unable to do. *Depression Quest* (Quinn et al. 2013) notably uses explicit exclusion of choices by showing the text with a strikethrough format to indicate options that the protagonist would like to choose, but is unable or finds too burdensome due to the condition of their depression.
- **Implicit Exclusion** describes anything that could be possible at a choice point, but is understood to be outside the scope of what is likely at that choice point. On a surface level, a character could at any point roll around on the floor, or something else similarly out of the ordinary, but not only would that be outside the scope of what a character would do, such actions are generally far outside the realm of things a character would even consider. This makes a larger statement, however, when there are options a player might expect to see in a choice list that are not included. Following Chris's conversation with Cornell in *Sonder*, Chris arrives late to class. The only option on the list of choices when he arrives is to select the nearest seat, which suggests that there might also be options for him to sit in another seat, but the exclusion of those options speaks to a hurried response to his tardiness.
- **Implicit Inclusion** describes options that can be selected, but are not stated to be selectable. This includes things like the option in Telltale games, such as *The Walking Dead* (Telltale 2012), to respond with silence by waiting for a

timer to run out. In this example, the option is always present but is never explicitly part of the list of dialogue responses.

**Arrival Context** is the set of actions that occur in response to the selection of a choice. Outcome describes this section effectively, but in this case we use different language mostly for the sake of consistency. The Primary difference in this departure of terminology is to account for the **Relevance** of a choice—drawing directly from Tosca’s theory of hypertext—but the two terms are nearly interchangeable. **Relevance** of the selection feeds directly from choice to the arrival context; it describes the expectations that can be formed about the arrival context based on the content of the selection. Usually the first action that occurs in the arrival context is the **Character Action**, the action taken by a character prompted by the selection. Following that is the **World Action**, the way the world state changes based on, and in response to, the character action.

Relevance could be interpreted to be either part of a choice or part of the arrival context, as such expectations are formed based on the content of options in a choice. However, like links there can be a suspended meaning of options which is only resolved once the arrival context is revealed (Tosca 2000). The importance of relevance in this framework is due to the double implicature that occurs in traversal, or the two phases of interpretation that occur during the suspension of meaning and after that suspension is resolved. The first implicature that occurs is in how a choice and its options are interpreted. This implicature is formed based on the departure context and choice, but the arrival context has no bearing on this, as it has yet to be read. The second implicature occurs in seeing how the selection relates to the arrival context. The second implicature, however, is affected by how the relevance of the selection aligns with the rest of the arrival context. Choice outcomes are usually written to have conjunctive function, so the relevance aligns closely to the character’s action, but there is space for the choice to serve a disjunctive function, where there is a dissonance between the relevance of an option and its resulting character action.

Expanding on this, we argue that there is a third implicature that occurs upon rereading when the player has been exposed to multiple paths, generally before they have reached closure<sup>2</sup>. This third implicature results from the multilinear structure of storygames (Aarseth 1997), understood by the **Gestalt Structure** of arrival contexts. Arrival contexts following from a choice represent a possibility space, so every event within that space represents some aspect of a character. If a choice reflects what a character will do, the results of choices also reflect that character.

## CHOICE IDIOMS

Some of the choice idioms<sup>3</sup> enumerated by Mawhorter et al. (2014) demonstrate the usefulness of expanding their choice structure model and the vocabulary that accompanies that expansion. Their discussion of these idioms is sufficiently descriptive, but they describe patterns that highlight aspects of a choice that our expanded model provides a more specific vocabulary for.

- Unchoices are choices that have only one option. In terms of this expanded framework, these choices are characterized by their choice list. Their significance

lies in the lack of explicitly included options—which calls attention to the implicit exclusion of other possible options—so the reading of these choices is grounded in the negative space of what the character can’t or won’t do.

- Dead-ends are options which result in the end of the story, usually in a way that is considered unsatisfying. It is correct to say that dead-ends are a pattern of outcome, but more specifically they describe a pattern in world action. Character action isn't necessarily related, as dead-ends can often occur in ways that are seemingly unrelated to character action. Traversals of dead-end options that are considered unsatisfying occur due to a dissonance between relevance and world action.
- False choices are choices in which all options lead to the same outcome. Similar to dead-ends, false choices describe a pattern in world action where each option in a choice list leads—usually through different character actions—to the same world action. This pattern calls attention to the relationship between relevance and world action, since character action might not be significant in the reading of a false choice. The gestalt structure often only consists of a single part (and if not, those parts are very similar) which, for example, can communicate the inevitability of factors outside a character's control.
- Blind choices offer little context for the player to form distinct expectations of various options. This pattern primarily deals with the relationship between a choice and its departure context. Blind choices are defined in a way that describes initial context failing to inform a choice, but they can be presented in a way that either the overall or immediate context conceals information. The reader lacks context enough to sufficiently form expectations in the choice's first implicature, which can lead to the second implicature either causing greater confusion or reorienting the reader to the context they were lacking.

## **SONDER: AN ANALYTIC CASE STUDY**

*Sonder* is an anthology of short storygames about a day in people's lives. Each story follows a single protagonist, offering the player a glimpse into their lives, but not positioning the player as embodying those characters. Plot occurs mostly through the protagonists' conversations with other characters, with non-dialogue action used mostly in scene transitions. During dialogue some words are highlighted, which are options for the player to advance the dialogue. When highlighted words are moused over, a tooltip appears with some of the protagonist's thoughts about the conversation. Choices outside dialogue are highlighted descriptions of the protagonist's action. They are in-line descriptions that cycle through options when clicked, so only one option appears at a time. Examples from *Sonder* discussed in this paper are limited to Chris's story, as his was the only one published at the initial time of writing.

Rather than emphasizing the significance of outcomes that follow choices, a player's motivation for making a choice, or even the player's feeling about having made a particular decision, *Sonder* uses choice as a means of characterizing the protagonists. Vella (2016) points out "If the player-character is defined by what they can do in the gameworld, they are equally defined by what they cannot do," and *Sonder* shows this to the reader through choices by looking at what choices that character considers and occasionally calling attention to things they won't do. We use *Sonder* as a case study to demonstrate this framework by analyzing how reflective choice (Manning 2018) is used to show aspects of Chris's character.

## NON-DIALOGUE CHOICES

Of the choices in the piece, the ones that occur outside of dialogue are the most straightforward for analysis. When Chris notices Cornell being verbally abused, he makes a decision whether or not to sit down with Cornell. The two explicitly included options are to sit with Cornell or continue walking, ignoring Cornell. Before Chris has taken any actions we are shown an insight into his decision-making process. His first instinct is to sit beside Cornell, however he doesn't feel so strongly about that instinct that he wouldn't ignore it. The order of options is meaningful, as this moment would read differently if the first option was for Chris to walk past Cornell

The suited man stops yelling and continues on his way. Chris watches him leave and **sits by the homeless man.**



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The suited man stops yelling and continues on his way. Chris watches him leave and **continues walking.**



**Figure 4:** Chris decides whether or not to sit with Cornell. The text defaults to sitting with Cornell (top). When the highlighted text is clicked it changes to show a different option (bottom) and cycles between the two on subsequent clicks.

Following this interaction with Cornell, Chris walks into class tardy. There is an obvious reason for him to be late if he stops to talk with Cornell, but not so if he simply continues past. While not a false choice, it follows a similar pattern where the same world action occurs, albeit one option has a delayed effect. This convergence on a single world action indicates a predisposition on Chris's part to arriving late to class, maybe that it's a recurring problem for him. Upon arrival we are presented with an unchoice for Chris to sit in the first available seat, which highlights the implicit exclusion of an option to select another seat. There are any number of assumptions we might make about Chris at this point—that he is anxious about walking in after the lecture has begun, that he is too apathetic to select another seat, or simply that he prefers sitting toward the outside of the room—but it clearly indicates that he isn't the type of person to find a seat in the middle of a lecture hall after class has begun.

Later in the story, when Chris receives a phone call from his mother, we are immediately presented with the explicitly excluded option to decline the phone call. Like before, during his interaction with Cornell, the ordering of this option indicates that he has a desire not to speak with his mother. However the only included option is to answer the phone, which shows his ultimate unwillingness to not answer. This choice foreshadows their strained relationship that we see play out through the conversation and points us to see that, as strained as it is, they still have active contact in their relationship.

Analyzing these choices in terms of framing, options, and outcomes (Mawhorter et al. 2014) naturally leads to the same insights we have made about Chris in deciding whether or not to sit with Cornell, since the insight follows from the order in which the

options appear. The other two examples we discuss are not such obvious insights based on their model, and the types of options we present, explicit and implicit inclusion and exclusion of options, make insights like these more apparent. This is not to say they are otherwise out of reach, most of the insights from critics about *Depression Quest* pointed out its use of explicitly excluded options and their semantic effect, but framing unchoices in terms of their implicitly excluded options leads to more insight, such as the example above where Chris is selecting a seat in class. This is the sort of insight that is otherwise intuitive, but is more apparent with this framing. Chris's choice to pick up the phone highlights the distinction between using the term arrival context as opposed to framing, since the departure context does very little to frame the choice. The immediate context just being that he sees his mother on the caller id and there are no other references to his mother in the overall context, so most of the way this choice is being framed to the reader is by the contrast between the two options.

## DIALOGUE CHOICES

Options usually communicate proceeding character action, for example when the text of a dialogue option mirrors the line spoken upon its selection. This approach leaves less room for disjunctive function, since there's such a high overlap between relevance and character action. Dialogue options in *Sonder* are vague, showing the words that prompt response and the character's thoughts about their responses. By writing these choices with such a degree of ambiguity, the player is left guessing at what possible character actions will result from a selection.

In Chris's conversation with his friends, the information given about choices align closely with his responding character action, the only information Chris doesn't share, that the player knows, is his reasoning for not going out drinking with them the previous weekend. This is in stark contrast with his conversation with his mother, where we see Chris consistently hiding information from her, especially regarding his sexuality. The disjunctive function that appears here is telling of their relationship, since the player might expect the same open dialogue seen earlier where Chris responds without filtering the thoughts shown to the player, instead we see Chris responding in a way that is opposite what a player might expect given the information surrounding each option.

**Mom:** "Well, It wouldn't kill you to call once in awhile, just to let your father and me know that you're **still alive**."

*just barely*

**Figure 5:** Chris's conversation with his mother.

Additionally, during the same conversation, there's a reversal of resulting action following a selection. Up to this point Chris's character action has immediately followed every choice, followed by world action. In his conversation with his mother most choices are followed by world action—his mother continuing to speak—character action, and more world action. This adds another layer to show how his mother dominates the conversation, Chris is not able to respond as he would in other conversations.

During his conversation with Dave, the conversation has more significant branching than Chris's other conversations. The gestalt structure of conversational directions all reveal differing aspects of Chris's motivation. It could be argued that all of these motivations are present in each branch, but the conversational direction depends on which of these motivations surface. In every version of this conversation, Chris in some way arrives at expressing his reservations about joining the church because of his sexuality. This indicates that it might be his prime motivation during this conversation. In some branches Chris expresses his history with how he has been hurt by the church, and he discusses this in one branch with more depth than the others. As a minor motivation, in one branch he expresses his concern about the group avoiding weighty topics, and instead uncritically performing religious rituals.

**Dave:** "You make it sound like the word of God is  
a **trap** that we're trying to **bait** with pizza."

*sure felt like it growing up*

**Figure 6:** Chris's conversation with Dave about Christianity. The highlighted words 'trap' and 'bait' connote the flow of conversation that follows their selection.

The text of dialogue options in this conversation—in contrast with the previous conversation with his mother—suggest the proceeding flow of conversation. When Dave says "You make it sound like the word of God is a trap that we're trying to bait with pizza," the words highlighted as options are "trap" and "bait." The arrival context from selecting "trap" is the conversation branch where Chris speaks most to having been hurt by the Church. Whereas selecting "bait" leads to conversations where Chris is more comfortable about the conversation overall.

Using framing, options, and outcomes (Mawhorter et al. 2014), the way our last example suggests the flow of conversation is just as well described in terms of framing, and the contrast between options and framing describe what Chris chooses to share with his mom and friends or keep to himself. Expanding the types of outcomes (or how the selection affects the arrival context) uncovers more subtlety of the conversation with Chris's mother and how it is communicated to the reader that she dominates the conversation. The most significant set of insights that our extended model opens up is in the gestalt structure. Thinking about choices in terms of having an outcome focuses an analysis on multiple directions of linearity, and turns away from how the multiplicity of branches forms a whole structure. That holistic structure is as ripe for analysis as the particular ways it can be traversed. In his conversation with Dave, Chris's feelings about the church are apparent in each branch of traversal, but are emphasized when the branches are compared with one another.

## CONCLUSION

We have outlined a framework of choice hermeneutics, building from existing work in choice poetics and hypertext. This framework breaks down the choice structure outlined by Mawhorter et al. (2014) into more detail to look at more elements of choices which can be accounted for in analysis, how choices are contextualized by the events they connect, how choices add meaning by connecting events, and how they connect the structure of possible outcomes. Choice idioms, drawing from choice poetics, are

reframed in terms of how they add meaning to choices by structural patterns. This expands the vocabulary around choices to provide more descriptive ability, and in turn more analytical insight, for critics and scholars analyzing games with choice structures.

This framework is targeted specifically to discrete, explicit choices. It doesn't account for implicit choices, for example, where it isn't signposted that narrative branching occurs or what the available options are. There are other forms of choice which follow a different structure, making them ontologically distinct from those described in this paper, and thus require a distinct hermeneutic framework to achieve the same depth of analysis (Aarseth and Möring 2020). For example, many choices made in real-time, such as those found in many action games, don't make the player aware of every option available, and such a choice will be interpreted differently than one where the player is shown a list of options. Aspects of this framework are applicable to other forms of choices, but a separate framework would be necessary to account for their aspects which this framework does not account for. While the framework we have presented is limited in its scope, our hope is that it is useful for hermeneutic approaches in the same family of game ontology to expand on this framework to generate new frameworks targeted toward those separate ontologies, like how we have expanded on similar work in choice poetics.

## ENDNOTES

<sup>1</sup> We use the term storygames here following Aaron Reed's definition, "a playable system with units of narrative where the understanding of both system and narrative, and the relationship between them, enables a traversal through the work" (Reed 2017). Our framework is broadly applicable to multilinear narrative systems that feature choice structures, as it is a tool for analyzing those choice structures. While we present this framework in terms of games, it is not limited to an ontology of "gameness".

<sup>2</sup> When reading multilinear works, such as hypertext and choice-based storygames, readers will typically reread the work to explore different paths, which may include parts of the text that were not shown to them in previous readings. Closure refers to the point at which a reader is satisfied with their understanding of the text after exposing themselves to enough separate branches to build that understanding, and the objective of rereading changes to going back through parts of the text they already experienced from looking for new content in the text (Mitchell and McGee 2012).

<sup>3</sup> Similarly, Clara Fernandez-Vara (2019) presents a taxonomy of narrative choices directed toward an audience of students and practitioners, which describes some of the same patterns with different names and draws distinctions between patterns that Mawhorter et al. (2014) describe using a single idiom.

## BIBLIOGRAPHY

- Aarseth, E. 1997. *Cybertext: perspectives on ergodic literature*. Baltimore, MD: JHU Press.
- Aarseth, E. and Möring, S. 2020. "The game itself?: Towards a Hermeneutics of Computer Games." In *International Conference on the Foundations of Digital Games, 2020*.
- Arjoranta, J. and Karhulahti, V.M. 2014. "Ludology, Narratology and Philosophical Hermeneutics." In *Nordic Digra 2014*, 9. Visby, Sweden: Digital Games Research Association.
- Fernandez-Vara, C. 2019. "Taxonomy of Narrative Choices." Accessed October 25, 2021. <https://clarafv.itch.io/taxonomy-of-narrative-choices>.
- Focht, C. 2019. *Sonder*. Web Browser. Self-published. Available online at: <https://ceciltheawesome.itch.io/sonder>

- Landow, G.P. 1987. "Relationally Encoded Links and the Rhetoric of Hypertext." In *Hypertext 87 Proceedings, 1987*, 331–344.
- Manning, C. 2018. "Reflective choices in narrative." Accessed April 15, 2019. <https://catacalypto.wordpress.com/2018/06/19/successful-reflectivechoices-in-interactive-narrative/>.
- Mason, S. and Bernstein, M. 2019. On Links: Exercises in Style. In *30th ACM Conference on Hypertext & Social Media, 2019*.
- Mawhorter, P., Mateas, M., Wardrip-Fruin, N., and Jhala, A. 2014. "Towards a theory of choice poetics." In *Proceedings of the 9th International Conference on the Foundations of Digital Games, 2014*.
- Mawhorter, P. 2016. "Artificial intelligence as a tool for understanding narrative choices." PhD diss., University of California Santa Cruz.
- Mitchell, A. and McGee, K. 2012. "Reading again for the first time: a model of rereading in interactive stories." In *International Conference on Interactive Digital Storytelling, 2012*, 202-213. Springer, Berlin, Heidelberg.
- Morgan, W. 2002. "Heterotopes: Learning the rhetoric of hyperlinks." In *Education, Communication & Information* 2, no. 2-3: 215-233.
- Quinn, Z., Patrick L., and Isaac S. 2013. *Depression Quest*. Web Browser. The Quinnspracy. Available online at: <http://www.depressionquest.com/dqfinal.html>
- Reed, A. 2017. "Changeful Tales: Design-Driven Approaches Toward More Expressive Storygames" PhD diss., University of California Santa Cruz.
- Schmidt, L. K. 2006. *Understanding hermeneutics*. Durham, U.K.: Acumen.
- Telltale Games. 2012. *The Walking Dead*. PC game. Telltale Games.
- Tosca, S. 2000 "A pragmatics of links." In *Proceedings of the eleventh ACM on Hypertext and hypermedia, 2000*, 77-84. ACM.
- Vella, D. 2016 "A Structural Model for Player-Characters as Semiotic Constructs." In *Transactions of the Digital Games Research Association* 2, no. 2.