

# Wordless Games: Gameplay as Narrative Technique

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**Abstract.** In this paper, we look at how gameplay can be used to tell stories in a game without the help of words. Through close readings of three wordless games with a strong narrative focus, *Journey*, *Brothers: A Tale of Two Sons* and *A Bird Story*, we explore how gameplay within wordless games can help to convey a narrative. We have identified four techniques by which gameplay is used for storytelling: gameplay as enacting narrative, manipulating player controls for narrative effect, gameplay for exploring narrative setting, and gameplay as time progression. We discuss these techniques in relation to existing concepts of player experience, and suggest ways gameplay can help to circumvent issues of ambiguity in wordless narrative in games.

**Keywords:** Close reading · Player experience · Game design · Wordless games

## 1 Introduction

The idea that games can tell stories has long been a point of contention, resulting in many debates between two camps, each contending that games can or cannot tell stories. The debate on *whether* games can tell stories has moved on to *how* exactly games tell stories. As games remediate other forms of media and add the dimension of interactivity, the role of interactivity in games becomes crucial when looking at the potential of games as a storytelling medium. Researchers have begun to consider the relationship between game mechanics and narratives [1–3]. In this paper, we are interested in the role that interactivity plays in conveying the narrative, particularly in wordless games.

Before delving into why we are looking specifically at wordless games, we must first look at the role that language plays in conveying narratives. When thinking about narratives, verbal or textual storytelling would probably come to mind. The literal meaning of narrating presupposes that there is a narrator telling the story, and also implies that narration is done through verbal or written language. Traditionally, a narrative can be loosely defined as causal relationships of a sequence of events [4] consisting of the discourse—the act of narrating by a narrator and the form in which it is conveyed—and the story [5]. As this traditional definition requires the presence of a narrator, classical narratology has largely been limited to literary studies, with much focus put on the linguistic component of narrative discourse [6]. Classical narratology however is unable to accommodate other storytelling mediums when solely defined by linguistic discourse. Ryan proposes to rethink narrative as a mental construct formed in the minds

of the audience when they interpret and experience the narrative text. Ryan identifies five dimensions to narrative: spatial, temporal, mental, formal and pragmatic. She defines narrative as “a sequence of events involving thinking individuals, linked by causal relations, motivated by a conflict, and aiming at its resolution” [7: p. 43].

Redefining narratives cognitively allows for a wider range of mediums to be included. However, much emphasis is still placed on language. Since language is able to effectively represent and convey ideas that are intangible and abstract, language naturally affords storytelling [8]. Language continues to be the most commonly used mode of storytelling, although not necessarily the most predominant [5]. Ryan [9] further points out that only language can express propositions and explicitly indicate the causal events in a narrative. Despite this, she does not discount the capability of other mediums to convey narratives. In fact, she argues that visual and aural modes are indeed able to represent temporal changes, and may even surpass language in terms of representation.

Given that most narratives rely heavily on language to convey causality and abstract ideas, narratives that are conveyed without the medium of language risk being ambiguous and frustrating to understand [10], and may require more effort on the reader’s part to make sense of the narrative. This is possibly the case with storytelling in wordless games. However, this is also precisely why wordless games are an interesting case study to look at when examining the narrativity of games. Without using words to make explicit the events and meanings in the game, the game has to compensate for wordless ambiguity by relying more on the aural and visual modes as well as interactivity to help the player form meaning without language. Thus, in the absence of language, interactivity and gameplay will arguably need to take on a bigger role in conveying the narrative than in narrative games with words. The narrative experience of wordless games also differs from other games as such games potentially provide players with the ability to use their own experiences to create a meaning and a narrative unique to the player themselves. The act of inferring the narrative can add another dimension of difficulty to games, requiring players to figure out the game narrative on top of the gameplay. Solving the ambiguous narrative can possibly allow players to achieve a sense of satisfaction in figuring out the narrative, but on the other hand, the additional difficulty may act as an obstruction to the gameplay, making it crucial for the game mechanics to support the game narrative. By looking at such games, we can further understand the roles that interactivity and game mechanics play in supporting the game narrative.

The term “wordless” in this paper is defined as games with no in-game dialogue, in-game text or paratext relating to the narrative within the game. Paratext, as defined by Genette, is “a zone between text and off-text, a zone not only of transition but also of transaction” [11: p. 2]. In this paper, the “text” in wordless games refers to the main game, and off-text refers to text outside of the main game; paratext here refers to the text that is out of the game narrative context but still part of the game, such as the instructions and user interface. Thus, instructional and menu paratext that are not associated with or hint at the game narrative are not taken into consideration when looking at whether a game is “wordless”. In addition, although the title of the game is simultaneously a paratext and can possibly reference the narrative of the game, game titles will not be taken into consideration as it is unlikely for a game to be released without a title.

The paper will first begin by briefly reviewing related literature on the relationship between the ludic and narrative elements in games, not to revisit the debate on whether games can tell stories but instead to examine how research has moved beyond the original debate. Next, the paper will identify and address the research problem and the methodological approach taken in the paper. Subsequently, we will introduce the techniques identified and discuss the potential impacts on the player's experience. Lastly, we conclude with suggestions for future work.

## 2 Related Work

The question of the narrativity of games has sparked fierce academic debates in the past [12–14], with each side advocating for emphasis to be placed on either narrative or ludic elements when studying games. However, the debate has since shifted to looking at the different ways a game can allow both elements to work together.

Moving past the ludology vs narratology debate, a concept that has garnered much attention in the field of game studies, ludonarrative dissonance, comes from looking at how in certain instances gameplay and narrative serve to work against each other. Ludonarrative dissonance was first mentioned by Hocking [15] in his critique of how the narrative objectives of *Bioshock* contradict with the ludic objectives. Hocking discusses how the game mechanic of harvesting or saving Little Sisters acts in direct opposition to the narrative objective of helping Atlas. The game mechanic makes it easier to progress by harvesting Little Sisters, which advocates for rational decision making in the players, while at the same time the game narrative encourages the player to help Atlas, which is inconsistent with the gameplay of harvesting sisters. Hocking points out that this “dissonance”, the inconsistency between game and narrative objectives, hinders the player from becoming immersed in both the narrative and gaming experience.

With the term ludonarrative dissonance being used to critique the inconsistencies between narrative and gaming objectives, the term ludonarrative resonance was introduced to describe the direct opposite: the idea that game mechanics and narrative can work together in tandem. The term, first coined by Brice [16], is defined as “the successful use of game mechanics to communicate a narrative experience” [17]. Giving an example of how the hand-holding mechanic in *ICO* could tell a typical narrative of “boy-saves-girl” through the mechanic, she goes further to declare that “narrative [actually] is a game mechanic, as much as game mechanics can also be narrative elements”.

Taking the idea of ludonarrative resonance a step further, Pynenburg introduces the notion of ludonarrative harmony, wherein there is a “positive symbiotic relationship between the narrative and gameplay of an interactive narrative” [18: p. 24]. He distinguishes ludonarrative harmony from ludonarrative resonance by highlighting how the game mechanic and narrative should “enhance” each other instead of just merely being complementary. He added that a game with narrative and mechanics working in harmony will allow players to better sustain the flow state and immersion.

While the concept of ludonarrative resonance and dissonance are increasingly advocated for a more cohesive gaming and narrative experience, the concepts have not been

further developed, and are mainly used as a means for critiquing games. However, several researchers have recently further explored and developed the notion that a narrative can be conveyed through game mechanics. Dubbelman proposes the idea of narrative game mechanics, which he defines to be “game mechanics [that] invite agents, including the player, to perform actions that support the construction of engaging stories and fictional worlds in the embodied mind of the player” [2: p. 43]. His notion of narrative game mechanics stems from the theories of cognitive narratology and the concept of “mental constructs” as mentioned in the introduction. Through case studies of three games, he identified how the same basic game mechanic of a shooter game can build tension, enhance characterisation and evoke empathy just from recontextualising the core mechanics. At the same time, the use of a unique game mechanic can serve to confront players with serious moral dilemmas.

Similarly, Larsen and Schoenau-Fog [3] introduce a Narrative Quality of Game Mechanics Model for analysing the relationship between the ludic and narrative elements in a game by adopting concepts from ludology and narratology to form a cohesive model. Both Dubbelman and Larsen and Schoenau-Fog emphasise that the contextualisation of the game mechanic is able to evoke emotional and aesthetic responses to the narrative. However, this implies the contextualisation is heavily dependent on other narrative elements to set the scene. In fact, Dubbelman was careful to point out that narrative game mechanics do not exist in isolation but will often be supported by other narrative devices such as dialogue and in-game text.

### 3 Research Problem

Previous works considering the narrative capability of game mechanics address the question of *whether* gameplay can tell stories, but do not answer the question of *how* gameplay conveys or supports the narrative. In this paper, we are focusing on the different ways that gameplay can convey a narrative in the *absence* of words. This allows us to focus on the gameplay techniques used to convey the narrative. We define gameplay as the set of actions a player can perform and the resulting actions taken by characters, objects or elements as feedback to player actions [19]. In addition, we will explore whether gameplay can solve the problem of causality that is likely to arise in the absence of language, and identify several techniques that wordless games use to do so.

### 4 Method

Through close readings of *Journey* [20], *Brothers: A Tale of Two Sons* [21] and *A Bird Story* [22], we identify different ways in which each game uses gameplay to help convey the narrative wordlessly. As proposed by Bizzocchi and Tanenbaum [23], close reading is a method of analysing and deciphering a text adapted from the field of literary studies. A close reading of a game involves deconstructing its features and elements to understand what contributes to a cohesive gameplay experience. The method requires repeated playthroughs of a game, with each playthrough seeking to surface new understandings of the game system. Focusing on particular aspects of the game acts as an “analytical

lenses”, which helps to narrow down an otherwise overly broad scope of a piece of game text. In this paper, we will use the player actions in the game as lenses to look at how the gameplay within each game helps to convey or reinforce the narrative.

## 5 Results: Techniques

We will now discuss the four gameplay techniques we identified from *Brothers: A Tale of Two Sons*, *Journey* and *A Bird Story*: gameplay as enacting narrative, manipulating player controls for narrative effect, gameplay for narrative exploration, and gameplay as time progression.

### 5.1 Close Reading: *Brothers: A Tale of Two Sons*

*Brothers: A Tale of Two Sons* is an adventure puzzle game that tells the story of two brothers setting off on a journey to find a cure for their ailing father. Throughout their journey, they encounter creatures and people who may aid or hinder them in their quest. The game contains no written narrative text, and only uses spoken fictional nonsense dialogue that cannot be deciphered. In *Brothers: A Tale of Two Sons*, the gameplay works to convey the narrative by having the players enact the sequence of events.

**Gameplay as Enacting Narrative.** *Brothers: A Tale of Two Sons* was released on the PlayStation, Xbox and PC platforms, but requires a controller to play the game. The main game mechanic requires both brothers to work together to solve environmental puzzles. The player simultaneously controls both brothers on the same controller, the elder brother controlled using the left joystick and triggers and the younger brother using the right joystick and triggers. Each brother has different traits: the older brother can move heavy levers and boost the younger brother up to higher places, whereas the younger brother is able to squeeze through the bars of locked gates. Most of the time the game requires simultaneous control of both brothers to solve puzzles. For example, when climbing cliffs, the player must hold down the left and right triggers so that the brothers hang on to the rocks. In another instance, when the brothers must cross a bridge, the player must keep the younger brother running in a wheel to keep the bridge lowered by continuously circling the right joystick while moving the older brother to cross the bridge and catch a sheep to replace the younger brother in the running wheel.

The narrative of the game is about how the brothers go on a journey, overcoming obstacles together. The mechanics of having both brothers work together to solve environmental puzzles lets the player enact the bulk of the narrative of the game. By solving the puzzles, the player can progress the narrative. Letting the player’s actions play out the narrative itself reduces any ambiguity that the player might feel about the narrative as the player would know for certain that their actions within the game had a direct impact on the narrative events, making the causality of the events within the game unambiguous. The mechanics of *Brothers: A Tale of Two Sons* not only convey the narrative of the game perfectly, but also embody and communicate the relationship between the brothers. The game mechanics requires the brothers to work together to

solve the puzzles. The coordination of the brothers at the gameplay level implies trust and a connection between them, and is representative of the relationship between the brothers. The puzzles become progressively more difficult as the player progresses in the game. To clear all the obstacles the player must get used to or improve on their coordination of the brothers. This also represents the development of the relationship between the brothers as they overcome various challenges. Thus, the gameplay not only creates the narrative, it also drives the narrative forward and mirrors the narrative progression.

In addition to supporting the overall narrative of the brothers going on a journey, the gameplay also helps to create meaningful narrative events by adding a new objective or context to the mechanic. There are mini events at points of the game where the brothers must work together to save other creatures or people in danger, such as freeing a trapped troll from an ogre or a trapped griffin in a cage, with both creatures eventually returning the favour by helping the brothers. In one example, the brothers chance upon a man trying to commit suicide. The brothers can save the man if the player acts fast enough, letting the little brother climb up the tree to cut the noose while the older brother supports the suicidal man from the bottom. If the player is unable to save the man, a short cut scene of the brothers looking sadly at the body of the man is then shown. Although in that example, helping the suicidal man is not compulsory to proceeding on and the man does not help in the later part of the game, it adds to the narrative and character building of the brothers. Using the same mechanic, the game designers can recontextualise it by adding short-term objectives which then turn the mini event into a narrative event. These mini-stages allow for memorable events which not only function as part of the overall narrative of the brothers' journey, but also create purposeful narrative events to enhance the larger narrative and the characterisation of the brothers. As such, the gameplay not only complements the narrative objectives by letting the game mechanics enact the narrative, it also enhances the narrative by recontextualising game mechanics into mini narrative events, achieving ludonarrative harmony.

**Manipulating Player Controls for Narrative Effect.** The difficulty of controlling both brothers at once also allows the players to experience the difficulty of good teamwork. The different characteristics of each brother shows how important the brothers are to each other, as both brothers must fulfil their own parts to overcome obstacles. The game fully utilises the unique characteristic of each brother. For instance, at one point the players must lure an ogre into a cage, requiring players to have the older brother pull a lever to open the cage. The player must keep the cage open while moving the younger brother to lead the ogre into cage, and then shut the door while the younger brother slips through the bars. Here, the roles of the brothers are not interchangeable, as only the older brother is strong enough to move levers and the younger one small enough to slip through the bars, showing the importance of having the brothers work together.

The game enables players to better understand this by removing one of the brothers whom the player has become accustomed to controlling throughout the game. Near the end of the game, the older brother was fatally wounded in a fight against a spider creature right before obtaining the cure for their father. The younger brother then had to bury the brother and return home alone with the cure. The scene was heart-breaking, as the

younger brother wept throughout when burying his older brother. The change in controls adds to the emotional impact, as with only one brother to control, the player only needs to use one hand on the controller instead of using both hands, making the loss of the older brother feel greater. In particular, in the final parts of the game, the younger brother comes across a platform that only the older brother is strong enough to pull, and is seemingly unable to do it himself. That is, until the player realises that even though the older brother is no longer around, they can still use the controls on the left hand and by doing so, the younger brother hears the voice of the older one encouraging him and summons enough strength to pull the lever. The fact that the player was controlling and carrying out the narrative makes taking away the controls upon the death of the older brother that much more powerful and emotional.

We have identified how *Brothers: A Tale of Two Sons* uses game mechanics to convey the narrative by perfectly matching the narrative and ludic objectives such that the player enacts the narrative by playing and advancing through the game, achieving ludonarrative harmony. In addition, by manipulating the player's control over the characters, the game can evoke strong emotional responses to the narrative.

## 5.2 Close Reading: Journey

We will now proceed with the analysis of *Journey*. *Journey* is an adventure puzzle game that takes the player through a world of deserted ruins, where the player plays as a robed character. As the title suggests, the player embarks on a journey, going through different trials and obstacles to travel to the top of the mountain. On the way, they may meet other travellers, or befriend carpet creatures that will help them on their journey. The player will eventually realise the journey is a prophecy and that they will ultimately meet their demise, only to be resurrected. Once the player reaches the top of the mountain, the game ends and restarts. The game uses no written text or dialogue. While the game can be played online with other players, the only form of communication between players is through “ringing”, where a single musical note will be played and a symbol appear above the player's character. In *Journey*, the player actions are a way for players to enact the narrative and serve to let the players explore the world of the narrative.

**Gameplay as Enacting Narrative.** The core mechanic of *Journey* involves collecting hieroglyphic symbols to lengthen the player's scarf, and using the scarf to fly for a short period of time. Carpet creatures recharge the player's scarf and huge flying rock monsters will rip off parts of the scarf. The musical note the player makes is not only used as a way to communicate to other players, but also allows the player to “activate” hieroglyphs and “sleeping” carpets, and call carpet creatures to come to the player's aid.

Like *Brothers: A Tale of Two Sons*, the main narrative of *Journey* is conveyed through gameplay. By traversing the deserted ruins, freeing carpet creatures and climbing up the mountain, players enact the narrative of a traveller on a journey. Each game stage serves as part of the narrative arc. The obstacles and hostile creatures are the conflicts that the character faces in the story. The last stage where the player is resurrected and flies above the clouds to the top of the mountain resolves the narrative. As with *Brothers: A Tale of Two Sons*, *Journey* conveys the narrative by allowing the

players to enact the narrative of the game. For example, there is a sequence in *Journey* where the player has to “ring” at multiple areas to released trapped carpet creatures. When all the creatures are released, they form a bridge allowing access to the next area. From this we can see that the game mechanic of “ringing” makes clear the causality in the game, as the player knows it was their actions that formed the bridge.

The mechanics also do a good job of conveying the character’s state. Nearing the end of the game when the player is climbing up a snowy mountain, the cold causes the player’s scarf to start to freeze, slowly losing the ability to fly. While the frost is visually represented, losing the ability to fly helps to indicate the severity of the cold. Similarly, at the last stage when flying above the clouds, the player’s scarf remains almost constantly charged, allowing them to fly endlessly. This seems to represent a state of near immortality appropriate to the player character’s resurrection at the end of the narrative.

In the case when the player is online, the narrative changes as players meet other players. They can choose to either accompany these other players, help them through each stage of the game, or leave them alone. When playing with other players, these players become companions to the player’s character, a choice that is reflected in the game during the cut scene of the prophecy: it shows two robed figures instead of one, changing the game narrative to a story of companionship instead of a lone traveller.

**Gameplay for Exploring Narrative Settings.** While *Journey* allows players to enact the narrative through gameplay, the narrative is heavily supported by the many narrative devices and the narrative architecture [24] used in the game. A contextually rich environment can elicit pre-conceived ideas or narratives drawn from other forms of media, set up the narrative world of the game, embed narratives into the environmental objects, or allow for emergent narratives. *Journey* uses environmental storytelling extensively to evoke the setting and atmosphere of the game. The desolate ruins and hieroglyphs hint at a lost civilisation, with the red robes and carpets possibly pointing to a Tibetan or Middle Eastern influence [25], and the slow strings soundtrack giving a solemn, melancholy mood to the game. The game also uses a high level of realism of the visual graphics to let the players better establish a spatial presence within the game. With the narrative rich environment and the realistic visuals, it creates a simulative experience for the players when traversing through the game environment. The gameplay of *Journey* then not only enacts the narrative of the game. In addition, the narrative architecture adds upon the narrative derived from the game mechanics.

For example, as the game ends and the player is brought back to the start, it may seem as though the game simply restarted. However, with the Tibetan influences in the environment adding another layer of interpretation, the Eastern references may suggest the concept of reincarnation or rebirth. In the starting scene of the game, there are tall stones scattered across the desert that seem to be of no significance; however, knowing that the player dies and revives and comes back to the starting point, the stones then take on a different meaning as the players may interpret the stones to be tombstones. While the narrative architecture heavily informs the setting for the gameplay, conversely the gameplay can be used to let players see and explore the environment in a different light.



Even though the game relies heavily on visual cues, *Journey* also uses embedded storytelling [24] within the game such that new information about the narrative is uncovered through gameplay. The main narrative of *Journey* is mostly told through the gameplay. However, interspersed between each stage of the game are cut scenes in which the character appears in a bright white space with a larger robed figure dressed in white. During these cut scenes, the player is shown parts of a hieroglyphic mural that can be understood as the history of an ancient civilisation. The game not only embeds the history of the civilisation within the cut scenes, but also in the game environment. Throughout the game, players can search for hieroglyph murals at each stage of the game. The murals contain more history of the civilisation or hint at how the places of each stage were used in the past. Supplemented with the hieroglyphs shown in the cut scenes, players can understand the history of the civilisation better and add to their understanding of the game narrative by actively searching for the hieroglyph murals.

By using a combination of narrative devices and realistic visuals, *Journey* lets players feel present in and intrigued by the game environment, leading them to explore the game. Along with gameplay appropriate to the narrative, *Journey* is able to convey a complex narrative without the use of any words.

### 5.3 Close Reading: A Bird Story

We now move on to the close reading of *A Bird Story*. *A Bird Story* tells the story of a relationship between a boy and a bird. The player plays as a boy who has no friends in school and whose parents are constantly away. The boy rescues an injured bird from a badger and forms a heart-warming friendship with the bird. The boy tries to keep the bird a secret from his mother but is eventually found out and forbidden to keep the bird. In *A Bird Story*, gameplay is used as a means to progress time within the game.

**Gameplay as Time Progression.** Unlike the other two games, *A Bird Story* has very little in the way of game mechanics, and only has basic player interactions consisting of walking around the game world using arrow keys. Occasionally the game introduces mini-game events such as when the boy is competing with the bird in jumping into rain puddles, or navigating the paper airplane to find the bird's nest, but these events do not involve any difficulty or any need for skill on the part of the player. In addition, the outcomes of these mini games have no impact on the narrative or the game. The game also has many cut scenes, so much so that the player can easily forget that there is a need for any input. To overcome this, the game indicates with arrow keys when the player can control the boy. Despite the shortcomings of *A Bird Story* as a game and the heavy use of cut scenes to convey the narrative, the game is still able to use gameplay for storytelling by letting player actions turn time forwards or backwards.

The game uses very interesting and surrealistic ways of doing scene transitions. For example, when the boy heads home after school, instead of cutting the scene directly to the home or depicting the school and the way home realistically, the lockers in the school's corridors start to look like trees and the school building then slowly melts into the courtyard outside, so that the player doesn't have to go through a door when moving from inside the school building to the courtyard outdoors. Another example is a scene

where the furniture of the living room appears in the middle of the forest. After the player steps into the “living room”, the environment gradually changes from the forest to the boy’s actual living room. In these moments, when the player controls the character and navigates the boy through surreal scene transitions, it feels as if time is being fast-forwarded as the blending of surroundings of different environments mimics the blur of the surroundings in peripheral vision when travelling at a high speed.

Another scene where *A Bird Story* uses player action to progress time is at the start of the game. The boy goes to bed and a scene that appears to be a dream sequence starts. The player can control the boy in that scene, but he walks backwards. The player walks past some shadows, hopping onto a paper plane that also flies backwards. The player will only realise at the end of the game that this sequence represents the boy moving backwards in time to the chronological start of the story, and the shadows that they pass by are future sequences of the boy with the bird in the game.

Even with the lack of game mechanics and player agency, *A Bird Story* makes use of surrealistic representations and player actions to represent the temporal progression and spatial movement of the narrative.

## 6 Discussion

From close readings of three wordless games, we have identified four techniques that the games use to convey a narrative through gameplay: gameplay as enacting narrative, manipulating player controls for narrative effect, gameplay for exploring narrative settings, and gameplay as time progression. We will now briefly discuss how the techniques relate to the literature.

Gameplay as enacting narrative involves having the player’s actions convey the main narrative of the game. In the absence of words, both *Brothers: A Tale of Two Sons* and *Journey* manage to use the same technique with slight differences. *Brothers: A Tale of Two Sons* has short game stages that act as the narrative events of the game. This coincides with a technique that Dubbelman had identified: recontextualising the game mechanic for characterisation and narrative empathy. *Brothers: A Tale of Two Sons* does this by using the same mechanic that was introduced earlier in the game, recontextualised it by adding a short-term objective which then turns it into a narrative event. *Journey* changes the mechanic to match the development in the narrative as well as the player’s emotions. Likewise, choosing to play with another player can change the narrative. This technique allows for ludonarrative harmony, as the game mechanics fully support and enhance the narrative experience of the game.

Gameplay as enacting narrative is also related to Jenkins’ idea of spatial stories that are “held together by broadly defined goals and conflicts and pushed forward by the character’s movement across the map” [24: p. 124]. Both games are dependent on being able to move from a starting point towards a main objective (heading to the top of the mountain or getting to the cure). Therefore, it is of no surprise that both games are of the same genre and have the same broad narrative structure of a hero’s journey. Ryan [9] suggests that for interactive narratives to be on par with other mediums, they must be able to represent physical actions that have impact on the narrative world and verbal

actions that have impact on the motivations of the characters. She points out that without using language, player actions are limited to physical ones which cannot affect other characters' relationships. However, *Journey* manages to allow players to develop a sense of camaraderie while travelling through the desert together, which players may interpret to be a connection between the characters. This is also represented through the change in the prophecy upon going through most of the stages with another player. The change in the prophecy, however, is only able to indicate the status of companionship and nothing more. Therefore, even though it is possible for relationships between characters to be represented in the narrative, this is still far from the ability to represent complex interpersonal relationships that Ryan is discussing. Hence, even though *Journey* shows promise in representing character relationships, it may be that for complex relationships to be supported, there is still a need for language.

Without the use of language, *Journey* had to make use of familiar conventions to set up the narrative world. In addition, the game embeds a higher-level narrative into the environmental objects. *Journey's* use of realistic visuals also increases the narrative and game immersion. While most of the narrative content is communicated visually, the gameplay allows the player to explore the narrative-rich environment at their own pace. Although this may mean that the player's interpretation of the narrative does not match with the developer's authorial intentions, suggesting the old ludonarrative debate about the conflict between player's agency and narrative, this does not necessarily mean that the player-generated narrative is "wrong". Players may gain satisfaction and a sense of achievement from creating their own interpretation. Using their own experience to interpret the narrative, they can potentially create a more personally meaningful narrative.

Gameplay as time progression in *A Bird Story* serves to help the player move forward in time without impacting the events within the narrative. Of the four techniques, gameplay as time progression has the least narrative quality, with player actions having the least impact on the game narrative. However, even with very little impact on the game narrative, using the game actions to help progress the narrative can still serve to help the player feel agency. Tanenbaum and Tanenbaum [26] propose to think of agency as commitment to meaning for narrative rich games instead of agency as choice or freedom. Even when game actions do not allow for any decision making, the commitment to performing a meaningful game action helps to "facilitate meaningful expression". In this case, the gameplay of *A Bird Story* allows the player to feel agency by committing to the action of moving the character and at the same time progressing narrative time.

In the introduction, we discussed the relationship between language and narratives, and brought up Ryan's argument that only language can convey causality. Through our close readings, we have argued that gameplay can indicate causality by allowing players to carry out actions that affect and trigger subsequent events in the game. Enacting the scenes of the narrative in game time also gives the player a clear idea of causality and the progression of the narrative. However, while game mechanics may possibly help the player understand the causality of physical narrative events, the causality of events triggered by the thoughts and motives of characters may be difficult to convey, as complex thoughts may still require language for representation.

On the other hand, leaving the narrative and complex thought processes ambiguous is not necessarily a bad thing. Just as ambiguity is used in literature to allow for multiple

interpretations [27] and to evoke emotional response [28], wordlessness in the game context can very likely do the same. We earlier discussed the possible differences in the narrative experience of wordless games as compared to games with words, suggesting that wordlessness possibly adds another level of difficulty to the gameplay. However, as the identified techniques help to convey the causality of player actions and time progression, this gives players a clear understanding of their actions while leaving the exact meaning of their actions open to interpretation by the players.

## 7 Conclusion

In this paper, we identified four different techniques by which gameplay is used to convey a narrative within wordless games: gameplay as enacting narrative, manipulating player controls for narrative effect, gameplay for exploring narrative settings, and gameplay as time progression. These techniques can empower game designers to design games wherein the game mechanics and player actions are used together to tell the game narrative. Future work will include conducting empirical studies of players playing existing wordless games to validate the techniques, and compiling the techniques in the form of design knowledge to better help designers in creating narrative games.

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