

Representing Game Characters' Inner Worlds through Narrative Perspectives

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ABSTRACT

When compared to the depiction of external actions, modern computer games have developed very limited means of conveying game characters' inner activities. In this paper, we focus on different *narrative perspectives* and the ways in which they enable us to express a wider range of characters' inner worlds. We also present our on-going project *Remembrance* which uses a system of shifting external environments to reflect the character's inner world.

Categories and Subject Descriptors

K.8.0 [PERSONAL COMPUTING]: Games; J.5 [ARTS AND HUMANITIES]: Literature

General Terms

Design, Theory

Keywords

Interactive Narrative, Game Design, Narrative Perspective

1. INTRODUCTION

To many, the question of “Can a video game make people cry?” has become the epitome test for the level of emotional engagement that a player feels in games, especially narrative-based ones. From predefined dramatic moments (e.g., the killing of a beloved character, Aeris, in *Final Fantasy VII* and the heartbreaking ending of the recent indie game *Passage*) to player-generated story components (e.g. the ones in *Sims* and *World of Warcraft*), these classic moments are landmarks in the evolution of computer games because of the strong emotional connection between the game characters and the players.

Authentic emotional engagement, of course, involves a broader range of emotions other than actual tears. As Murray [15] describes, it also includes emotions aroused through

identification with the characters; a feeling that the actions of the characters and the events in the imaginary world have dramatic importance, that there is a weight and a significance to how things turn out (dramatic agency); a suspension of disbelief that lets us enter into and sustain an involvement in a richly detailed imaginary world. Although this paper focuses on emotional immersion in story-centric games, we do not suggest that this is the only way. Many other games, such as *Guitar Hero* and TGC's *Flower*, have successfully explored non-story-centric means to arouse strong feelings in the player.

So far, most of computer games have relied heavily on game characters' (both PCs and NPCs) *external behavior*, such as spatial navigation, manipulating objects, and solving puzzles, as the material basis to achieve such emotional immersion. Ryan [19] argues that, because of these well-understood player activities, most games gravitate towards a type of plot that places great emphasis on psychical actions. Among others, classic narrative patterns for games and story-generation systems are Joseph Campbell's hero's journey — a hero receives a mission, fulfills it by performing various tasks and receives rewards at the end [2] — and Vladimir Propp's morphology of Russian folklore tales [17], both frequently used in many action and adventure games.

These corporeal actions are the main component of our relation to the physical world. According to Ryan, however, our direct relations to other human beings are “based on semiotic transactions, though we can also affect other people indirectly by performing physical actions that will please or displease them.” The drawback of solely relying on game characters' external actions to establish the player's emotion connection therefore is that these actions may not carry the full weight of the potential rich inter-personal relationship between the player and game characters.

Our work focuses on new ways of creating an emotionally immersive experience for the player, particularly through the depiction of game characters' internal activities. These activities include, but are not limited to, game characters' memories, emotions, imagination and daydreams. Compared with their external actions, we have very limited understanding of how to depict character's inner activities. In this paper, we focus on different *narrative perspectives* or viewpoints in computer games, and their respective affordance to express a wide range of characters' internal activities. Extending existing narratology theories on narrative perspective from literature and film, we illustrate the imbalanced development of narrative perspectives in computer

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	Internal analysis of events	Outside observation of events
Narrator as a character in the story	1. <i>First-Person</i> (Main character tells own story)	2. <i>First-Person Observer</i> (Minor character tells main character's story)
Narrator not a character in the story	4. <i>Omniscient Author</i> (Analytic or omniscient author tells story, entering thoughts and feelings)	3. <i>Author-Observer</i> (Author tells story as external observer)

Table 1: Brooks and Warren’s Quadripartite Space for Narrative Point of View (Perspective) [1, p.148].

games and the need for new experiments of internal-based perspectives. As one of such attempts, we present our on-going project *Remembrance* which uses a shifting external environment to reflect the character’s inner world.

The rest of the paper is organized as the following: Section 2 introduces our theoretical framework of narrative perspective in traditional media. Next, Section 3 extends the framework to existing computer games and analyzes the imbalance of external and internal perspectives. In Section 4, we describe our on-going project *Remembrance*, which is geared towards new ways of foregrounding game characters’ internal activities. Section 5 presents related work, and we offer our conclusion and discussion in Section 6.

2. THEORETICAL FRAMEWORK

Narrative perspective, closely related to point of view and focalization¹, describes the perceptual or conceptual position in terms of which the narrated situation and events are presented. It is an important aspect of how the author of a literary, theatrical, cinematic, or musical story conveys the narrative to the audience, because the choice of perspective imposes significant constraints on what can and cannot be presented by the discourse [3]. Let us discuss the different uses of perspective in traditional media before we extend this framework to computer games in next section.

In the context of prose narrative, a number of narratology theories have been developed about the use of perspective. Among them, the well-known framework by Brooks and Warren [1] classifies narrative perspective (which they call “focus of narrative”) based on two distinctions: *is the narrator in the story* and *what kind of information is available to the reader*. Generally speaking, the first axis determines whether the narrative is told from a first- or third-person perspective. The second axis determines whether the narrator has access to characters’ internal thoughts of events, or act as an outside observer of these events and therefore do not have such access. Figure 1 lists the resulting quadripartite narrative space.

In the *first-person* perspective (first-person internal, Type 1), a character tells his own story from his point of view. In the *first-person observer* perspective (first-person external, Type 2), a character tells, in first-person, a story that he has observed. Usually, the observer/narrator is a secondary character in the story recounted. In the *author-observer* perspective (third-person external, Type 3), the author tells what happens in the “purely objective sense — deeds, words, gestures — without going into the minds of the characters and without giving his own comments.” It is also called the

“camera-eye perspective.” Finally, in the *omniscient author* perspective (third-person internal, Type 4), the author has the full liberty to incorporate the inner thoughts and emotions of the characters as well as his own.

The choice of narrative perspective has a much stronger impact on the narrative than simply the grammatical difference between “I” and “he.” In fact, a narrative perspective not only influences the content but also the structure of the story. For instance, in a first-person perspective (Type 1 or Type 2), the narrator can naturally function as a device for *selectivity*. The narrator’s reasonably bounded knowledge of other characters and events determines what kind of information is or is not available to the reader, which may provide a dramatic frame as a device for suspense. In many successful stories, this selectivity helps the story to stay focused on things that really matter to the narrating character and skip unessential but otherwise necessary details. More important, different narrative perspectives afford different kind of content. Whereas third-person perspectives typically offer a more neutral and unbiased view through specification and analysis, the first-person ones succeed in interweaving a character’s personality and sensibility into the texture of the story [1, p.661].

As film extends narrative to a primarily visual medium, Brooks and Warren’s classification of prose-based narrative perspectives needs to be updated. For instance, the difference between “who *sees* the story” (cinematography) and “who *tells* the story” (voice-over) becomes more important for understanding a film’s narrative perspective. A film may not be strictly shot from the narrating character’s viewpoint (hence the audience never sees his/her face) for the entire time, but film-specific conventions, such as the voice-over by the narrating character, alternating point of view shots, and restricted narration, can still deliver a coherent first-person (observer) perspective narrative.

Type	Literature	Film
1	<i>Great Expectations</i>	<i>Fight Club, Memento</i>
2	<i>The Great Gatsby</i>	<i>The Blair Witch Project</i>
3	<i>War and Peace</i>	<i>Citizen Kane</i>
4	<i>Tess of the D’Urbervilles</i>	<i>Hitchhiker’s Guide to the Galaxy</i>

Table 2: Examples of Narrative Perspectives.

Unsurprisingly, the perspective most widely adopted by mainstream films is the author-observer perspective. More recently, a new wave of contemporary film explores new cinematographic ways to enhance the narration of characters’ internal events, such as the events seen through the perspective of a split-personality protagonist in *Fight Club* and the strict use of hand-held camera in *The Blair Witch Project*. Computer graphics also tremendously increase filmmakers’

¹The distinctions between perspective, point of view, and focalization have been studied in depth in [3]. These differences, however, are not essential to our argument at this stage. Therefore, we choose to use the above terms interchangeably in this paper.

ability to show the imagined world of their characters as in *Pan's Labyrinth*. Representative examples of each type of narrative perspective in literature and in film can be found in Table 2.

3. NARRATIVE PERSPECTIVES IN COMPUTER GAMES

In this section, we extend the above framework to computer games and use it to classify multiple games based on their use of perspective. Based on our classification, we analyze what in our opinion is an imbalanced development.

3.1 Extending the Framework

Like any media in their early stages, computer games are in the process of defining their semiotic systems, of which narrative perspective is an important aspect. With the player occupying a much more central role in the game world than in fiction and film, different conventions for narrative perspectives are being invented. For instance, the second-person narrative perspective, rarely used in fiction and film, has been developed into a distinctive characteristic of certain genres of games, particularly interactive fiction (IF), to establish the player's sense of agency. The first-person perspective (cinematography-wise), also uncommon in film, is the standard for first-person shooter games.

Before Brooks and Warren's framework can be fully useful for us, we need to specify the scope of our study and adapt the framework so that it is more applicable to computer games. Our discussion in this paper is primarily concerned with dynamic *visual representation* of game characters' internal activities. Although a voice-over may effectively convey the thoughts of a game character, it tends to be fixed and is typically associated with pre-authored cut scenes.

Accordingly, we update these four perspective types with more game-friendly terms: 1) first-person internal (first-person), 2) first-person observer, 3) third-person observer (author-observer), 4) omniscient player (omniscient author). We will use "first-person perspective" to refer to the combination of Type 1 and 2, and "third-person perspective" for Type 3 and 4. Similarly, Type 1 and 4 are "internal perspectives" whereas Type 2 and 3 are "external perspectives."

Although computer games borrow many cinematography and storytelling conventions from linear narrative media, especially film, some of the original framework is less applicable and needs to be redefined. First, the original distinction between first-person and third-person is based on whether or not the narrator is a character in the story world. In games, this maps to whether the game world is perceived from the main character's viewpoint (e.g. FPS) or from a camera that follows him/her closely (e.g. platformer). Like film, the mixed use of the two is common, especially because many games offer the option to switch camera viewpoint at any time.

Second, the boundary between the first-person internal and the first-person observer perspectives also needs some reworking. Since computer games emphasize player agency, it is not a common practice to place the player character simply as a minor character/observer of other main character's stories with minimum influence. Here, we redefine this distinction to be more symmetric to that between Type 3 and Type 4 perspectives — it describes the difference between the more objective portraying of the main player character

(i.e. first-person observer) and the more subjective description that "enters" in the thoughts and feelings of the character (i.e. first-person internal).

Third, we redefine the difference between first-person internal and omniscient player perspective. Here, if the player only has access to the the player character's internal world, it is first-person internal. If she has access to multiple characters in the game, then it is omniscient player perspective. A first-person narrative perspective may be rendered in third-person viewpoint.

Finally, we replace the four clear-cut quadripartite space with a prototype categorization model [18]. In the new prototype model, members of each type of narrative perspective have gradient centrality — some members are more prototypical (representative) than others. This model allows us to address the complexity of narrative perspectives in computer games in a vocabulary that accommodates more than binary boundaries. For example, most games provide a view of game stats, a technique not used in film and literature. Although these are not fully articulated internal narrations, these stats often offer important information of the emotion and desire of the characters (examples below) and should be categorized as a peripheral case of internal narratives. A simple illustration of this model as well as some game examples can be found in Figure 1.

3.2 Narrative Perspective Space in Computer Games

Using our revised taxonomy, below is a list of the four basic narrative perspectives in story-centric computer games as well as their representative examples.

First-person observer perspective.

In a first-person observer perspective, the player observes the world through the eyes of the player character (PC), without explicitly entering the PC's feelings or thoughts. It is currently favored by many designers and gamers because of the sense of immediacy and empathy with the PC that this perspective often provides [6, p.231-34]. An obvious use of this perspective in games is the first-person shooter (FPS) genre. Like their counterparts in prose fiction and film, the limited field of vision can be used for dramatic moments of surprise and suspension when, for example, the player senses the enemies around but cannot see them directly. Another genre in which first-person observer lends itself to is puzzle-solving games, such as *Myst* and *Safecracker*, where the player takes the role of the explorer character and traverses the environment while solving puzzles.

First-person observer perspective means more than simply placing the camera at eye level of the PC. Recent FPS games are pushing the envelope of this perspective by boosting sensory immediacy and immersion. For example, in the nuclear explosion scene in *Call of Duty 4: Modern Warfare*, the player controls the dying main character crawling down his tank. Through the PC's heavy breathing (auditory), fading vision (visual) and limited mobility (control), the game conveyed a poignant sense of helplessness using the first-person observer perspective.

Third-person observer perspective.

This is also one of the most commonly used perspective in games. In this perspective, the camera follows the PC closely but does not put the player directly in the charac-

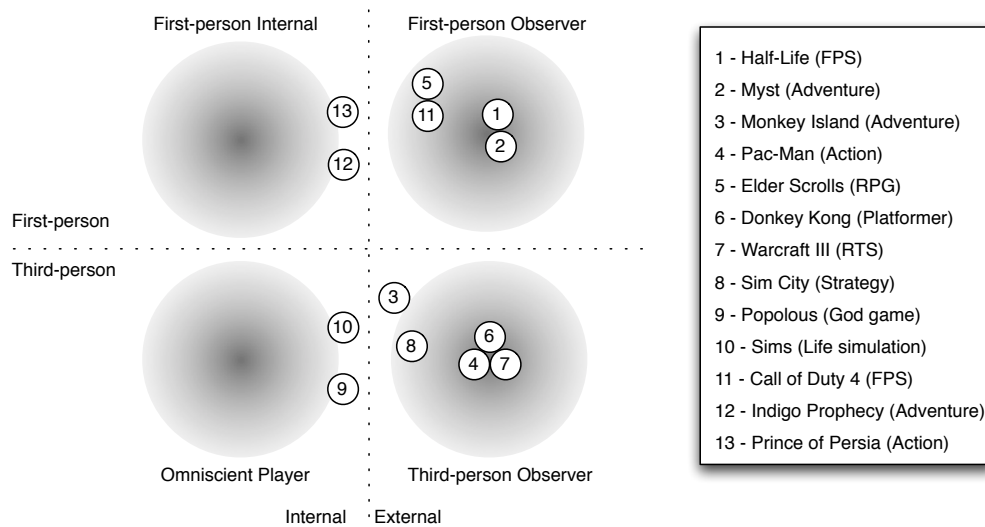


Figure 1: Categorization of the Use of Narrative Perspective in Computer Games.

ter's viewpoint. Games that require more detailed control of character actions, such as action-adventure games and sports games, tend to use this view. Viewpoints typically associated with third-person observer are overhead view, side view and isometric view [6]. The overhead view directly looks down at an object and was often used in early games such as *Pac-Man*. Due to its somewhat unnatural camera angle, the overhead view is presently seldom given other uses than level maps and digital versions of board games. Side view was popular in early arcade games like *Donkey Kong* and *Tetris*, but largely out of fashion in large budget games. Isometric view reduces in the impact of perspective and offers the player more information in 3D spaces. It is popular in strategy games, construction simulations, and role-playing games such as *Warcraft III* and *SimCity*.

An innovative use of this perspective is the use of split-screen cameras to show the correlation of events at different time-space. For example, in *Indigo Prophecy (Fahrenheit)*, split screens are used effectively to create a sense of urgency. In one scene, the PC has to cover evidence of his crime in a restaurant bathroom. After a certain period of time, the screen is split into two; one about the PC and the other showing a nearby policeman approaching the bathroom.

First-person internal perspective.

Fully-fledged first-person internal perspective, in our opinion, is still under development in modern video games. So far, there have been some techniques, often embedded in an overall third-person perspective, that offer a glimpse into the main character's inner world.

A common method is cutscenes or flashbacks, directly adopted from film conventions. In addition to inserting pre-authored plot points (e.g., ending), cutscenes are also used to explain past events (i.e., characters' memories) and hence communicate characters' emotions and thoughts to a certain extent. Another related method is to use the voice-over of a narrator character. In certain games, such as *Prince of Persia*, the overall story is narrated by the main character in retrospective through a sequence of cutscenes. *Tomb*

Raider's Lara Croft has a tendency toward audible internal dialogue while in third-person viewpoint. However, both methods have the drawback of relying completely on pre-authored assets and hence are not very flexible.

As mentioned above, a technique unique to computer games is the view of character stats. In some cases, this view offers a simple and straightforward way to understand character's internal states. In several scenes in *Indigo Prophecy*, the player can see a graphic representation of the PC's mental state (e.g. anxious, depressed, insane, and neutral) while playing. The limitation of this method is that these character stats tend to be rather simplistic and do not afford a rich description of the PC's inner activities.

Omniscient player perspective.

An omniscient player perspective offers access to multiple game characters' thoughts and feelings. A representative (but simple) omniscient player perspective can typically be found in god games, such as *Popolous* and the *Sims* series. Because the player needs to control or interact with a big group of characters, information about their needs and emotion states is provided at the same time, typically in the form of thought bubbles. A simpler form of this technique is multi-character battles, where the health of all characters are displayed simultaneously. Like the use of character stats, thought bubbles are simplistic compared to the depth and breadth of characters' inner world.

A potentially effective omniscient player perspective is associated with games in which the player can inhabit multiple characters. For instance, in *Messiah* the PC is a small angel who can possess any creature, from humans to animals. The possession is mainly used to obtain the special abilities or characteristics of different characters while controlling their movements. Potentially, an interesting variation on this concept could involve allowing the player to experience the game world differently depending on which character the PC inhabits.

In summary, internal perspectives in games are far less developed than external ones. Internal perspectives currently

rely on a small number of simplistic techniques (e.g. flashback, voice-over, and character stats) to convey characters’ inner worlds. If we look at mature narrative forms such as prose fiction and film, this kind of clear imbalance generally occurs in their early stage and is bridged over time through formal exploration. The medium of computer games is in a similar process of developing its expressive language. In the next section, we will present our new approach for internal perspectives in games.

4. REMEMBRANCE

Remembrance is an on-going research and artistic project. Our goal is to develop new methods based on the first-person internal perspective to portray characters’ emotions and inner thoughts in a game environment. In the context of fiction and film, Chatman describes a successful use of first-person internal perspective as a portrait of the narrator whose consciousness is used as “the screen or filter through which the events of a story are perceived, conceived and so on” [3]. *Remembrance* is an attempt towards developing internal perspective that engages not only viewpoints, but also other areas of game characters’ fictional consciousness.

The player character in this narrative world is a robot. Different from many action-based games, we are primarily interested in exploring the affective consequences of user actions on the PC, in addition to their external physical consequences in the story world. For instance, opening a shiny bright-colored door will let the PC enter a room, but it may also set the PC’s emotional state to a happier one. Similarly examining an artifact connected to a lost friend will have the opposite impact.

Remembrance is developed in the Panda3D engine by Disney and maintained by Carnegie Mellon University’s Entertainment Technology Center. We developed a specialized rendering pipeline on top of Panda3D using a combination of Python and Cg shaders. Our rendering pipeline takes care of both lighting and object transformations caused by the PC’s emotional changes.

The main contribution of this project is the use of the environment as an externalization of characters’ inner world. As opposed to most games’ limited utilization of a PC’s internal activities, *Remembrance* blends these emotional states with the shifting game environment. In the rest of this section, we present the theoretical basis of our approach, our new technique for first-person internal perspective, and overall experience design.

4.1 Conceptual Blending

Cognitive semantic theory of conceptual blending describes the process by which concepts are integrated, guided by “uniform structural and dynamic principles” [5]. It covers subconscious mental processes in everyday language and thought as well as in those in more complex domains such as literary arts or rhetoric. The theory builds upon Gilles Fauconnier’s mental spaces theory [4] and elaborates insights from metaphor theory [11, 12].

Figure 2 depicts the integration of two input spaces I1 and I2 as guided by the shared structure indicated by the generic space, to form a blended conceptual space. A motivation example of conceptual blending is between the concepts HOUSE (I1) and BOAT (I2), which results in the blends HOUSEBOAT and BOATHOUSE. A more elaborate example is Turner’s conceptual-blending-based analysis of a

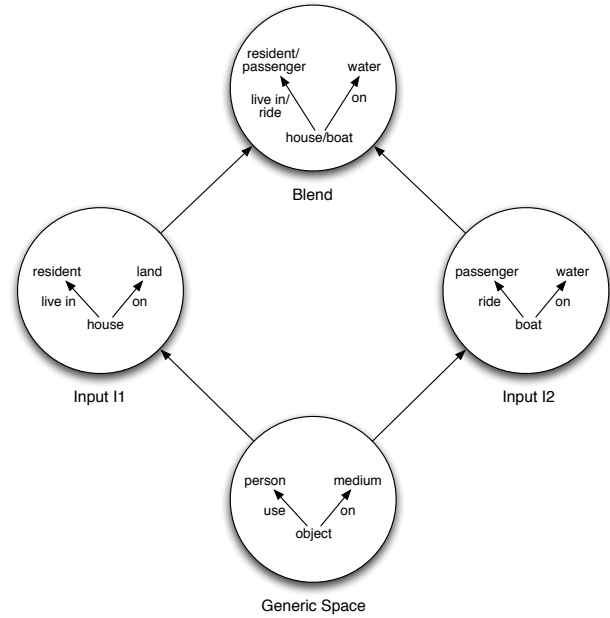


Figure 2: Conceptual Blending of the Concepts of HOUSE and BOAT.

children’s story called *Harold and the Purple Crayon* [20]. More details of conceptual blending can be found in [5, 8] and a computational model of blending was developed in Harrell’s ALLOY program [7, 9].

4.2 Blending the Internal and External

Conceptual blending theory provides us with a conceptual framework to integrate the game character’s inner activities (I1) with an external environment (I2) and create a blended space of dynamically shifting environments (G). In the current version of *Remembrance*, the PC’s inner world mainly consists of its changing emotions (e.g. happy, grumpy) and a pre-authored collection of memories. The blend-ready environment elements include: the artifacts (like the walls, floor, furniture, etc.), lighting, and background music.

Between the two main internal activities, the blending between the internal and external is primarily achieved dynamically through the PC’s emotional states. Currently, the PC’s memories of past events mainly serve as an explanation for the change of its emotion states and are incorporated as flashbacks. When the player interacts with certain artifacts in the game world, certain memories will be triggered and the PC’s emotion state will be updated accordingly along a sliding scale from “sad” to “happy.”

For example, Figure 3 shows a screenshot of the PC in front of a wall while in a neutral emotional state. Next, the user clicks on one of the pictures on the wall, which triggers a sad memory. (A screenshot of a memory flashback is in Fig. 5.) It changes the PC’s emotional state from neutral to sad. As a result, the room gradually morphs into a bleak and worn appearance in order to reflect the PC’s shifted emotions. In another example, when the PC opens a book containing a pressed flower a pleasant memory is triggered. This alters the shape and texture of the bookshelf from broken and worn to a more structurally sound and pleasing ap-



Figure 3: Screenshot of the PC in a Neutral Emotional State.



Figure 4: Screenshot of the PC in a Sad Emotional State (Same Location as the Figure Above).

pearance. In other words, the player experiences the game environment not as how it exists objectively, but from the subjective internal perspective of the player character.

Overall, we use three techniques to render the PC's inner world. First, and most important, the morphing environment mirrors the PC's shifting emotion state, as a form of conceptual blending between objective and affective concepts. Second, we use pre-authored memory flashbacks to explain different objects' emotional effect on the PC. Third, ambient music is used to highlight the emotional tone of the PC and the environment seen through his/her eyes.

4.3 Experience Design

In order to highlight the unique narrative perspective in *Remembrance*, we intentionally designed the interactive experience to maintain a fluid and whimsical quality. Because the devised system of morphing environments could allow for a jumbled pastiche of aesthetics, special attention was given to the pacing and timing of the blending to avoid such an effect. When the PC's emotion shifts, the sequence of transformations are choreographed to create a feeling of fantasy without disorienting the player.

To externalize the PC's mental world, the environment was made to conform to the character's emotional state influenced by player decisions throughout gameplay. In order to achieve this effect, a system of texture blending and target-driven mesh animation (morphing) was utilized in altering the structural appearance and surface texture of ob-

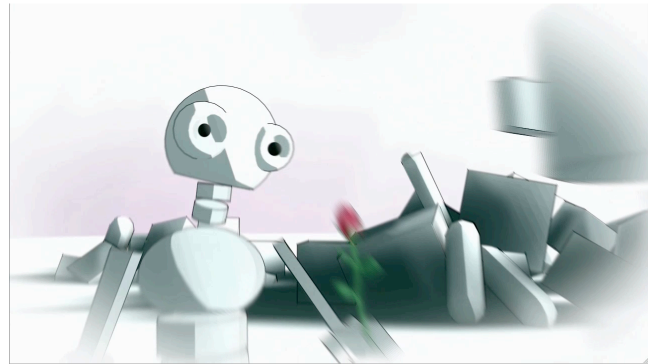


Figure 5: Screenshot a Memory Flashback.

jects in the environment.

As mentioned above, the portrayal of the character's inner activities in *Remembrance* is not restricted to the blending of textures and object meshes as the player interacts with the environment during gameplay. In fact, much of the insight into the character's inner world comes from the use of cutscene animations activated through many of these actions. To reinforce the whimsical and contemplative feel of gameplay, these cutscenes were rendered in a stylized and semi-abstracted cell-shaded style. This was also done to differentiate them from the gameplay's more realistic rendering style. To emphasize the internal, "mind's eye" quality of these scenes, a time dilation effect was used in compositing to impart the hazy quality of memory.

In structuring the gameplay dynamics, we also intended to de-emphasize a strong sense of goal. There is no combat, timer, or specific tasks the user needs to accomplish. In the current prototype of the game, the focus of this interactive experience is on allowing the player to explore the internal/external world of the PC in novel ways and discover its past stories based on her decisions. In other words, we hope to leave enough space for the player's interpretation and imagination.

Though limited numbers of emotional states and associated aesthetic styles were created for the playable prototype of *Remembrance*, our approach can be applied to a larger number of styles and associated inner activities. A video clip of the latest iteration of the project can be found at: <http://dm.ucf.edu/~jzhu/video/remembrance2010.mov>.

5. RELATED WORK

Fox Harrell's various polymorphic poetry generated by his conceptual-blending-based GRIOT system is an important source of inspiration for *Remembrance*. In his recent interactive narrative *Loss, Undersea* [10], for example, the player character morphs from fully human to a combination of different sea creatures, based on the players emotive responses to different possible actions. Also, in our prior work *Memory, Reverie Machine* [21], we explored similar blendings between artifacts with emotion in pure text forms by extending the GRIOT system. In comparison, *Remembrance* extends this line of exploration into 3D game space and mechanics. Other related work include Porteous, Cavazza, and Charles's work on using point of view as part of the constraints network for planning-based interactive storytelling [16] as well as Nick Montfort's work on altering narrative

expression (as opposed to story content) in the context of Interactive Fiction [14]. Melo and Paiva's work [13] also explores the expression of character's emotions through lighting, shadow, and other computer graphics techniques.

In the context of other computer games, a handful of titles explore the concept of shifting environments in response to the player's decision. For example, in the *Fable* game series, different moral choices by the player affect the "alignment" of the PC (i.e., how good or evil he is). These changes are externalized by changing the physical features of the character. For instance, evil characters may develop black lines around their eyes or even horns protruding from their skulls. At a certain point of the game, if the player becomes the king in the town where the PC lives, she can change the look of the town. Compared with *Remembrance*, the change of the environment in these games is mainly a form of user agency in the game world, but not essential to the depiction of the character's inner activities.

6. CONCLUSIONS AND FUTURE WORK

Depicting characters' consciousness in meaningful and expressive ways has always been a goal for many authors working with different narrative forms. In this paper we have focused on developing such techniques for computer game characters through narrative perspectives. We analyzed a collection of computer games using a revised theoretical framework of narrative perspective and illustrated the imbalanced development between external and internal narrations. Finally, we presented *Remembrance*, an on-going project in which a morphing external environment is used to represent the inner activities of the player character.

Based on our analysis, internal perspective narrations are currently underdeveloped. We believe that they are key in extending the expressive possibilities of computer games and may also be crucial to establish stronger emotional connections between the player and her game character. We hope our exploration is a useful step towards a more mature semiotic system of computer games.

As part of our future work, we would like to experiment with different audio-visual cues and techniques to represent the main character's inner world. Many other theatrical and cinematographic elements (e.g., camera movement, theatrical lighting) can be further explored and incorporated into the system. Currently, *Remembrance* employs only a limited number of PC's emotional states and simple character/personality modeling, both of which we plan to extend. Finally, we plan to perform thorough user studies with *Remembrance* to evaluate the effectiveness of the techniques outlined in this paper.

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