

What Are You Going to Do, Talk Me to Death?

Exploring the Narrative State in Interactive Entertainment

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Abstract

We present a case study of narrative in an interactive game environment exploring how motivating text is used to create a narrative state in the mind of the player. This state in turn lends meaning to subsequent actions. We examine a set of text blocks from the game that tell a coherent, static story over a small play area and discuss the functions that text serves and the techniques used to accomplish them. We use this as a platform to explore how the narrative state might be varied to give insight into a more interactive narrative experience.

Introduction

People read narrative into everything. We're always looking for meaning and explanations in the events we see and hear about. Life is more exciting when there is drama and lessons to be learned (by other people, at least). The idea of interactive narrative is tantalizing because it combines the freedom to act with the promise of meaning. There is some idea that it should be like living out a really great story in the position of a character with total autonomy. However, in an autonomous environment those stories happen unpredictably and we'd like it to be more reliable than that.

Existing artifacts found "in the wild" present an unsatisfying account of interactive narrative. Hypertext stories can have strong narratives but feel more like multiple-choice than freedom of action. Interactive fiction games often can't shake the feeling that the player is navigating a grid of interconnected states like the caves of old. In many mainstream games, narrative and interaction co-exist, but take their turns at the podium and largely ignore what the other had to say. That is not to say that any of these are poor entertainment; only that the intersection of narrative and interaction feels either forced or ignored. Nevertheless, these artifacts are creative expressions of interactivity and narrative and in the best cases succeed at least in the two parts separately.

In this paper we present a case study of an existing artifact, a game, which has both interactive and narrative elements. The study is focused on how those elements co-exist and influence each other and what we can learn from their strengths and limitations.

Related Work

Research in interactive narrative has produced numerous theories and systems. Mateas and Stern proposed interactive narrative as the result of autonomous agents cooperating within authored *beats* selected by constraints in the *Façade* system (Mateas & Stern 2003). Aylett and Louchart have pursued *emergent narrative* and the process of *storification* resulting in the *FearNot!* system (Aylett, et al. 2005). Several initiatives have explored interactive narrative as the result of search based drama management (Weyhrauch 1997, Nelson et al. 2006, Ontañón et al. 2008). And a number of systems (Young 2007, Cavazza et al. 2002, Riedl & Young 2006, Riedl & Stern 2006, Magerko 2006) demonstrate techniques for maintaining plot consistency through parameterization, intervention or re-planning. For the most part the research community has defined interactive narrative in terms of systems that implement theories of narrative and behavior. This has proven a good methodology for exploration of theoretical issues, but the small number of field-evaluated systems represents less progress in establishing what the experiences of interactive narrative might be. Human activities such as improvisational drama and role-playing games (Louchart & Aylett 2004, Flowers et al. 2006) have been cited as attractive visions, but there is a substantial gap between here and there. We suggest that it would be profitable for the research community to put more effort into studying the intersection of narrative and interaction in existing creative artifacts, to attempt to better understand what the space of possible interactive narratives looks like.

The Case Study

We took our case study from the popular online game *World of Warcraft* from Blizzard Entertainment. It is a

persistent, shared world game where each player controls a character (third person point of view) making their way through a fairly standard high fantasy world. We chose a massively multiplayer game rather than a single player one because it operates under tight constraints that expose the conflict between player autonomy and story/world coherence. In a single player experience if the player burns down a castle along the way, it was part of the garden path to begin with. In a shared multi-player experience, if that castle is an immutable part of the planned story, it must be there for the next guy. This is a nightmare from an implementation point of view, but very illustrative in a case study such as this. Further, the set of player actions is quite limited and regular. The complexity of serving thousands of players strongly discourages complex interactions per client. In particular the *quest* system is easily picked apart for analysis.

A quest is accessed by interacting with a quest giver, typically a system-controlled character. It consists of a block of text presented to the player along with specifications of objectives and rewards. Once the objectives have been met the player interacts with the quest finisher, often the same character. There is another block of text presented and the rewards are obtained. Table 1 contains an example quest.

<p>Quest Text You'll be happy to know we appear to be making progress in the mine, thanks in no small part to your efforts. We can now turn our eyes to other concerns.</p> <p>My scouts have reported that a detachment of the Scarlet Crusade is setting up a camp southeast of here. The Scarlet Crusade is a despicable organization that hunts us, and they will not rest until every undead--Lich King's Scourge or no--is destroyed. We must strike first!</p> <p>Be careful, their unholy zeal makes them dangerous adversaries.</p> <p>Objective Bring Executor Arren 12 Scarlet Armbands from Scarlet Converts and Scarlet Initiates.</p> <p>Completion Text If only they listened to reason, eh, <name>? Perhaps we could sit them down for reasonable discourse... ha!</p> <p>Light-blinded fools.</p> <p>Rewards Choose one of: Executor Staff Deathguard Buckler</p>
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Table 1. An example quest.¹

This creates a very simple narrative framework: the quest text establishes the next turn in the storyline and the player responds with some set of actions. Eventually the

player reaches the objectives, returns, and is presented with quest text expounding on how her actions advanced the story. The text combined with actions taken by the player, other players in the vicinity and the simulated system-controlled characters form a *discourse* that tells a *story* in the narratological sense (cf. Chatman 1978). The goal of this study is to investigate how the static narrative experience presented by the quest system impacts the interactive experience of acting within the game world.

The study covers all twelve quests available to all players in the town of Deathknell, a starting area where certain new players spend their first few hours. The text and other specifics of the quests are available on numerous public websites that catalogue the game content.

Simulation vs. Narrative State

The relevant area of the game world consists of static landscapes and buildings inhabited by system- and player-controlled characters. System-controlled characters fall into two categories. Named entities including quest givers and other friendly faction members remain standing in a single location. They do not actually do anything besides speak with player characters. Generic and named enemy characters spawn in certain locations and wander within a certain radius. They attack player characters on sight, and re-spawn sometime after being killed. Player characters are free to move around the world as they like and to interact with system-controlled characters (the aforementioned speaking and fighting) as well as some interactive objects. The game simulation maintains spatial/temporal consistency and enables those interactions using a minimal set of variables for each character that we will refer to as the *simulation state*.

Quests exist in the simulation state as a set of variables indicating player progression. A quest may be inactive, in-progress or completed for a player. In the example quest given in table 1, progress is measured as the number of "Scarlet Armbands" collected from defeated foes. At the completion of the quest, the player character will obtain one of two items, updating her inventory in the simulation state. There are four types of interaction (resulting in simulation state transitions) required to complete the twelve quests in this study: speaking with a character, killing a character, taking an item from a corpse and "using" a fixed object. Several of the state changes are contingent on having a certain item in your character inventory. In order to accomplish these state changes, it is also necessary to move the player character around in the world and locate the entities to interact with.

Reading the quest text, it quickly becomes apparent that while part of it is reflected in the simulation state much of it is not. In the example we know because of the game world constraints that nothing is progressing in the mine, that the camp is always there and so forth. If the text and

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actions together form the discourse, then the story they tell reaches far beyond what is in the simulation state. We'll refer to this set of beliefs about the world as the *narrative state*. Having a character exposit about unseen states and events is not unusual in dramatic narrative. In fact, Freytag's Pyramid begins with *introduction* or *exposition* whose business is to "explain the place and time of the action, the nationality and life relations of the hero" (MacEwan(Freytag) 1894). The story being told almost always extends beyond the discourse presented. What is unique in this interactive setting is that the states and events which explicitly occur come from a small, highly repetitive set of actions. The discourse is constrained to a single exposition followed by a great deal of those repetitive events followed by another exposition. The quest text therefore carries the burden of making this discourse present a satisfying story by creating a narrative state that lends significance to the intermediate events. The extent to which the narrative state is unsubstantiated or even contradicts what is found in the simulation state captures the conflict of interaction and narrative.

Building the Narrative State

Roland Barthes proposed that units of narrative are multi-functional, and some of those functions do not pertain to the plot but to such notions as character and atmosphere (Barthes 1977). The quest text in our study serves many functions in creating the narrative state. The most basic function is informing the player of aspects of the simulation state. In the example, the player is made aware of a *faction* within the game world, the fact that it is hostile and the location of some members of that faction. This information is obviously important to the game play experience and it also serves to add some significance to player actions. If the player character knows there is a hostile camp nearby and chooses to go there and attack people, it is easy to read any number of motivations into that action.

As regards plot, the quest text presents much more detailed motivations. In the example there is an inciting moment – the discovery of the camp being set up – and the assertion of dire intentions on the part of the enemy concluding that "We must strike first!" The player is asked to separate what she knows, namely that the camp is statically located and that the enemy will always be right there ready to fight whoever comes over, from what her character is being told. What we have identified in these quests is a variety of techniques used by the authors to support this suspension of disbelief. The design of the game as a whole assumes that players are willing to go along with this arrangement.

As Barthes suggests, the text also functions to index character traits and the atmosphere of familiar themes. These elements of the narrative state are less likely to

directly conflict with player actions making them good candidates for a richer narrative state that does not create coherence problems. Attribution theory has long shown how people tend to attribute the behaviors they see to internal motivations and character traits (Heider 1958) and, as we'll discuss, even if the player attributes a different motivation than the text presents, it can be accepted as a valid difference in opinion within the game world. Other thematic elements and atmosphere are even further removed from the limited set of player actions. Table 2 describes three major themes that are presented across this set of quests. They exist at three levels of scope that serve to flesh out the player character and her place in the world.

Scope	Entity	Description
Personal	The Player Character	Tabula rasa finding her place in the world, callow youth proving herself
Local affiliation	Town of Deathknell	Short-handed, under-supplied defenders holding their ground
Global affiliation	The Forsaken Faction	Oppressed outcasts, struggling for freedom and acceptance, hounded on every side

Table 2. Major themes

The quest text serves the function of creating, reinforcing and expanding these themes in the narrative state. The player is invited to accept these themes as globally descriptive of the game reality, or to imagine that they are flawed, subjective opinions held by characters within the game world. This is achieved through the use of narrative/dramatic techniques that leverage human inferential capacity to fill in gaps and explain away plot holes. We detail a non-exhaustive list of nine such significant techniques here.

1) Off-stage life

Most of the characters the player interacts with in these quests mention other activities that fill up their time. The undertaker is burning bodies, the novice is making new gear and so on. This builds up in the narrative state an active town where things are happening all over. It allows for expansion on the theme of life in the town.

2) Representative characters, off-stage multitudes

Many of the characters mention large numbers of unseen other characters that they are interacting with. The player naturally assumes that these others are similar to the ones that are seen.

3) Identifying the player character with other characters

The player character is constantly being compared to the other characters both seen and unseen. Comments about life in the town and as a member of the faction are inclusive using “we” and “our”. The player is told about “the last guy who did this” and “the other recruits”. By identifying with this group, the player is able to flesh out the experience of her character using the attitudes and experiences of the other group members described in the text.

4) Personal character reflected off other characters

The player character never speaks in these quest interactions, yet personal character can be attributed based on the way other characters interact with the player. The player character is told at the beginning that she looks confused and lost by several characters. Through the progression of quests there is a repeated shift from being treated as undependable and replaceable to proven and valuable. Even if the player rejects these characterizations, she is rejecting the opinion of characters within the system on behalf of her own character. That is itself a valid and interesting narrative state.

5) Off-stage motivation

In one quest the player is told that she must collect several items because they will be made into new clothing for other new recruits. In another, a whole system of unseen logistics is referred to as reason to kill spiders inhabiting a gold mine. The set of enemies in the example quest are said to be “setting up” necessitating an urgent strike. Because the player character is limited in space and time, she is unlikely to inadvertently be confronted with the infelicity of these claims.

6) Character beliefs as global truth

A good deal of information is stated by characters in the form of personal beliefs. This is certainly more natural than having some global narrator cut in, but it also creates a good deal of flexibility for emotionally justified objectives and results. A character tells the player that they “must have” some documents or that certain enemies “must be destroyed” and “cannot be reasoned with”. In other cases the player is commended for doing “a good deed” adding weight of meaning to her actions. These emotional evaluations are easy to take at face value (or reject) without supporting evidence. This is used particularly effectively in establishing a hostile attitude towards other factions.

7) A part of something bigger

In one quest, a fairly complex plan is laid out, of which the quest objectives are one small step. Of course the rest of the plan, past and future, exists only in the narrative state. In many quests, it is stated or implied that the objectives are a small (but vitally important) part of a larger initiative involving numerous other agents on similar errands. This allows the player to feel that their character is the most important member of a large team effort, an illusion that can mitigate the dissonance of seeing other player characters working on similar tasks.

8) Unique instance vs. representative instance

In one of the final quests in the area, the player character meets a system-controlled character who is not part of the war effort. In contrast to the town inhabitants who are representative of many others like them, this character is unique and has his own agenda. The contrast gives a sense of diversity; that any number of interesting things may be going on out there, at least in the narrative state.

9) Archetypes

Many of the characterizations rely on familiar archetypes to help the player fill in the details and deepen the emotional connections. Besides the overall themes mentioned earlier, there is an enemy group clearly portrayed as religious fanatics with witch hunt/inquisition overtones.

These narrative techniques effectively leverage human competence to take the initial quest text and attach meaning to subsequent events. However, the game is less effective when it comes to responding to how those events alter the narrative state. Only the actions that specifically satisfy quest objectives have any impact on the availability of the closing quest text block. And that block is largely oblivious to what the player character has been doing outside of filling the objectives. The unspoken motivations and attitudes generated in the narrative state can be directed and guessed at, but if they are referenced in the quest text they can easily directly conflict with the state the player has created. Thus while the interaction is reasonably supported by the narrative, the narrative remains distinctly static.

Expanding the Narrative State

As our exploration has shown, there are several techniques for projecting a narrative state based on the simulation state and authorial goals for the story. It should be no surprise then that those same techniques highlight potential variations in that projected state. Importantly, each technique achieves a particular function and thus

variations for which that function is invariant can be explored. By considering these variations we begin to carve out a narrative state space that expresses the trade-off between authorial control and narrative interactivity.

1) Type of character

It is necessary to the progression from this zone to the next that the player character be on such terms with the faction that acting as an agent is plausible. Beyond that there is really no commitment to the type of character that the player is playing. The reflection of that character is seen only in the comments in the text. Expanding the space of possible character paths is a matter of varying the tone of interactions – disparaging or wary, affirming or begrudging and so on.

2) Accuracy of others' beliefs

Because a great deal of information is conveyed as personal beliefs by the various quest givers, there is always room to discover that they are in error. Further, since the player character doesn't have to speak her motivations, the system can present her as having assumed those beliefs were correct or as having thought they were suspect all along.

3) Exceptions to global assumptions

Counter-examples make for interesting narrative. The ogre with the heart of gold and the betrayal of a trusted confidant are more dramatic than playing to type. The narrative state is rich with characters and relationships, but they map to a tiny set of actual behaviors (try to kill you, ignore you, talk to you). A great deal of variation can come from simply swapping those scripts around and violating what role a character is expected to play.

4) Perspective on off-stage events

Past off-stage events are only relayed by other characters in text. Different accounts of what happened can be presented and only effect the relationships and motivations in the narrative state. This leads to...

5) Owning different causes

Character motivation for accepting different quests is largely in the narrative context. Even the straightforward in-simulation rewards can be portrayed as filthy lucre or some noble cause. Variations that present different motivations not only expand the space but allow the player to impact her own opinion of her character in a very direct way.

6) Off-stage plan failure, redundancy

Because the narrative state contains other plan steps being carried out off-stage and relayed to the player second-hand, the system can always declare that another step failed or that the situation changed requiring a new plan. How many good stories feature plans that completely work out? Last minute emergencies and unforeseen problems are a fundamental way to bring flexibility to the narrative space.

7) Shifting identification

Because a great deal of the player character's story is inherited from the groups she identifies with, radical shifts can be made in the narrative state by simply altering the in-group/out-group language and suggestions in the text.

Discussion and Future Work

There are numerous ways to approach the challenge of interactive narrative. In this study we've suggested that more effort should be put into understanding the space of narrative in existing interactive artifacts. We believe that the results of even this simple case study have given us valuable insights. First, the delineation between the elements of the simulation state and the narrative state. Second, how narrative functions are achieved in the text to build up the narrative state in a way that is reasonably coherent with the players' experiences. Third, how the narrative state space can be expanded by considering variations on those functional techniques. Digging into the narrative space of a small but effective game can only help to deepen our understanding of what interactive narrative might look like.

Additionally, we think there is promise in approaching the problem from the top down. That is, numerous projects are producing building block models of emotion, character, social interaction, belief and the like. Much remains to be seen whether the composition of these building blocks will result in behavior that meets the various criteria of interactivity and narrative. Top-down investigation of narrative in interactive contexts complements that research by starting with existing composite models of complex interactions.

Lastly, this case study suggests a simple incremental model for making steady, evaluable progress towards greater interactivity in narrative: start with an existing artifact and move relevant pieces of the narrative state into the simulation state. We intend to pursue this direction within our computational model of story understanding (Dehghani et al 2008). We will extend our system by modeling these types of thematic elements and the discourse pragmatics used to convey them. The system will then be able to take an initial exposition and subsequent events as a discourse and generate potential

narrative states. This will allow us to model variations in a responding exposition, particularly those discussed that attempt to maintain some functional invariance, and explore how those variations support or conflict with authorial control.

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