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FEATURE: Secrets of Interactive Storytelling

By Ernest W. Adams

Author Ernest Adams picks through the fierce debates surrounding interactive narrative and storytelling in games, and argues that the industry is in danger of losing the plot.



For the last several months I've been working on a major new textbook called *Fundamentals of Game Design*. It's an expansion and update of Andrew Rollings' and my earlier book, which was called [Andrew Rollings and Ernest Adams on Game Design](#). A lot has changed in the three years since the older book was published. When I got to the chapter on storytelling, I faced a problem. How should I teach this subject, taking into account all the latest developments?

If you type 'interactive narrative' into Google—with the quotation marks—you get over 129,000 hits. If you type 'interactive storytelling,' you get over 414,000 hits. The idea of reading half a million documents and trying to digest them down into a single chapter seemed a little daunting, and the more I studied the issue, the more tangled it seemed to be. It's a jungle out there, but I didn't want to make it a jungle for my readers.

Female players especially, demand compelling characters and stories. If you don't offer them, you won't get access to that growing market.

So I started hacking through it with a sort of intellectual machete, and this feature is the result. Interactive storytelling isn't necessarily as complicated, or as expensive, as you might think.

What Have We Actually Tried?

First, I want to run through a quick summary of the various approaches to interactive storytelling that we've taken in the past, because this stuff is the subject of much of the debate. I'll begin with an important concept, and that is the granularity of storytelling in video games. Granularity refers to the frequency with which the game switches back and forth between interactive material and narrative, non-interactive material. A game like *StarCraft* has large granularity. You play a whole mission, lasting anywhere from 20 minutes to a couple of hours, before you get any more story.

On the other hand, a traditional adventure game has fairly small granularity—you get narrative material (often in the form of new information from NPCs) pretty frequently.

There's a general opinion going around that we should really try for infinitesimal granularity - narrative chunks so small that the player isn't aware of them. *Half-Life* comes about as close to infinitesimal granularity as anybody ever has. Usually the smallest grain of narrative is a single dialog sentence, but if you can shoot somebody dead while he's talking to you—or interrupt him, or just walk away—the granularity is pretty small.

Unfortunately, infinitesimal granularity rules out a lot of useful storytelling tricks such as prologues, flashbacks, and parallel action ("...meanwhile, back at the ranch..."). If the avatar must be allowed to take action at any moment, then you can only show his own time and place. You can't show anyplace else or any events that happened in the past.

So, with that in mind, here are a few of the things we've tried. If you have paid any attention to interactive storytelling at all, this won't be new to you:

Linear stories, either with large granularity (*StarCraft*) or small granularity (*Half-Life*). The story is on a rail. Nothing the player does can change the future. He can end the game prematurely by losing, but that's all. The story only has one ending.

Branching stories. In these, the player's decisions, or sometimes his skill at overcoming challenges, determines how the plot line branches. The more frequently this occurs, and the more options he has at each branch point, the more material the designer has to create. The story can have multiple endings. The classic example was *Wing Commander III*, a large-granularity game whose plot lines branched depending on how well you did at the combat missions you flew.

Foldback or **multilinear** stories. The story branches out for a while, but eventually it returns to an inevitable event that the player has to pass through no matter what. Then it branches again, before folding back to another inevitable event. This is the traditional adventure game structure, and they usually have only one ending.

Linear stories with optional side quests. The RPG solution. The overall quest is linear, but in the meantime the player has the option to take a ton of side quests—subplots, if you like—to build up his stats enough to let him take on the main challenge. He can usually abandon a side quest without penalty if he wants to.

Emergent stories. This means stories that arise out of the core mechanics of the game, without any narrative (non-interactive) elements or formal organization. The story is supposed to "just happen." Unfortunately, there aren't many examples of this. People point to *The Sims*, but I see *The Sims* as more of a story-generation tool than a story-telling game. Players like to make up stories about their sims, but the players don't really feel as if they're participating as a character themselves. The only game I've ever seen that felt as if it really generated emergent stories was one called *King of Dragon Pass*, which used a database of characters and a database of character-agnostic situations to generate a story-like sequence of events. It would mix and match the characters and the situations to produce new outcomes.

So these basic approaches—along with some less-significant examples—are the major ways that we've tried to create interactive storytelling in the past, and they're the subject of a lot of the flaming...



So who's doing the flaming?

Four Interest Groups

There are four major interest groups, all weighing in on the subject of interactive storytelling:

The **anti-storytelling developers and gamers**. Legend has it that back when id Software was working on Doom (the first Doom), the dev team referred to story as "the S-word." They absolutely didn't want any story in their game. And a number of gamers feel this way too: When any narrative happens, such as a cut-scene, they interrupt it right away so that they can get back to live play as quickly as possible. These people tend to be hardcore: For them, playing a video game is about meeting challenges, period.

The **pro-storytelling developers and gamers**. This crowd is a mixed bag. It includes fans of traditional adventure games; developers of blockbuster RPGs and action-adventures; people who want to sell storytelling engines; and even the people making interactive fiction, also known as text adventures. (Yup, they're still around.) The pro-storytelling people like deep characters, intricate plots, and dramatic scenery. They want to feel as if they're inside a story.

The **narratologists**. Academic theoreticians of narrative. They write abstruse papers in impenetrable jargon. They have a lot to say, and some of it is interesting and important, if you can figure out what it means. But it may not be much use to a commercial designer on a deadline.

The **wanna-be film directors**. The game industry has been plagued by these vermin since the invention of the CD-ROM. They make games with tons of narrative and not enough gameplay. Some are game industry people envious of Hollywood; others are Hollywood people who know and care nothing about interactivity, but see computers as another medium with which to tell their stories.

All these people have opinions, and they all contribute to the mass of verbiage out there. You get "we shouldn't even try to do storytelling, that's not what games are about," from one camp, and "it all begins with Aristotle" from another. Some are saying "linear stories aren't truly interactive" and others are saying, "I don't want to have to play a branching story ten times to see all the content." Each approach has its own vociferous critics and staunch defenders. Chris Crawford even went so far as to say that foldback stories are "fraudulent" in his book on interactive storytelling.

So who's right?

They're All Wrong. In my opinion, they're all wrong for two major reasons. First, there's too much emphasis on structure. Remember that these approaches are all about how the story is represented inside the software, in a place where the player never sees it.

Arguing about this is like taking a class on creative writing and spending the whole time studying the development of English grammar. Whether interactive storytelling does or does not work has nothing to do with the structure of the plots, but with how the player perceives it in the end - and what the player wants in the first place.

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The second reason they're wrong is because they're assuming there's one right way to do it. Different players want different things, and games include stories for different reasons. Stop and think for a minute about how many different kinds of non-interactive stories there are in the world. Going from the shortest to the longest, I can come up with all the following in just a minute or two: jokes, newspaper comic strips, advertising, urban legends (yes, they're stories too), fan fiction, children's TV shows, sitcoms and satire, dramatic series, soap operas, movies, plays, genre fiction, short stories, and highbrow literature of the type written by people like Salman Rushdie.

Why would anybody think that one theory of storytelling is good enough for all of those? And for that matter, why would anybody think that one theory of interactive storytelling is good enough for all the kinds of games in the world, or, more importantly, all the kinds of players in the world?



Why It's Easier Than You Think

Fundamentals of Game Design starts with a basic philosophy about games: that we design them to entertain players, and everything we do has to be based upon how the player perceives our game. Let's look at storytelling from that angle. The one thing we're absolutely guaranteed is that the player's experience of the game is linear in time. No matter what may be happening behind the scenes, his or her experience always goes forward. And at any given time, one of three kinds of events - and only three kinds of events - is taking place:

The player is taking an action. He's inserting an event of his own into the sequence of events appearing on the screen.

The software is presenting a computer-generated, in-game event. The event is either a response to the player's action, or it's some other activity under control of the core mechanics.

The software is presenting non-interactive narrative material (such as a cut-scene) that the player cannot change. He might be able to button through it, but other than that he can only watch it.

That's all. All of videogaming and all of storytelling can be defined in terms of those three types of events. If all the events are narrative, then it's not interactive—the experience is a movie or TV show. If they're all player events, with no independent responses of any kind, then the software is probably a drawing tool or something similar. But videogames are a mixture of player actions, computer-generated in-game events, and narrative events that are somewhat rare, depending on the granularity of the story. As time goes on, new events occur: either the player contributes them or the computer generates and displays them. The designer Ben Cousins, writing in Develop magazine, has suggested that you can analyze any video game down to its atomic-level events just by watching it frame-by-frame in a video player.

So what's an interactive story? Taking the player-centric approach, it's a story that the player feels as if he's interacting with, no matter what its underlying structure. Even a linear story is interactive, because the player contributes events to it, and the computer generates more events in response to his contributions. The key factor is not how internal mechanism works, but how the player feels about the experience. As long as he's contributing actions to the story—participating—he feels as if he's interacting with it.



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What's the Answer, Then?

So where do all the different structures fit in - linear, branching, foldback and so on? Well, if you tell a linear story and the player doesn't want a linear story, then he's playing the wrong game. But that's just a personal preference.

It doesn't mean there's something wrong with linear stories. Different players want different things, and you can't please them all. Personally, I like for my actions to influence the outcome, but that's just me. If, having read the reviews, I go out and buy a game with a linear story, then I only have myself to blame.

Each structure has its strengths and weaknesses. Linear stories don't let the player change the ending, but at least she's guaranteed that she has seen the whole thing once she's through it; she doesn't have to go back and replay it differently to see the other content.

Foldback stories contain inescapable events the player can do nothing about, but that's quite reasonable for some stories. In *Gone With the Wind*, the burning of Atlanta was a critical, inescapable event. If Scarlett O'Hara could have prevented it, she'd have been Wonder Woman, not Scarlett O'Hara.

Branching storylines give the player great freedom to influence events, but the branching means that for a given total amount of content, you can only tell a story of limited duration because much of the content belongs to alternate paths that the player doesn't take. Emergent storytelling shows promise, but some people want stories told by a human writer. There are tradeoffs everywhere.

The bottom line is this: don't let yourself be bewildered or bullied by all the verbiage surrounding interactive storytelling. Don't let anyone tell you there's one right way to do it. That depends on your game, your story, and your market. Consider all your options and ask yourself how important they are to your player. Let your answers, not other people's arguments, help you to determine what structure and mechanism you need.

So What About Profitability?

Interactive storytelling is rapidly becoming a financial necessity, the hardcore gamers notwithstanding. A game's lead character is its most valuable intellectual property. In order to be meaningful and appealing, that lead character must appear in compelling situations, and that means storytelling. You can't turn gameplay into T-shirts and lunchboxes and keychains. In fact, it's difficult to sell gameplay in any form other than the game itself. (Ever notice that Gordon Freeman appears on the box and in the ads, where he's needed to sell the *Half-Life* games, but not in the game itself? In the game, the gameplay is enough. But the box and the ads need Gordon's face: Gordon the character.) To exploit an intellectual property to the fullest, it has to work in different media. Characters and stories do; gameplay doesn't.

Only the hardest of the hardcore care nothing for the characters and context of a game. There might be a few people willing to play *Stratego* with bare numbered counters, but the rest of us like to see the little sergeants and miners and scouts in their funky Napoleonic hats. And the truth is - they're not going to like hearing this - that the opinion of hardcore players is becoming irrelevant to the question. The game industry has been selling to them for 30 years, but the struggle is increasingly desperate as we all try to draw water from the same well.

At the same time, there's a far larger market of casual players opening up with different interests and priorities for the way they play - and among those interests, especially with female players, are compelling characters and stories. If you don't offer them, you won't get access to that market.

Interactive storytelling doesn't have to cost as much as you might think. For some time developers have assumed that stories, especially branching stories, cost a lot of money. This came about because of what happened with *Wing Commander IV*, which had a branching storyline and cost \$13 million to make at a time when most games cost about \$500,000. But the real reason *Wing IV* cost so much didn't have to do with its branching storyline, but the fact that it was all shot using real actors on real sets with real film.

What costs money is not plot but spectacle: large set-piece action events. Plots are made by writers, and writers are cheap. The old *Doctor Who* and the modern *Law and Order* are good examples of TV shows with no big special effects, but interesting and imaginative stories. In fact, much of what changes when a storyline branches are relationships among people, not explosions, and those changes can be expressed with dialog. (Big spectacles like the burning of Atlanta make good inevitable events in foldback stories: you only have to do them once.)

Now that we present video using the game engine rather than filmed actors, dialog is inexpensive to create. If we continue to research things like facial expression animation and body language, we'll be able to do this kind of thing quite well. That's why the work of Michael Mateas and Andrew Stern on *Façade* was so important. *Façade*'s biggest achievement was its visual representation of conflicting emotions. That kind of thing is hard to do, but it doesn't cost much. It's AI, and AI is much cheaper than filmed content.

In short, there's no excuse for not doing interactive storytelling because "it costs too much." That attitude is an outdated holdover from the mid-90's, when we made a number of expensive mistakes. We're past that, and it's simply not true any more.