

Towards a Game Theory of Game

Celia Pearce

Introduction: Why Game Theory

In mapping the trajectory of popular media, we can see a clear corollary between theory and practice. Literature, film, even popular music all began to a certain extent as "folk" genres that, once their cultural relevance had been proven lasting, caught the attention of theorists and entered into academic discourse.

Such a cycle is currently underway vis-à-vis computer games. This medium is still erroneously considered to be in its "infancy." (In fact, it is just coming of legal drinking age in some states.) The evolution of a body of theory on computer games is an exciting prospect. As with other media, it promises to broaden and deepen the discourse of the medium (we can start talking about something beyond violence, for example). In addition, if history is any indicator, it will also have a positive influence on the practice of creating games, just as the development of film theory in the sixties and seventies did on film craft. It is ironic that academia, the birthplace of games, has mostly shunned them until recently. It is also quite appropriate that

MIT, where the first computer game — *SpaceWar* — was created as an independent hack by computer science Ph.D. students, was one of the first places to embrace game design and game culture as a subject of academic study. Here I will invoke MIT's own Henry Jenkins, who stated in his January 2001 presentation at "Entertainment in the Interactive Age," at the University of Southern California, that the most significant evolutionary leap in the film craft occurred when people started writing about it.

Repurposing Theory

Because computer game theory is a relatively new discipline, much of what has emerged thus far has come out of theorists from other disciplines absorbing game theory into their purview. It seems axiomatic that there must always be a phase where established media seek to "repurpose" their existing "assets" for use in the new medium. Most notably, film and literary theorists have begun to discuss game theory within their own idiosyncratic frameworks. These disciplines have much to add to the discourse on games, particularly when the discussion is centered on narrative. However, they are missing a fundamental understanding of what games are about. Because of this, they continue to struggle to "fit a square peg into a round hole," so to speak, by attempting to force games into their own notions of

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Response by Mary Flanagan

Celia Pearce's wake-up call for new ways of thinking about games in her article "Towards a Game Theory of Game" is well-timed. Computer games, at least those of a commercial genre, long ago reached their "adulthood." As a capitalist affirmation of "digital culture," the gaming industry is now more profitable than box office sales in the film industry (ticket sales were just 7.7 billion in 2000; Associated Press, 2001). In 2001, games represented a \$10.5 billion dollar industry, growing 15 % per year from 1997 [IDSA]. Gaming is a social and technological phenomenon that has worldwide influence.

But... what will theories of and for gaming actually look like?

Pearce follows in the steps of cybertext theorist Espen Aarseth, who has argued against "applying one's favorite theory" such as literary, film, or television studies to emerging forms. In effect, Aarseth argues, this combination of theories reduces new media phenomena to broad conceptual terms such as "interactive," "labyrinthine," and "worlds." The textuality of a computer game whose materials are entirely computer-based needs to be addressed in a way that brings the experiential, social, and material aspects of such work to the forefront.

Although the application of old theories to new forms can result in such linguistic muddling, to argue that we must define game studies *devoid* of knowledge of other art and entertainment forms is not

narrative and "text." To quote the old adage, "If you have a hammer, everything looks like a nail." The result is a kind of theoretical imperialism which those in the gaming world are scarcely aware of, let alone involved with. A small handful of significant theorists, such as Henry Jenkins, J.C. Herz, and Janet Murray, have moved game theory into its own realm by helping to define and articulate what is unique to games and game culture, even while comparing games to other media.

A number of debates have been raging about the definition and role of "narrative" in games. It seems only natural that people who have considerable expertise in other narrative media would seek to bring their own knowledge to bear in this argument. However, it is very important to understand that narrative has a profoundly different function in games than it does in other narrative-based media. In games, narrative structures operate in a comparable but at the same time diametrically opposed way to that of traditional narratives. And although there is much to be learned from traditional narratives, and a great value in drawing comparisons between the two, without understanding the fundamental differences, the discourse becomes ultimately irrelevant because it entirely misses the fundamental point of what games are about.

A Play-Centric Approach

The first and most important thing to know about games is that they center on PLAY. Unlike literature and film, which center on STORY, in games, everything revolves around play and the player experience. Game designers are much less interested in telling a story than in creating a compelling framework for play.

If we begin with this fundamental fact, it enables us to look at narrative in a play-centric context, rather than a "storytelling" context. At its highest level, the function of narrative in games is to engender compelling, interesting play. The reason that narrative games have gained such popularity is because they borrow what is engaging and interesting about other forms of narrative and use it to enhance the play experience. Where interactive narrative tends to fail is where the model is based on interacting with a linear narrative genre, such as interactive movies. Interactive "novels" have been slightly more effective from a critical perspective, but they have made virtually no impact on the mainstream of interactive media.

Narrative, again, operates at a fundamentally different level in games than it does in other media. A game is most simply described as framework for structured play. In most cases, this structure will include some type of goal, obstacles to that goal, and resources to help you achieve the goal, as well as

constructive. We must recognize historical contexts of gaming against the torrent of "novelty" rhetoric in "new" media by looking around us at our own human history. Games have been important throughout time: the *Royal Game of Ur* may be 5,000 years old, *Weiqi* (*Go*) is said to have a 4,000-year history, and various sports have fascinated participants and observers since before the Greeks. "Modern" (or as Pearce notes, postindustrial) computer-based games utilize traditional sport and board game elements, dimensional spaces, aspects of narrative, and other aspects that each have historical contexts, bringing to the forefront the concept of play and fun over all other principles.

Gaming brings elements of other media forms into

play, but to develop a cohesive study of computer gaming, scholars must look at a very wide range of disciplines and histories, some extremely popular and "lowbrow." Cultural studies as a theoretical discipline has thankfully paved the way for the academic study of popular culture, so that activities from kitsch refrigerator magnets to Barbie collecting can be studied with intellectual ferocity. Those who look at games need to draw upon studies of communities in sociology and other areas, cognitive psychology, and studies of interaction and use patterns in fields such as industrial design and architecture (areas that have long considered "the user/participant," and have made multiple tracts/multiple motivations of users and a consideration of space essential parts of good design).

consequences, in the form of penalties and rewards (which can often translate into obstacles and resources). At its simplest level, these elements create a generic deconstructed narrative structure of sorts. The author has identified six different narrative "operators" that can exist within a game; the first is clearly a component of all games, by definition. The second through fourth can exist in various combinations, or not at all:

Experiential: The emergent narrative that develops out of the inherent "conflict" of the game as it is played, as experienced by the players themselves.

Performative: The emergent narrative as seen by spectators watching and/or interpreting the game underway.

Augmentary: Layers of information, interpretation, backstory, and contextual frameworks around the game that enhance other narrative operators.

Descriptive: The retelling of description of game events to third parties, and the culture that emerges out of that.

Metastory: A specific narrative "overlay" that creates a context or framework for the game conflict.

Story System: A rule-based story system or kit of generic narrative parts that allows the player to create their own narrative content; story systems can exist independent of or in conjunction with a metastory.

A good game, even one without an obvious "storyline" (or *metastory*), while being played, will tend to follow something that resembles the emotional curve of a dramatic arc. A great example of this would be basketball. At its heart is the dynamic "conflict" between the teams, and subconflicts among the individual players, including players within a team. This is the *experiential* aspect, the narrative that *emerges* as a product of the play itself, between the players. To the spectator, this translates into a *performative* drama which the viewer experiences in the third person, but which also has an equal amount of dramatic impact. This aspect of the narrative is enhanced by the *augmentary* content of journalistic reportage that the spectator has access to before, during and after the game. This content takes the forms of the numerous

Unfortunately, calling for new language and methodologies with which to consider computer games is not the same thing as writing them. Now we begin the "dirty work" to articulate exactly what types of intersections of theories we can use to explore games. Certainly questions concerning authorship, individual and collective action, game world time, perception, and positions in between audience and participant need to be better articulated — perhaps even new words invented to develop and enhance these sites and positions. Just to be troublesome, I'll end this response with a quote from Barthes. "A text's unity lies not in its origin but in its destination" (Barthes 1988, 171). In other words, the best games are the ones tightly woven around the user's desires, seamless, catering, which

seem to be filled with options for those who need to break the levels. Participatory, skill-based, emotional, addictive, often competitive, instinctual, frequently violent, yet at the same time, immersive, creative, sharing, rewarding, empowering, and frequently community-building, gaming occupies a critical cultural niche. We must learn how to talk about it.

From Mark Bernstein's Online Response: "And Back Again"

To assume that games cannot hold a mirror up to nature, that they cannot move us or change us, is almost to assume that they are hardly worth discussing. Children play games, but the games we study are not

subplots that are layered over the game itself, such as conflicts between teammates, personal narratives of players, city rivalries, etc. The *descriptive* aspect of basketball, which is captured primarily through postgame sports coverage, operates in the retelling of the game afterward. Some games, while rife with narrative suspense during game play, may tend to lose something in the translation. As J. C. Herz has pointed out, golf may be fun to play, but it doesn't make much of a story after the fact. In basketball, the descriptive element is almost always accompanied by augmentary elements, which tend to carry through before, during and after the game itself. These capture the personal, behind-the-scenes narrative, "the thrill of victory and the agony of defeat."

Although basketball provides an excellent example of the first four narrative operators described previously, it includes neither a metastory nor a story system. It's important to realize that in many games, particularly precomputer games, narrative operates on a much more abstract level than it does in other narrative media. In board games, for example, the metanarrative generally functions as a metaphorical overlay for a mathematical or logical structure. Thus, a game can be deconstructed for its "pure" structure, as well as its narrative overlay or metastory. The key to game narrative is that it is, by definition, incomplete. It must be in order to leave

room for the player to bring it to fruition. This is one of the primary flaws of applying literary or film theory to games; the authorial control, which is implicit in other genres, tends to undermine the quality of the user experience.

Some games are pure structure with no metastory. For example, Tic-Tac-Toe is a simple game that has a clear structure that results in a very compressed narrative arc on the experiential level. Needless to say, both its performative and descriptive properties are somewhat thin. And it has no metastory whatever. *Battleship*, on the other hand, can be deconstructed in terms of its pure logical construction (the positioning and targeting of objects in a grid), as well as its metastory, a battle between two seafaring fleets. Note the level of abstraction of the narrative in *Battleship*. Also note that there are no characters. In typical narrative texts, both literary and cinematic, characters are central to the conflict. You cannot really imagine a story without characters. In a game, on the other hand, it is quite possible, and often desirable, to have a narrative with no "characters" whatsoever. And in fact, well-developed characters often get in the way. Games tend to favor abstracted personas over "developed" characters with clear personalities and motivations. More abstracted characters leave more room for the player, and are therefore better suited to support a play-centric model.

child's play (and child's play, to children, is deadly serious). Children like to dress up as kings and to undress, but drama is not merely playing house or playing doctor.

Tolkien does indeed hold an important place in the development of computer games, but Pearce utterly misunderstands *The Lord of the Rings*. Tolkien's importance has little to do with the maps that adorn his endpapers. Yes, Tolkien spoke of writing as a journey through imagined worlds, but this perception is not uncommon. Neither is it necessarily helpful in understanding either Middle Earth or interactive art. Yes, he kept elaborate notebooks. This is not uncommon, either: we know many of the War Poets through their notebooks. (Tolkien on The Somme was

24, and if no poppies bloom in the Dead Marshes, we still recognize the muck and thirst of Flanders refracted through the memory of the Burma Road and Stalingrad and That Fucking Island, the land even Marines would not name.)

Game designers who see only Sherlock Holmes's puzzle solving are missing the point, just as game designers who think the story of war is the struggle between two generals have forgotten the lessons of last two centuries. They have forgotten *The Naked and the Dead* and *Catch-22*, or, for that matter, *Run Silent, Run Deep* and *Apocalypse Now*...

Perhaps the best example of the ways narrative operates in a noncomputer game can be demonstrated by chess. Chess has a brilliant mathematical and logical structure that we can look at purely for its structural elegance. It has a clear experiential and performative arc. In addition, it has a metastory of two battling kings and their armies and minions (figure 12.1). To understand the narrative of chess, it might be helpful to compare it to a traditional narrative with a similar plot: Shakespeare's *Macbeth*. Although both have a similar "storyline," the comparison clearly highlights the profound difference in how narrative operates in each genre.

In chess, the drama of the experience resides in the strategic conflict between the players, not in empathizing with characters, as in *Macbeth*. The metanarrative operates at a highly abstracted level, creating a context for this intellectual contest. It is interesting to note that this conflict between the players is played out entirely without the benefit of dialogue. Conversation often has a role in games, but in chess it is minimal. It is hard to imagine *Macbeth* without dialogue. Chess replaces the classic Aristotelian techniques of mimesis and empathy with the game-specific technique of agency by giving the player "avatars" that serve as representatives for his or her own actions.



12.1. The chess set of King Edward II, Tower of London.
(Photo by Celia Pearce)

As you can see, the distinction has profound implications in terms of narrative. Although both techniques involve projection of the player/audience into a character space, they do this in profoundly different ways. Empathy/mimesis requires the development of highly constructed and authored characters with which viewers develop an empathic bond. Agency creates a container for players to inhabit. Avatars must by definition have a certain level of ambiguity in their characters in order to allow the players to transpose or project themselves into them. Part of the technique of game design is making

Pearce Responds

Games do not ask the player to construct or interpret what the author is trying to "tell" them. Rather they function as a kit of parts that allows the player to construct their own story or variation thereof.

<http://www.electronicbookreview.com/thread/firstperson/pearcer2>

strategic decisions about how much and what sort of room to leave for the player.

In addition, chess has an ambiguous ideology or morality. There is no clear "good guy" or "bad guy." *Macbeth* too employs a technique of ambiguous morality: although we know that Macbeth is someone we would not necessarily aspire to be like, we empathize with his struggle nonetheless. But the way these ambiguities are conveyed is very different. Chess has a sort of "Zen" quality of symmetry, equality and fair play. It is interesting that more recent games of military strategy, such as *Risk*, and its computer relatives such as *Age of Empires* and *Civilization*, utilize an asymmetrical structure in which all players do not start with equal assets. This technique can tend to enhance the drama, as well as the potential variations in the emergent narrative.

Recent Examples

To illustrate my points in terms of contemporary computer games, I would like to highlight two game genres in particular that I think have been successful because they are based on a play-centric model of narrative. Before doing so, however, I want to take a few moments to ponder the drawbacks of narrative within games.

Whereas narrative theorists, academics, and those engaged in a critique of games are obsessed with narrative, many game players find narrative quite problematic. The largest controversy has to do with the use of "cut-scenes," also known as "cinematics." These are linear segments within a game that are used to create a narrative context, or "reward" the player for having completed a mission or achieved a subgoal in the game. While often beautifully rendered (since typically they are not rendered in real time, they have the luxury of higher graphical quality), many players find cut-scenes to be egregiously interruptive to their play experience. It seems counterintuitive to use passivity as a reward for play. Many game players associate the idea of "narrative" with this type of enforced linearity, which is a throwback to cinema.

What are much more interesting, and I think are proving to be the so-called "killer apps" of narrative in

gaming, are various procedural forms of narrative, which combine various levels of metastory and story systems. I am going to look at two genres in particular which have caused considerable groundswell, and by looking at them from a play-centric point of view, gain some perspective as to why they have been both critical and popular successes.

The first genre I'd like to look at is the massively multiplayer online role-playing game, or, in game culture parlance "MMORPG." The two most popular of these are *Ultima Online* and *EverQuest*, and second-tier games include *Baldur's Gate*, *Asheron's Call*, and *Diablo*. Although they differ in some significant ways, what all these games have in common is that they create fantasy story worlds in which players improvise narratives in real time. These games, all of which share the common theme of medieval fantasy, represent the evolution of about forty years of popular culture converging on the computer. They can be traced back to J.R.R. Tolkien's *The Hobbit*, and its sequels, which caused what can only be called a pop culture phenomenon starting in the 1960s. This highly elaborate imaginary world was tailor-made for interaction because, in Tolkien's own words, the stories were developed as a means to explore the worlds. From this emerged the analog role-playing game *Dungeons and Dragons*, first introduced by TSR, Inc. in the mid-1970s, and its online text-based descendents, MUDs (Multi-User Dungeons).

In many respects, the medieval fantasy genre MMORPG is a graphical MUD, and most of them still rely heavily on text for dialogue, although what used to be handled through textual descriptions (e.g., "You are stranding outside the castle, facing north"), is now done visually. This hybrid visual/text form has developed a small but adamant following, and although by game sales standards they are something of a niche market, these games have a great enough audience that they manage to at the very least support themselves as commercial endeavors.

The MMORPG combines a metastory, primarily in the form of a predesigned story world and various plots within it, with a story system that allows players to evolve their own narratives within the game's story framework. The central play mechanic of the



12.2. Screenshot from *EverQuest: The Shadows of Luclin*.
 (Verant, Sony Online Entertainment)

MMORPG is what I refer to as social storytelling, or collaborative fiction. The idea is that the story emerges as a direct result of social interaction. As with the Renaissance Faire (also a huge commercial success throughout the U.S.), players enter a fully constructed three-dimensional world. Rather than selecting fixed characters, they select particular character roles. These are somewhat generic, but allow players to configure unique characters composed of various traits, which they can then evolve over time into a fully developed persona through a system of improvisational collaborative narrative (figure 12.2).

In traditional narrative, a classic view of character development is that characters are what they do. It is the actions of the characters that not only tell us who they are, but also determine who they are. The choices they make in a sense configure their personalities. In the MMORPG genre, this dynamic is put in the hands of the player. Players take actions that construct their characters on the fly. For example, depending on your role, you may be endowed with certain innate traits or talents, such as strength or intelligence or magical powers. You also have the opportunity to acquire skills. In games like *EverQuest* and *Ultima Online*, the game is structured in such a way as to make it beneficial for players to join forces and form spontaneous teams. As your team develops over time, your role on the team will cause your character, originally a generic kit of skills, to evolve distinctive personality traits. The

strategies you choose in enacting your innate talents and acquired skills engage you in a process of real-time character creation. In addition, you can acquire property, including weapons, tools, magic amulets, and even real estate, which will all become part of your character's unique personality. Some players choose to act out in an antisocial way. In many cases, these players are penalized by game operators, but just as often, they are penalized socially. For in these worlds, reputation is the most valuable currency.

These games, because they are highly improvisational in nature, require constant attention from their operators. *EverQuest*, for example, has a Command Central at its San Diego headquarters where its customer service staff wanders about the virtual game world assisting players, and creating narrative events, conflicts and missions for players to engage in. They carefully watch what players are doing and constantly evolve the game, the game rules, and the game narrative accordingly. Again, a play-centric model, in which the player is revered and constantly accommodated.

The result is an emergent narrative, a story that evolves over time as a result of an interplay between rules and players. In addition, there is the emergent infrastructure that is constantly reformulating itself, evolving, and adapting, much like an ecosystem, to the player behavior. Most of these games work on a product-plus-subscription economic formula: you purchase a CD at the software store, then pay a nominal monthly fee (seldom more than \$20) for unlimited play. Although at present the audience for these games is relatively small compared to the mainstream, their fan base is extremely committed. MMORGs require a large time investment because they are strongly skills — and relationship-based. It requires a commitment of at least ten hours a week to maintain ongoing engagement in these games, and many players put in well above that. Interestingly, most of the original MMORPGs' meta-stories focus on medieval fantasy/*Dungeons and Dragons* style themes, although more mainstream themes are forthcoming, which will most likely expand the audience for this genre.

The second game genre we are going to look at, currently represented by one game and its various

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sequels and enhancements, is *The Sims*, designed by Will Wright of Maxis. *The Sims* evolved out of an entirely different tradition and genre in games, that of the simulation game. I want to note that there are two distinctly different types of games that are referred to as simulations. One is the training-based simulator, which comes out of the military world, and puts the player into a first-person role centering on mechanical control of a vehicle, e.g., a flight or tank simulator. The other is a simulation that dynamically models an entire system. This tradition comes from a variety of sources, but was used extensively in paper-and-pencil form in the social sciences, history, and economics in the 1960s and 1970s. *SimCity* was one of first computer games to employ techniques of this type of simulation in a game context, and at the time it was released (1989), it revolutionized the game experience and business. Since then, this genre has been expanded into a range of metastory contexts, including Maxis' *SimEarth*, *SimAnt*, as well as *Roller Coaster Tycoon* by Microprose.

The Sims has been described as a human behavior or psychological simulator. Rather than employing purely player-inhabited characters or purely autonomous characters, the game puts players in the role of influencing semi-autonomous characters. They are semi-autonomous because while they have their own innate behaviors, they depend on player influence to dictate their actions. The viewpoint is isometric rather than first person, allowing players to have a god-like view over the game terrain.

The Sims is a story system described as a kind of narrative Lego. Designer Will Wright himself describes it as a sort of virtual dollhouse. The original prototype was created as a physical model using model railroad materials. *The Sims* uses the emergent narrative model, but leaves the metastory relatively open-ended. The original *Sims* Game, which has now spun off into a variety of add-ons and enhancements, is basically a domestic drama, or a sitcom, depending on how you play. You create a family and place them in a house that you can then enhance and occupy with a variety of items to better the Sims' lifestyle and comfort level. There is a strong anticonsumerist satirical subtext to the game. I refer to it as the IKEA game, because a

major feature is the catalogue of humorously described household items and enhancements (figure 12.3). The subtext is that characters need things to make them happy, but over time, the things begin to own them. A larger house requires more cleaning time. You can hire a maid, but the higher expenses require that you maintain a certain earning power. As your characters evolve, they form various relationships with each other. Some can even fall in love and form domestic partnerships, even same-sex partnerships.

The Sims is a cross between a dollhouse, a Tamagotchi, and the television program *Big Brother*. In *Big Brother*, contestants inhabit an enclosed house for eighty days, eliminated one-by-one by audience vote until only one roommate is left standing. As in *Big Brother*, the *Sims* player is a voyeur with an all-seeing eye and definite influence on the characters, even though they also have their own "free will," so to speak. You must maintain a constant vigil over them or calamity might result. Characters without adequate cooking skills can perish in kitchen fires, and children can be taken from negligent parents by social services.

Sims characters are built from a kit of character parts that includes various physical (mostly having to do with appearance), as well as personal traits. The emphasis here is more on personality than skills, however (figure 12.4). You can construct your own configuration of such traits as neatness, friendliness, etc., or you can select an astrological sign that will automatically configure a personality for you. Based on this, the character will have certain natural qualities and aptitudes. Your characters can also acquire skills that will enable them to avoid things such as kitchen fires, or improve their job performance, thereby earning promotions at work.

Sims are very moody and when they aren't getting their needs meant, they will throw tantrums, shaking their fists and calling to you in "Sim-ish," a combination of verbal gibberish and symbols that appear in comic book bubbles over their heads. Images such as food, kissing, and recreational activities provide indicators of what *Sims* want or what they are conversing about.

The Sims has taken a radically different approach to narrative than most of the games that preceded it. In

addition to a story system that results in an experiential narrative, *The Sims* has a built-in descriptive component (a feature it shares with some of the MMORPGs) in the form of a "Family Album" feature that allows players to take snapshots of their game underway. They can then make descriptive storyboards and post them on *The Sims* web site for others to view. As a result, a new play trend has emerged, in which players have transformed the game into a storyboard authoring tool (figure 12.5). Players have used it to recreate autobiographical or even news stories.

In addition, players can upload their games onto the site so that other players can continue the gameplay. In other words, if you create a family, you can put it up on *The Sims* web site, and another player can pick it up where you left off. Thus, there might be multiple versions of your family, having been taken in different directions by different players.

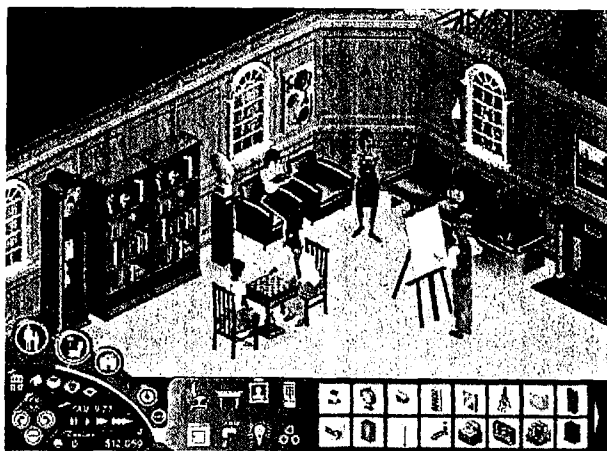
The game also allows for skinning, which the MMORPGs sometimes (but not always) allow for. Skinning is the practice of pulling your own assets into the game. Most of the time, it consists of placing new texture maps on game environments or characters. Maxis encourages this sort of thing and has even created a trading post within the web site where players can exchange skins and other custom-built game features.

Part of why it is interesting to look at the *The Sims* in terms of narrative fiction overall is that it represents an abdication of authorial control, or, perhaps more

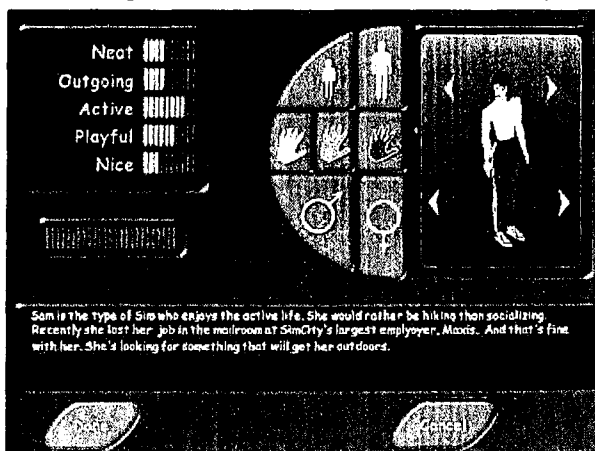
accurately, a shift in the definition of "author." The creation of meta-stories and story systems has become a new form of authorship that is a sort of author/nonauthor role. It is somewhat ironic in light of the "death of the author" debate that has raged in poststructuralist literary theory, from Barthes to Foucault to L'Dieaux, that it is games, rather than literature, that have been able to finally dispense or at least significantly reframe the author's role as creator of content.

The Sims is a story system that lets the player drive the story experience within a set of carefully crafted rules, processes, and constraints. It blurs the line between audience and author in the same way the MMORPGs do, but with a more open-ended story framework. Furthermore, Maxis is developing even more interesting ways to blur that line. In his keynote address at "Entertainment in the Interactive Age," Will Wright presented a diagram showing the role of players in content creation. His "pyramid" content scheme states that if the 10% of players who occupy the top level of the pyramid are defined as expert storytellers, then for every million players there are 100,000 people creating high-level game content. The idea here is that the "author" shifts into a role as facilitator, and the audience now takes over the role of storytelling.

Maxis is currently looking at ways to reward this top 10% of player/creators, either financially or with free game subscriptions, updates, etc. At this writing, Maxis is in development with *The Sims Online*, a massively



12.3. Build mode in *The Sims*, aka The IKEA Game.
(Maxis, Electronic Arts)

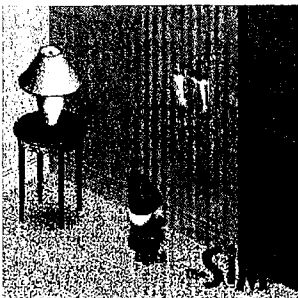


12.4. Character kit in *The Sims*.
(Maxis, Electronic Arts)

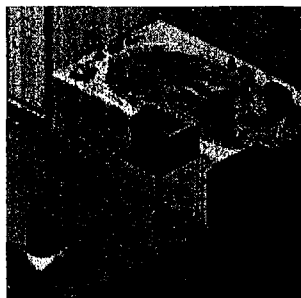
Towards a Game Theory of Game Celia Pearce

FIRSTPERSON

Pete the Lawn Gnome makes an "anonymous" call to report the death of Bob, his lonely but devoted owner.



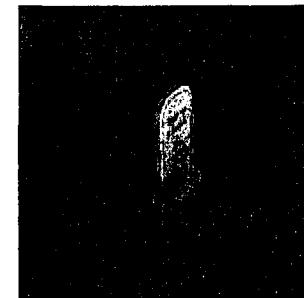
The first of several failed attempts at killing Bob's drunken son, Tony, who has inherited the house.



With the help of an army of plastic pink flamingos, Pete succeeds in incinerating Tony.



Tony is destined to spend the rest of his days as a lawn ornament.



12.5. Scenes from "A Lawn Gnomes Revenge" [sic], a player-created story using *The Sims*. (Maxis, Electronic Arts)

multiplayer *Sims* world that players can co-inhabit. Here players will be able to start their own businesses and devise their own entertainment for other *Sims* characters.

This notion of authorial abdication is essential to understanding where game narrative diverges from other narrative media. Other narrative media focus on "text," and text as a signifier of authorial authority. The text is fixed, and it has a single authoritative source. In some cases, that authoritative source might be a community, but nonetheless, the text is fixed. It may be open to a range of interpretation, and I will here take exception to those who say that all narrative is interactive. If we use the term as defined in the dictionary, interactive is by definition responsive. In other words, it must have a visibly different manifestation with each user's individual input. A nonlinear book may arguably fall into this definition by virtue of the fact that the reader assembles its sequence as he or she reads. But a linear story does not allow for any variable manifestations, and therefore, by definition, it cannot be interactive.

Looking at the differentiations between game-based and other forms of narratives can give us some vital clues as to the pitfalls of transitioning between the two. Repeatedly, filmmakers have attempted to leverage the popularity of video and computer games. But if we review some of the points made above, we can easily see why the game-to-movie adaptation has repeatedly failed.

The number one reason is that the function of character in each medium is diametrically opposed. The contrast between Macbeth and the chess king sheds light on why *Mario Brothers*, *Dungeons and Dragons*, and *Tomb Raider* have made disappointing films. One only has to imagine chess as a stage play to understand why these transitions consistently fail. In the game *Tomb Raider*, Lara Croft is a partially formed character; she is in essence a cartoon who serves as an avatar onto which the player is meant to project her — or more often, his — own interpretation. It is important that the character is incomplete, because if the character is too developed there is nothing compelling for the player to contribute. I frequently liken game design to having a good conversation: in order for it to work, you have to listen, which means leaving gaps for the other person to fill. Taking a caricature that has been created as a vehicle for player projection and trying to develop it into a full-blown cinematic character is a dangerous game to play, so to speak.

Reverse adaptations have been slightly more successful, but it's important to understand why. Generally a game version of a film character will need to be streamlined. Some characters, such as Indiana Jones, are cartoony-enough that they can easily transition into game characters. In *Blade Runner*, the designers at Westwood Studios chose not to use the main character in the movie, but developed a new character broadly based on the film. Because the *Blade Runner* character is mysterious and ambiguous to begin with, this was an easier stunt to pull than taking a

highly articulated, nuanced character and trying to develop it for a game. On the other hand, it may simply be that all characters played by Harrison Ford are particularly well-suited for game narratives.

In fact, a deeper analysis reveals that certain story genres are more innately gamelike to begin with. These include mysteries, mission or goal-based adventures, or combat scenarios. James Bond and *Mission: Impossible* are two examples of gamelike film genres that have transitioned into critically and popularly successful games. In any case, it seems that games are weaker at character development, whereas they excel at adventure, mystery, and action. Even non-movie-based games based on these themes, such as *Thief* and *Deus Ex*, have been the more popular among games that employ a more literal metanarrative.

The other sort of narrative genre that does well in a game framework is the world-based narrative. *The Hobbit* was an example cited earlier. In fact, Tolkien himself spent many years developing the world, its cultures and languages, and the story was really just a way to describe and explore the world. Any book that has a map in it is likely to be good material for a game, because it is clear that the game is about the relationship between the characters and the world.

Star Wars is a great example of a story world that is tailor-made for gaming. The first movie is much more of a game than a film. As is the case in all the *Star Wars* films, the characters tend to be archetypal and somewhat cartoon-like (Harrison Ford again!), which makes them perfect building blocks for game narrative. George Lucas's strengths as a world-builder have resulted in story contexts that have proven to be endlessly fascinating to at least two generations thus far. At this writing, Verant, the creators of *EverQuest*, are developing *Star Wars: Galaxies*, a MMORPG based on the *Star Wars* worlds. Based on sneak previews at E3, most game industry pundits are predicting a slam dunk. This is a case where the world will be complete, deeply developed and highly dynamic, but the story will be open-ended, to allow players to create their own narrative within this familiar imaginary space.

The most compelling thing about these trends is that they are changing the distinction between producers

and consumers. In film, television, theater and literary forms, there is generally a very clear line between producer and consumer. However, in these new forms of interactive narrative, particularly those that employ story systems, this line has become blurred. The consumer is now becoming a producer/consumer.

Computer games are really the first medium that blurs this boundary between author and audience so completely. As such, it undermines some of the fundamental tenets of postindustrial (e.g., printing press, film projector, television) narrative, which is based on a mass-production, one-to-many "broadcast" model. With the computer as a two-way, dynamic medium, those engaged in game design are creating an entirely and radically new ideology about narrative. They are not so much storytellers as context creators, and what they are doing is nothing short of revolutionary. As such, I believe that they have earned their own unique and indigenous theoretical discourse.

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