

FirstPerson

New Media as
Story, Performance, and Game

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Cyberdrama

Janet Murray, who coined the term *cyberdrama*, uses it to discuss a new type of storytelling — and a new type of story — that she sees emerging as the computer becomes an expressive medium. Cyberdrama appears to tell the story of our lives now, much as the novel emerged to tell the story of a previous culture and time. As Murray writes, the term emphasizes as well “the enactment of the story in the particular fictional space of the computer.” Inevitably the term also turns our attention toward those (“dramatic”) new media artifacts that resemble theater, cinema, or television — as we were similarly directed by the title of Murray’s seminal *Hamlet on the Holodeck* (1997).

Murray’s *Hamlet* followed Brenda Laurel’s *Computers as Theatre*, which had, six years earlier, made dramatic experience a central topic of discussion in the new media community. Laurel’s book was itself picking up themes from her 1986 Ph.D. thesis, which focused on forms of interactive, first person, computer-enabled storytelling. In both works Laurel offered Aristotelian dramatic experience as the model toward which designers of interactive computer experiences should aspire.

It is generally agreed that cyberdrama must give human participants an experience of *agency*. Usually this has meant that the participant’s actions have an appropriate and understandable impact on the world the computer presents to them (though the term is given a somewhat different spin by Ken Perlin in his essay included here). Other goals defined by Murray include *immersion* and *transformation*. To achieve these goals through a combination of experience design, computer graphics, and artificial intelligence — especially in a form reminiscent of interactive Shakespearian tragedy — has become a sort of “holy grail” for cyberdrama.

There are profound difficulties in achieving these goals, but the three authors presented here continue to work actively on the design and development of cyberdramatic experiences. They persevere, perhaps, because they and many others believe that a large number of new media’s most successful creations (*Zork*, *Myst*, *Everquest*, *The Sims*) incline toward cyberdrama. Perhaps also because cyberdrama exists as a powerful force of imagination (on- or off-board the *Enterprise*) even if it has not yet been fully realized.

The essayists in this section are theorist-practitioners of cyberdrama, and each addresses a major question for cyberdramatists (also a primary theme of this volume): Is there a game-story? Many in the new media field see cyberdrama as an attempt to marry the structures of games and stories — and many of cyberdrama’s harshest critiques come from those who believe this to be impossible. The first essay here is from Murray herself, who postulates that the “game-story” question is fundamentally misformulated. Ken Perlin follows, who finds engaging characters to be the element missing from even the most successful game-story examples to date. Finally, Michael Mateas offers what may be the “unified field theory” of Laurel’s and Murray’s work; giving a definition of neo-Aristotelian interactive drama, as well as describing the project he and Andrew Stern are creating through its guidance — a project that may allow them finally to take hold of cyberdrama’s grail.

From Game-Story to Cyberdrama

Janet Murray

Is there a game-story? I think this is the wrong question, though an inevitable one for this moment.

In our discussion here, *game-story* means the story-rich new gaming formats that are proliferating in digital formats: the hero-driven video game, the atmospheric first person shooter, the genre-focused role-playing game, the character-focused simulation. All of these are certainly more storylike than, say, checkers. But, as Celia Pearce has pointed out, not more storylike than chess or Monopoly. Games are always stories, even abstract games such as checkers or *Tetris*, which are about winning and losing, casting the player as the opponent-battling or environment-battling hero.

But why are we particularly drawn to discussion of digital games in terms of story? And why is so much storytelling going on in electronic games? First of all, the digital medium is well-suited to gaming because it is procedural (generating behavior based on rules) and participatory (allowing the player as well as creator move things around). This makes for a lot of gaming. Secondly, it is a medium that includes still images,

moving images, text, audio, three-dimensional, navigable space — more of the building blocks of storytelling than any single medium has ever offered us. So gamemakers can include more of these elements in the game world.

Furthermore, games and stories have in common two important structures, and so resemble one another whenever they emphasize these structures. The first structure is the contest, the meeting of opponents in pursuit of mutually exclusive aims. This is a structure of human experience, of course, from parenting to courtship to war, and as a cognitive structure it may have evolved as a survival mechanism in the original struggle of predator and prey in the primeval world. Games take this form, enacting this core experience; stories dramatize and narrate this experience. Most stories and most games include some element of the contest between protagonist and antagonist.

The second structure is the puzzle, which can also be seen as a contest between the reader/player and the author/game-designer. In a puzzle story, the challenge is to the mind, and the pacing is often one of open-ended rearranging rather than turn-based moves. Mystery stories are puzzles, and are often evaluated as games in terms of how challenging and fairly constructed they are. In fact, it makes as much sense to talk about the puzzle-contest (*Scrabble*) as it does to

Response by Bryan Loyall

In her essay, Janet Murray paints a compelling landscape of the varied forms of cyberdrama and presents criteria for their creation. Especially interesting to me is the *replay story*, and its ability to draw attention to the ramifications of the stream of choices each of us takes for granted each day.

One property of Murray's three main examples is that the participant is consciously aware of the story and actively manipulating it. These forms give powerful ways to tell new types of stories, but for me, one of the joys of a story is when I forget about it being a story. I am simply there. The experience is dense and powerful, and I like the characters, or hate the characters, or am disturbed by them.

I would like to extend Murray's landscape with

another form that has this property, and, following her lead, then suggest criteria to guide its creation.

The form I would like to add is one that combines the high interactivity and immersion of many computer games with the strong story and characters of traditional linear stories. Viewers can enter a simulated world with rich interactive characters, be substantially free to continuously do whatever they want, and yet still experience the powerful dramatic story that the author intended. My colleagues and I at Zoesis Studios and the Carnegie Mellon Oz Project call this form *interactive drama*, and we have been working to create it since the late 1980s.

Some have argued that this combination is impossible. As Murray points out, there are those who say that games and stories are opposed, and what

talk about the story-game. Most stories and most games, electronic or otherwise, include some contest elements and some puzzle elements. So perhaps the question should be, is there a story-game? Which comes first, the story or the game? For me, it is always the story that comes first, because storytelling is a core human activity, one we take into every medium of expression, from the oral-formulaic to the digital multimedia.

Stories and games are also both distanced from the real world, although they often include activities that are done "for real" in other domains. The stock market, for example is a betting game, but real world resources are exchanged and people's out-of-game or out-of-trading-floor lives are profoundly changed by events taking place there. Baseball, on the other hand, is run as a business and has economic and emotional impact on the lives of the players and observers, but the hits-and-misses on the field are in themselves only game moves. Similarly, a dramatization of a murder may be problematic in many ways to a community, but it does not directly result in anyone's death. A story is also different from a report of an event, though we are increasingly aware of how much about an event is invented or constructed by the teller, even when the intention is to be purely factual. Stories and games are like one another in their insularity from the real world,

makes a good story makes a bad game and vice versa. Yet, we and others working to create interactive drama think this combination is possible. As evidence for our position let me describe a working implementation. (An interesting side note pointed out by this implementation is that interactive drama does not require computers to exist.)

Imagine collecting an acting company whose sole job is to allow a single person to participate in an interactive drama. The actors each have a role to play, and the author writes a story that places the participant directly in the center of the action. The director is able to communicate privately to the actors through radio headsets. The director's job is to watch the flow of action, particularly what the participant does as the central character, and give direction to the

the world of verifiable events and survival-related consequences.

In a postmodern world, however, everyday experience has come to seem increasingly gamelike, and we are aware of the constructed nature of all our narratives. The ordinary categories of experience, such as parent, child, lover, employer, or friend, have come to be described as "roles" and are readily deconstructed into their culturally invented components. Therefore the union of game and story is a vibrant space, open to exploration by high and low culture, and in sustained and incidental engagements by all of us as we negotiate the shifting social arrangements of the global community and the shifting scientific understandings of our inner landscape. The human brain, the map of the earth, the protocols of human relationships, are all elements in an improvised collective story-game, an aggregation of overlapping, conflicting, constantly morphing structures that make up the rules by which we act and interpret our experiences.

We need a new medium to express this story, to practice playing this new game, and we have found it in the computer. The digital medium is the appropriate locus for enacting and exploring the contests and puzzles of the new global community and the postmodern inner life. As I argued in *Hamlet on the Holodeck: The Future of Narrative in Cyberspace* (1997),

actors to subtly guide the flow of activity toward the author's story.

Interactive dramas such as this have been created. One of best-documented versions gave the participant the experience of witnessing the evolution of a mugging, having the power to stop it, and facing the continually arising questions of how to react in such a situation as it unfolds (Kelso, Weyhrauch, and Bates 1993).

One obvious problem with this implementation, though, is that not everyone can afford their own dedicated acting troupe. The main advantage that computers give us, once we learn how to make simulated interactive characters and interactive directors for specific stories, is the ability to distribute interactive dramas widely, and thereby encourage their

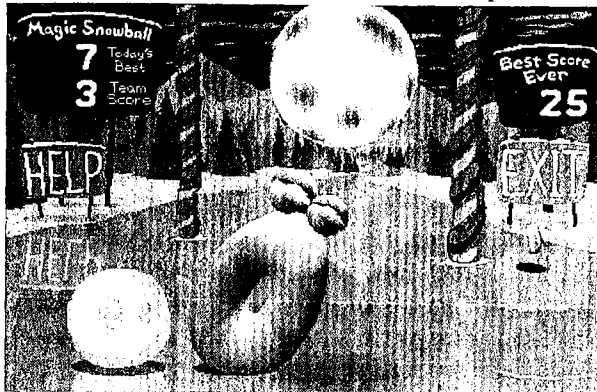
From Game-Story to Cyberdrama Janet Murray

FIRSTPERSON

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we can see a new kind of storytelling emerging to match the need for expressing our life in the twenty-first century. The first signs of this new storytelling are in the linear media, which seem to be outgrowing the strictures of the novel and movie in the same way that we might imagine a painting outgrowing the frame and morphing into a three-dimensional sculpture. Stories like Borges' "The Garden of Forking Paths" (1962) and films like *Groundhog Day* (1993) are harbingers of the emerging new story form. The term "story-game" is similar to the term "photoplay" that was used of early movies, as if the new format were merely the addition of photography to theater. We need a different term and a different take on the emerging form, one that recognizes it as moving beyond the additive into a shape unique to its medium. Neal Stephenson, in his science fiction novel *The Diamond Age* (1995), proposes the term "ractive," which is a contraction of "interactive." In *Hamlet on the Holodeck*, I reluctantly coined the term *cyberdrama*, emphasizing the enactment of the story in the particular fictional space of the computer. Espen Aarseth (1997) uses the term "ergodic literature," which he defines as "open, dynamic texts where the reader must perform specific actions to generate a literary sequence, which may vary for every reading." Some such term is needed to mark the change we are experiencing, the invention of a new genre

creation. (Computers also allow for a wider range of worlds and characters, but this is secondary to the practical enablement of the form in the first place.)



1.response.1. *OttoAndIris.com*. (Zoesis)

altogether, which is narrative in shape and that includes elements we associate with games.

The forms of cyberdrama that I described in *Hamlet on the Holodeck* have proliferated since the book was published in 1997. Role-playing games have blossomed into a new genre, the Massively Multiplayer Online Role-Playing Game, starting with *Ultima Online* (1997), reaching a usership of over 400,000 with *Everquest* (1999), and perhaps reaching over a million with *Star Wars Galaxies*, which as of this writing is planned for release in the summer of 2003. Interactive characters have also become wildly popular, starting with the Tamagotchi, which came out in the United States at the same time as my book, and moving to the current most popular game in digital form, Will Wright's imaginative *The Sims* (2000), which is like a novel-generating system. If there is to be a Charles Dickens or Charlotte Brontë of the digital medium, then Will Wright is surely one of his or her key antecedents. In *The Sims*, Wright has created a multivariant world of rich events and complex character interactions that is open to endless exploration and extension. *The Sims* embodies an ambivalent vision of consumerism and suburban life inside a structure that seems simply to celebrate it. It engages players in building up households in a fictional world that has its own momentum and generates its own plot events. Duplicitous neighbors and morbid

We believe widely distributable interactive drama will become a reality, and as it does it will be important to find criteria to guide the work of creators. I would like to describe some of the criteria we have used while trying to create interactive drama, focusing on criteria that illuminate relations to traditional games and stories.

Murray suggests agency as a criterion for all forms of cyberdrama, and it is central to effective interactive dramas as well. It is a core part of the freedom I mentioned earlier — and, like game designers, we focus our interactive dramas on the participant's constraints and options to help enable agency.

Another important property for interactive drama that comes from its definition is one Murray mentions in her book: immersion. Two related criteria apply to

downs come to visit and destroy the happiness of the household. The time clock pushes relentlessly forward, with every day a workday, with carpools to meet and chores to do for those at home. The world of *The Sims* has its own moral physics: education leads to job success; a bigger house means more friends; too many possessions lead to exhausting labor; neglect of a pet can lead to the death of a child. The losses in *The Sims* are oddly poignant, with neighbors joining in the prolonged and repeated mourning process. Looking back one hundred years from now, *The Sims* may be seen as the breakthrough text of cyberdrama, just as *Don Quixote* (1605) was for the novel or *The Great Train Robbery* (1905) was for the movies.

The Sims offers strong evidence that a new genre title is needed and it persuades me that "cyberdrama" is probably the best one currently proposed. *The Sims* is neither game nor story. It is a simulation world driven by a new kind of synthetic actor, an actor authored by Will Wright, but also (in the case of the protagonists) instantiated by the interactor who sets the parameters of the character's personality. The actions of the world are also a collaborative improvisation, partly generated by the author's coding and partly triggered by the actions the interactor takes within the mechanical world. It is a kind of Rube Goldberg machine in which a whimsical but compelling chain of events can move in

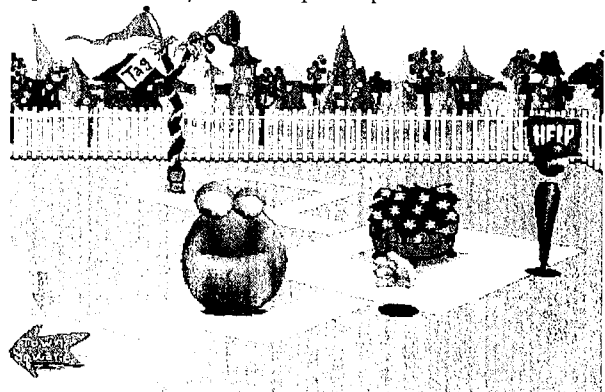
the characters. For immersion to take place, the characters in the world need to seem real to the participant. This means that they need to be believable enough that the participant cares about them (whether that caring is liking them, hating them or being disturbed by them). Further, we have found that they need to be real enough that the participant respects them. If the participant feels that she can do whatever she wants to the characters (as though they are toys to be played with), then the stakes of the experience and the ability of the characters to seem alive are both weakened.

Our most recent system, *OttoAndIris.com*, is an attempt to create a world that has these properties (see figures 1.response.1-4). It is a playful space that one can enter to play games with two characters, Otto and

many ways. The story of *The Sims* is the collective story of all its many instantiations, and users share their events in comic strip "albums" — screenshots with captions that narrate the events of the simulated world. They also trade characters and will soon be able to send their characters on dates together. It is a simulation, a story world, opening the possibility of a *David Copperfield* or *Middlemarch* or *War and Peace* emerging some day, built around other compelling experiences of the global community: not just consumerism in the suburbs, but survival struggles among the underclass of the industrialized nations or postcolonial or ethnically divided countries.

Another community of practice that has grown since 1997 is in the domain of interactive video. As television and computing converge, there are increasing experiments in interactive storytelling, including several prototypes sponsored by the Corporation for Public Broadcasting, or emerging from the Hollywood-based Enhanced TV Workshop of the American Film Institute (which has convened yearly since 1998), or from the Habitat program of the Canadian Film Centre. Of course, our assumptions about the hardware for delivering interactive video have also changed significantly since 1997, and the situation is far from resolved. In spring 2001 there were fewer than five million homes in the United States with set-top boxes,

Iris. Otto and Iris treat you as an equal, as one of them. Even though you are special in the sense that the whole experience is for you as the participant, the characters

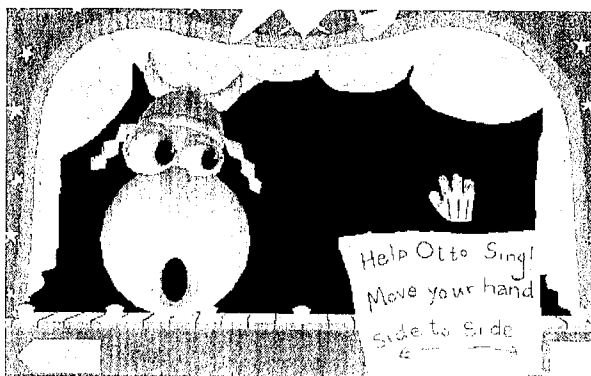


1.response.2. *OttoAndIris.com*. (Zoesis)

but as many as sixty million homes in which the television and the computer were in the same room.

Ford Motor Company sponsored a set of interactive commercials in Spring 2000 in which viewers contributed dialog suggestions and voted on branching choices for a four-episode story broadcast live within a single hour of prime-time network television. In the first episode a couple (chosen from among several possible characters over the internet) leave on a blind date for the surprising destination of the laundromat. The audience is invited to submit a flirtatious remark by which the nerdy male can retrieve the situation. Suggestions poured in over the internet and were scanned on the set during the 15-minute interval before the next episode aired. A witticism about "static cling" was selected and credited to a viewer. Audiences were then asked to guess the number of dirty shirts in the trunk, and later to choose whether the hero should use his last quarter to buy his date a trinket from a vending machine or to pay the parking meter. East coast audiences paid the parking meter and west coast audiences opted for the more romantic plotline. The directing of the story by the audience in real time on a mass stage is similar in its way to the sharing of stories from *The Sims*. It offers us a public stage for remotely controlled actors in structured situations. Most of all, it offers us the sense of a world in which things can go

have their own egos. For example, if you spend too long ignoring Iris, Iris will lose interest in you and leave. Similarly, if you are repeatedly mean to Otto by not



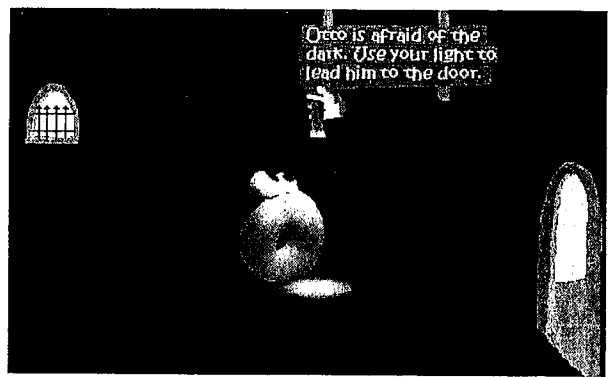
1.response.3. *OttoAndIris.com.* (Zoesis)

more than one way.

Since *Hamlet on the Holodeck* came out I've also moved personally: from MIT (where I was directing projects aimed at educational uses of the digital medium and teaching a single undergraduate/graduate course in interactive narrative), to Georgia Tech, where I now direct the Information Design and Technology Program (IDT). IDT is the oldest humanities-based graduate program in interactive design in the world — although it is still only ten years old — and welcomes around twenty graduate students a year. Here we are beginning to see a community of practice arise among the students, including considerable work in new storytelling genres. One of the most promising aspects of this practice, which I have been actively encouraging, is a subgenre I have begun to think of as the *replay story*.

Replay is an aspect of gaming, one of the most pleasurable and characteristic structures of computer-based gaming in particular, which is usually accomplished by saving the game state at regular intervals (before and after each major decision point in the game "script"). In a procedural world, the interactor is scripted by the environment as well as acting upon it. In a game, the object can be to master the script, to perform the right actions in the right order. (This is also an aspect of harbinger storytelling — as in *Groundhog Day* or *Back to the Future* or *Run Lola Run*, in

letting him play, he will mope, and stop trying to play with you. If you want him to play again, you will have to wait for his sadness to subside, try to cheer him up,



1.response.4. *OttoAndIris.com.* (Zoesis)

which the protagonist inexplicably gets the chance of a "do-over" in the real world.) But it also can reflect our sense of the multiple possibilities of a single moment, the "pullulating" moment, as Borges called it, in which all the quantum possibilities of the world are present. A replay story world allows the interactor to experience all the possibilities of a moment, without privileging any one of them as the single choice.

One successful version of such a replay story is Sarah Cooper's *Reliving Last Night*, initially created as a masters project for the IDT program in spring 2001. In Cooper's interactive video, a woman wakes up confused about who is in bed with her. The rest of the story is a flashback of an evening in which an acquaintance comes over for a study date and an almost-ex-boyfriend shows up hoping to reconcile. The interactor can trace the events of the evening, changing three parameters: what she wears, what beverage she serves, what music she chooses. All of the outcomes reflect the personalities and previous experiences of the characters, and taken as a whole they present a fuller understanding of who they are individually and of the intriguingly rich space of possibilities within a seemingly simple encounter. The story works because of the careful segmentation of the drama into parallel moments, and the well-framed navigation, which allows the interactor to change only one parameter at a time.¹

or try to coax him into playing again.

Informal reactions from participants suggest that such strong egos add to, rather than detract from, participants' feeling of immersion and belief in the life of the characters. In an early version of the system, kids testing it drew pictures afterwards of Otto as a "crybaby," and kept talking about the time he refused to sing. The refusal was a bug that caused part of Otto's mind to completely freeze. We thought the bug had ruined the test, but to the kids it showed Otto's strong will and made him seem more alive.

Another criterion we have found important for interactive dramas is that they have compressed intensity. It is important that the story move at a reasonable pace and never get stuck. This is at odds with many games based on solving puzzles. If the

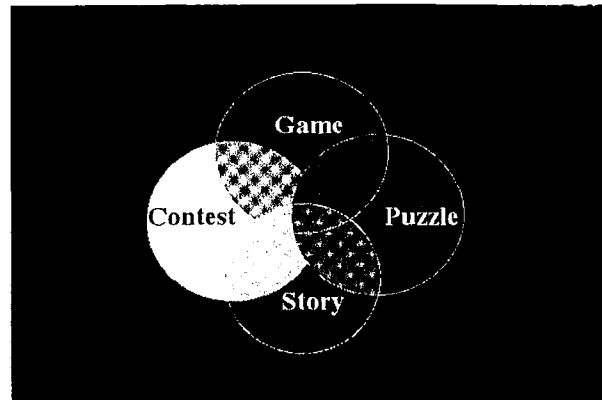
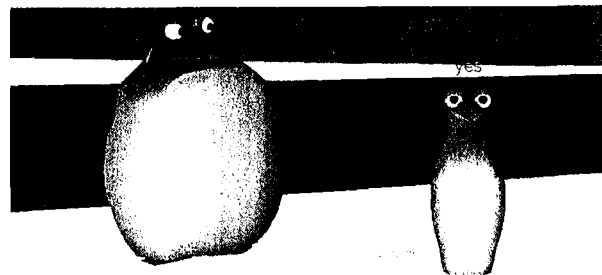


Figure 1. sidebar 1:
The areas of game and story have both independent and overlapping features, and for our discussion the areas of contest and puzzle are equally relevant.

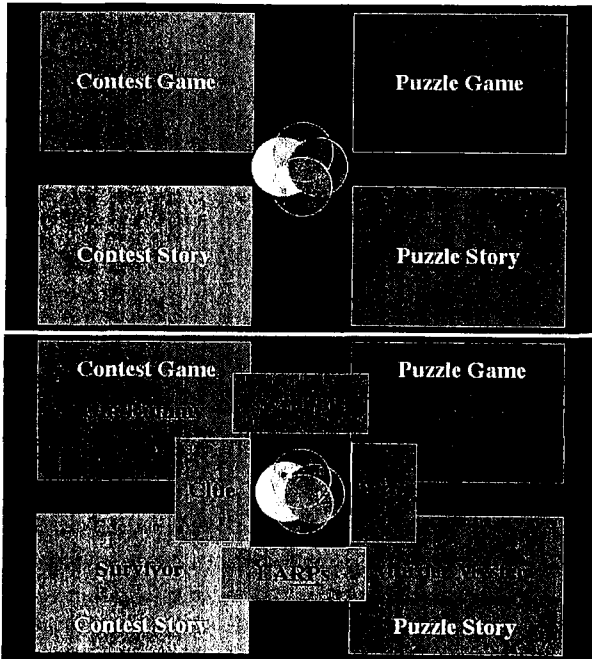
We could call *Reliving Last Night* a game-story or a story-game, because it contains elements of gaming. We could call it "new media," which is an increasingly popular term, although both words are problematic: "new" because it is too vague and ephemeral, and "media" because the computer is a single new medium. Or we could call it "ergodic" or "ractive" or cyberdrama. The important thing, to my mind, is to encourage it. The computer is the most powerful pattern-making medium we have available to us, and it includes the legacy patterns of "old" media, but it is not merely

participant can get stuck, then the story doesn't progress, and the compressed intensity that is a hallmark of many traditional stories suffers.

Compressed intensity can be achieved by sharing the advancement of the story between the participant and the world. In a prototype interactive drama system, *The*



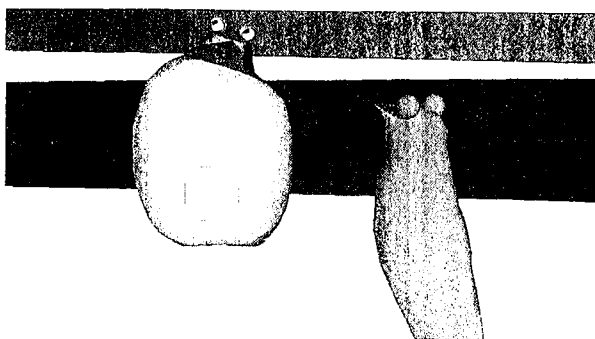
1.response.5. *The Penguin Who Wouldn't Swim*. (Zoesis)



Figures 1.sidebar.2 - 1.sidebar.3. Thinking about nondigital overlap cases, in multiple directions, may be a particularly fruitful activity.

limited to these patterns. It is not merely "new" media or "multimedia" or story-game or game-story. It is redefining the boundaries of storytelling and gameplaying in its own way.

Penguin Who Wouldn't Swim (1999), the participant is a penguin who is trapped on a chunk of ice with two other penguins, drifting out to a dangerous sea (see figures 1.response.5-7). One of the penguins wants to

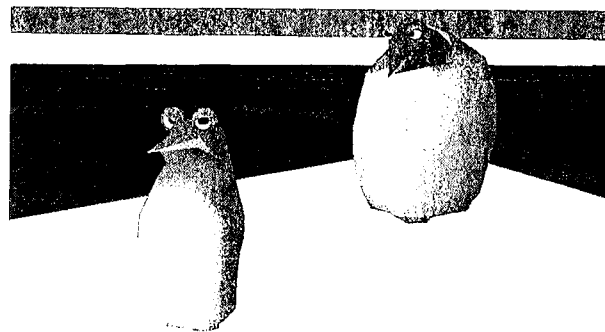


1.response.6. *The Penguin Who Wouldn't Swim*. (Zoesis)

Just as there is no reason to think of mystery novels or role-playing games as merely versions of chess, there is no reason to think of the new forms of story telling as extensions of filmmaking or board games, though they may include elements of all of these. Storytelling and gaming have always been overlapping experiences and will continue to be so. Human experience demands every modality of narration that we can bring to it. The stories we tell reflect and determine how we think about ourselves and one another. A new medium of expression allows us to tell stories we could not tell before, to retell the age-old stories in new ways, to imagine ourselves as creatures of a parameterized world of multiple possibilities, to understand ourselves as authors of rule systems which drive behavior and shape our possibilities.

The computer is a medium in which the puzzle and the game, the instantiated artifact and the performed ritual, both exist (see sidebar). It has its own affordances, which I describe in chapter 3 of *Hamlet on the Holodeck*. The computer is procedural, participatory, encyclopedic, and spatial. This means it can embody rules and execute them; it allows us to manipulate its objects; it can contain more information in more forms than any previous medium; and it can create a world that we can navigate and even inhabit as well as observe. All of these characteristics are appealing for

stay, and the other wants to try to swim back to shore. The participant is always free to do as she wishes in the situation. To adjust the pacing, there is a dramatic guidance system that continuously estimates the



1.response.7. *The Penguin Who Wouldn't Swim*. (Zoesis)

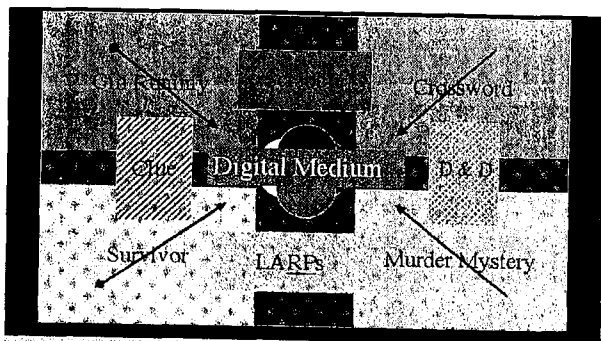


Figure 1.sidebar.4. When we get to the digital medium, we find a medium that can accommodate the features of all these nondigital examples.

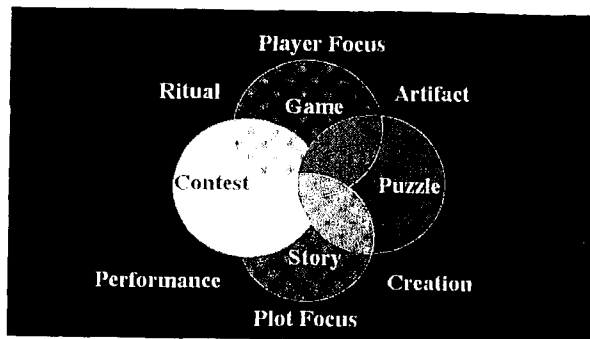


Figure 1.sidebar.5. We can also think of the game/story axis as a player focus/plot focus axis.

gaming; all of these characteristics are appealing for storytelling. Gaming and storytelling have always overlapped. They are both being expanded at this moment as authors take advantage of these new affordances, and they have increased opportunities to develop in their areas of overlap. But there is no reason to limit the resulting form to the dichotomies between story and game, which are more rigidly established in legacy media. We can think instead of matters of degree. A story has greater emphasis on plot; a game has greater emphasis on the actions of the player. But where the player is also the protagonist or the god of the story world, then player action and plot event begin to merge. The task before us, to my mind, is not to

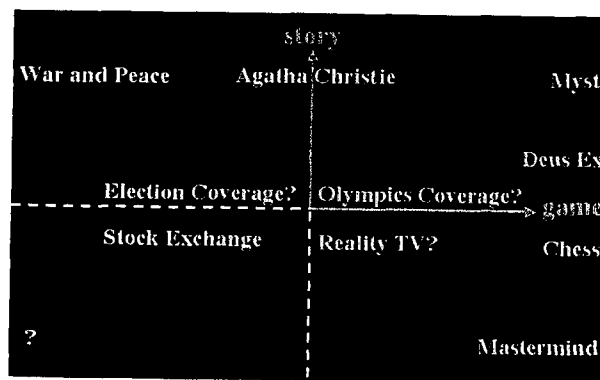


Figure 1.sidebar.6. But what if we take a step back, and reconsider the notion that game and story represent two directions of an axis? An interesting territory may open.

participant's subjective feeling of pacing. If that pacing is good, the system does nothing, leaving space for the participant's actions. When the subjective pacing is bad, the system acts to advance or slow down the story as appropriate, using the characters and other active elements. (As this is going on, the dramatic guidance system is also acting to guide the flow of events toward the author's story.)

All of these criteria are related to those of traditional stories and games, yet many are different in important ways needed for interactive drama. Murray urges us to not be limited by the dichotomy between stories and games, but rather to recombine and reinvent their primitive elements. In working to build these systems we have found that this is not just useful, but necessary. Interactive drama allows us to tell stories that we

couldn't tell before. It combines strengths and elements of stories and games, and is both and yet neither. If we are to reach the potential of expression that it offers, we must work directly in the new medium to explore, experiment and build.

enforce legacy genre boundaries, but to enhance practice within this new medium.

The question that most often arises, in one form or another, in "new media" practice, is how do we tell a good one from a bad one? How do we make it better if we don't know what it is? Too often, the criteria of divergent disciplines or genres are set against one another. We hear, for example, that games and stories are opposed and what makes a good story makes a bad game and vice versa.

But the more useful question is, how do we make a better cyberdrama? One criterion that I have found useful is the concept of dramatic agency. Agency is the term I use to distinguish the pleasure of interactivity, which arises from the two properties of the procedural and the participatory. When the world responds expressively and coherently to our engagement with it, then we experience agency. Agency requires that we script the interactor as well as the world, so that we know how to engage the world, and so that we build up the appropriate expectations. We can experience agency in using a word processing program, when our direct manipulation of the text makes it appropriately change to italics or boldface, for example. In an interactive story world, the experience of agency can be intensified by dramatic effect. If changing what a character is wearing makes for a change in mood within the scene,

if navigating to a different point of view reveals a startling change in physical or emotional perspective, then we experience dramatic agency. Dramatic agency can arise from a losing game move, as when we wind up imprisoned at the end of *Myst*. It is the fittingness of the result to the action taken that makes it satisfying.

Critique of the game-story or story-game or ergodic-interactive-cyberdrama will be most useful when it helps us to identify what works, especially what works in new ways. A new genre grows from a community of practice elaborating expressive conventions. I would argue that we stop trying to assimilate the new artifacts to the old categories of print- or cinema-based story and board- or player-based game. We should instead think of the characteristics of stories and games and how these separable characteristics are being recombined and reinvented within the astonishingly plastic world of cyberspace.

From Espen Aarseth's Online Response

That the problematic, largely unplayable, story-game hybrid will dominate the future of digital entertainment seems no more likely than a future with only one kind of sport. While there might be a future for narrative and new forms of storytelling in this cornucopia of new digital and cultural formats, the largest potential seems to be in new types of games, forms that blend the social and the aesthetic in creative ways and on an unprecedented scale. As a new generation of gamers grows up, the word "game" will no longer be as tainted as it is today. Then euphemisms such as "story-puzzles" and "interactors" will no longer be necessary. Games will be games and gamers will be gamers. Storytelling, on the other hand,

still seems eminently suited to sequential formats such as books, films, and e-mails, and might not be in need of structural rejuvenation after all. If it ain't broke, why fix it?

<http://www.electronicbookreview.com/thread/firstperson/aarseth1>

Murray Responds

In the end, it does not matter what we call such new artifacts as *The Sims*, *Façade*, or "Kabul Kaboom": dollhouses, stories, cyberdramas, participatory dramas, interactive cartoons, or even games. The important thing is that we keep producing them.

<http://www.electronicbookreview.com/thread/firstperson/murray2>

Note

1. Parameters can, however, be changed at any time — and the parameter choice controls are always exposed on the interface of *Reliving Last Night*. As Noah Wardrip-Fruin points out, this allows for continual “at-will” switches between alternate versions during the flow of the story. This is different from most game replay, in which seeing another version requires restoring to a previous game state and then making new choices from that point forward. Only by recording several play-throughs of different game options and running these recordings in parallel could the continual, in-flow comparisons of *Reliving Last Night* be achieved.

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