Ourselves Own Images: Post-Hypertextual and New Media

Michael Joyce and Jay David Bolter

When a number of us gathered for the first ever ACM hypertext meeting at Chapel Hill in 1987, the world had not heard of hypertext or the Web, and yet the room was filled with creators of hypertext works and systems: technical, scientific, medieval, academic, commercial, and indeed artistic. Although the Apple Computer presenters had not quite figured out yet what it might be useful for, they saw fit to unveil their 'new' Hypercard to a great deal of skepticism and not a few groans. Mark Bernstein of Eastgate Systems was already hawking his hypertext title *The Election of 1882*, published a century later. George Landow discussed classroom uses of Intermedia and the rhetoric of arrivals and departures, a consideration still fresh in the World Wide Web. And we two gave a paper called "Hypertext and Creative Writing," which used as figures screen shots from a then-new Storyspace and at the end mentioned that "One of us (novelist Michael Joyce) is currently working on interactive fiction using this system and his first effort, 'afternoon, a story,' is available to interested readers" (49).

A decade after that first meeting, the two of us gave the first of a three-year series of the SAGAs Writing Interactive Fiction workshops for filmmakers in Münich, a joint initiative of the European Union Media Training Program and the Hochschule für Fernsehen und Film, <http://www.lrz-muenchen.de/~SAGAs>.

The SAGAs Workshops

Through SAGAs we worked with filmmakers, film school teachers, and media professionals from fifteen countries investigating how to implement interactive narrative in as yet unknown new media. From the first we made a decision not to center upon any particular presentational medium but rather to engage ourselves

and the workshop participants in imagining the possibilities for expanded storytelling which new media offer. We did so out of a firm belief that interactive film or Web-based or 'silver disk' (CD ROM or DVD, etc.) infotainment cannot depend upon the development of a single 'killer app' for either theatrical or online exhibition or installation; nor, we thought, should interactive art and entertainment be restricted merely to branching stories or game-like story worlds. Rather than consider the constraints and opportunities of the particular technologies available to us then, i.e., Interfilm, Cinematrix, Quicktime, Director, Flash, Java, and so on, it seemed important to explore the nature and pleasures of interaction.

In this concern with basing interactive work upon the pleasures of interaction experienced by its several audiences, including first its makers, our approach to the SAGAs workshops remained consistent with our original ACM paper of a decade ago, perhaps remarkably enough in a world of changing change, where the world is webbed and everything, from toaster to New York Times, is interactive, and in which our own lives, careers, and writing interests themselves have changed remarkably. By way of a textual experiment, making only minor substitutions, a search-and-replace if you will, i.e., replacing occurrences of 'author' and 'writing' and 'fiction' in our 1987 paper with 'scriptwriter' and 'director/filmmaker' and 'interactive cinema', we can trace a (perhaps foolish) consistency between our current concerns and our ones then:

> The temporal character of interactive filmmaking is also something new. In traditional film the filmmaker is free to manipulate the time in which a story takes place; and every good scriptwriter or director does so. However, the plot, the author's manipulation of story time, is itself static. Film or video is one-dimensional in the sense that we need only one dimension in order to represent the experience of viewing it. The episodes...are realized through time as we view . . . . In interactive cinema multiple links among episodes allow our temporal experience of the plot itself to vary . . . . The electronic medium permits filmmaking of a second order, a filmmaking with narrative units, in which the structure of the cinema becomes truly fluid and indeed geometric. The scriptwriter and director become geometricians or architects of computerized "space" [and] they fill

> their space with a special pattern of episodes and links that define a kaleidoscope of possible structures. (47)

The difficulty with interactive narrative is the problem of working along multiple lines simultaneously. This does not necessarily mean multiple plot lines or branches, but rather it can also mean exploring the multiple thematic lines or contours of a story. For instance, what Grahame Weinbren characterizes as response-based versus choice-based interaction suggests for him the possibility of a "subjunctive cinema" in which the viewer is "constantly aware that things could have been otherwise." Notions such as Weinbren's disclose a longing among interactive cinema artists to integrate the viewer's choices with the unfolding story and the interactive medium as it is presented through and in its interface. Michael Joyce has written elsewhere that:

> It is almost a cliché of the new medium industry that the future of com will consist of so-called "story worlds," where audiences will share some sort of construction kits which provide setting, interactive characters, and the like which will spawn what in *Hamlet on the Holodeck* Janet Murray has called "procedural fictions." (*Othermindedness* 101).

Yet the problem is that the development of storyworlds in most cinematic computer games merely has the effect of embedding a menu and inventory list within the visual frame; while seemingly more procedural, agent-based or avatar-guided navigation merely substitutes a story-generation algorithm for the menu. A true story world should invite the viewer to identify, develop, and explore proprioceptive and topological spaces created within the visual flow. In place of agents and relentless 'first-person interaction,' empathic visual structures should invite interactive 'yields' and dramatic affiliations with third-person characters. Weinbren argues that "to find interactive forms in which desire can be sustained will require the construction of a new cinematic grammar . . . , [a] construction-process which must foreground that aspect of cinematic communication that is fundamentally a grammar of temporality." In our interactive narrative workshops we sought to explore multimedia equivalents of how multiple temporal narrative uses recursive and nested flashbacks, simultaneous unfoldings, parallel recurrences, as well as fugal and chained narratives as structures of transitory closures to maintain desire and move the interactive viewer

through the interactive cinematic work. In some sense our intention was to explore Weinbren's question of

> what happens to cinematic time when viewer input becomes a component of the screen amalgam? To what extent does the incorporation of viewer impact keep time real, canceling out the magnetism of cinema itself—when does it cease to be cinema and become "multimedia" in its drab information-delivery costume, the slick transmission of data in fields of "hot spots," "buttons," and point-and-click menus? ("In the Ocean")

We have for some time been intensely aware how so-called multimedia itself suffered from those drab qualities which Weinbren identifies here. A decade of electronic publishing in various forms has made it clear that compelling hypertext fiction for the World Wide Web or CD-ROM is something quite different from the grown-up version of Choose-Your-Own Adventure stories. In fact the best hyperfictions offer something much richer than a branching story or variations on a plot inducing readers to build their own sense of the gathering possibilities of multiple fictions, their characters, and story spaces. Indeed in our 1987 paper we imagined a fiction in which

> stability and certainty...disappear [and] there may no longer be one plot but several, and characters may no longer develop in a consistent fashion. The structure and rhythm of the text will be different for each reading [with] every element...subject to electronic fragmentation and reconfiguration. (44)

As we came to turn our attention toward fictions (re)presented in multiple modalities, we continued to focus on the structure and rhythm of interactive storytelling and to seek appropriate media for a rhythmic flow of electronic fragmentation and reconfiguration. Thus it should be no surprise that of the projects which the participants designed, storyboarded and prototyped during our SAGAs workshops, few fit within the 'traditional' silver disk genres occupied by *Riven*, *Johnny Mnemonic*, or *X-Files*. The rest described actual, albeit hybrid, spaces: a bar, a disco, a house filled with holographic generations and women and memories. "Why is it there were so few CD-ROM or Web projects?" someone asked in

our final sessions. "Because the space of those places is so flat, so lifeless, so intangible," the filmmakers said. They wanted–and wanted to sustain the desire of their audiences for–the experience of human space within Weinbren's "grammar of temporality" and did not think the screen alone could give them that. They wanted the illusion of immediacy that real space gives, although they also wanted to hypermediate that space.

Interactive Spaces

In our interactive media workshops we lay out a three-part taxonomy of interactive spaces, installation, exhibition, and presentment (the latter Michael's term for networked or silver disk interactions), and we suggest that three planes of interaction sit over them like layers, the plane of potentiality or the script, the plane of participation or the interface, and the plane of presentation or the viewer's experience. Compelling interaction, we suggest, flows through these planes, or better still (Photoshop increasingly being a metaphor for the mind) flattens them into a rich surface.

We built our taxonomy of interactive spaces upon our notion of *installation* because the most successful interactive cinema thus far has taken that form, whether the actual installations of Weinbren, Jeffrey Shaw, or Monika Fleischmann for example, or the online work of interactive artists like Laurie Novak or Chris Hales. Installation involves one or some viewers in intimate surroundings, where the term 'some' is left intentionally fuzzy since, as Michael Joyce has written elsewhere, they "present themselves to participants and spectators alike in layers of narrative" (*Of Two Minds* 200) wherein the person interacting is often on view within the installation space and that space itself is defined by the various frames of a museum, including its institutional nature, its neighborhood, and the actual city and the artifactual art worlds which enclose and link from it. Thus, in installations multiple viewers do not generally enjoy the anonymity that exhibition audiences, say in a movie theater, do. They or the results of their interactions may be viewed by a larger audience of non-participants.

Exhibitions such as movie houses are the most familiar settings but are also generally the least likely venues for any potential interactive medium. Yet each of us had growing and concurrent interests in the range of what Espen Aarseth has clustered under the term cybertext, i.e., "hypertext, the textual adventure game, computer-generated narrative and participatory world-simulation systems, and the social-textual MUDs of the global computer net-

works." The emergence of viable commercial technologies for non-branching group interactions ranging from simple social interactive interfaces such as Cinematrix to more complex, if still psychologically unsophisticated, uses of virtual reality caves, to more psychologically (and thus artistically) engaging developments within the MUD world and networked interactive gaming—not to mention the pure challenge of confronting an interactive setting thought to be intractable, and where at least one major commercial player, Sony Interactive, with their disastrous *Mr. Payback*, had failed miserably—of course led us to focus our exercises in this setting. Since at least initially our workshop participants were still more comfortable in a movie house than an online gameworld, this focus also suited them. For purposes of our workshops we distinguished exhibitions from installations to the extent that they involved several viewers in anonymous surroundings. Keeping in mind the experiments of interactive cinema artists like Weinbren and Shaw, whose *March II* and *Place--a User's Manual*, respectively invite audiences to shape an interactive viewing by their movement through the exhibition space as well as their concentration within the spaces they occupy, we noted that while the interactions of an exhibition audience are accessible to all the others, their nature may differ according to the location of physically separated groups.

We defined *presentments* as involving one or some or several viewers in electronically represented or networked settings. We chose the term presentment largely in order to distinguish these works from the typical and not very useful umbrella terms of 'interactive multimedia' or 'hypermedia'; but we also wished to emphasize the multiple articulations of the word presentment with its dictionary senses of 'presenting to view or to the mind' as well as the thing 'expressed, presented, or exhibited,' and also 'the light in which something is presented,' a simultaneity seemingly congenial to these kinds of works. Obviously presentments have aspects of both installation (disk-based or branching electronics typically engage single viewers or a small group) and exhibition (networked games, graphical MOOs and storyworlds often involve viewers in a shared audience experience). To the extent that presentments are like installations, however, their intimacy of surroundings may itself be externally represented or indeed viewed by a remote audience of lurkers. Likewise to the extent that presentments are like exhibitions, the audience's anonymity may nonetheless also be subject to representation (ranging from avatars to chat transcripts and even to Webcams). Thus in both instances the results of interactions may likewise be shared with remote viewers.

Our workshop participants began to explore these interactive forms through a variety of structured exercises ranging from simple formal linking structure and scenic matrices to the development of appropriate storyboards for a complex interactive "Conceptual Remake." In the latter, building upon our discussion of Hitchcock's film Vertigo as an instance of remediation, the participants wrote scenarios which explored the physio-psychic experiences of a basic fear such as vertigo as a focus for developing compelling multiple narrative streams.

Following these scripting sessions we invited the filmmakers to generate ideas for interactive interfaces that proceeded from the filmic narratives themselves and took into account considerations of environment, movement, subjunctivity, emotional registers, variations and events. We focused upon these aspects of interaction by offering a detailed taxonomy of interaction (see the appendix) posing a large number of open-ended questions ranging from simple environmental considerations to narratological, dramatic, and psychological ones. From this foundation we then offered a vision of interwoven and reciprocal planes of interaction which might constitute a successful interactive cinema

The *plane of potentiality* (or the script) we suggested depends upon satisfying variations situated in human experience. Its hallmarks are the perception and expression of evocative and recurrent spaces, times, and characters rather than branching events; a perception and expression multiplied and complicated by shifting configurations of perspective and person.

The *plane of participation* (or the interface) involves embodied and constructive actions which disclose dramatic complications, raise increasingly complex and fulfilling expectations, provoke self recognition, encourage a sense of shared presence, and offer coherence and transitory closure in the face of constantly changing situations.

Lastly the *plane of presentation* (or the viewer's experience) is one of progressively evolving multisensory experiences of passing time, shifting locales and significant events which associate themselves with our fixed memories, evoke and heighten our sense of mortality, and satisfy our predictive urges as well as our longing for harmony, confirmation, or community.

Refashioning

In presenting our taxonomy, we were inviting the SAGAs participants to explore the complex and sometimes contradictory rela-

tionships between digital technologies and earlier media forms. We were asking them to consider the joys and the difficulties of interactive narrative without limiting themselves to a familiar interface or authoring system: we directed them not to worry about the constraints imposed by Director or the World Wide Web. From the outset, however, we acknowledged that all narratives and narrative techniques are embedded in and expressed through particular technologies of representation, which are themselves embedded in particular cultural moments. All three of our interactive spatial forms (installation, exhibition, and presentment) have histories and perhaps even canonical forms in earlier media. Installation (and performance) art predates the use of computers in such installations, and refashions and seeks to reform the earlier artistic spaces of the museum and the gallery. Exhibitions are even older: all drama that has taken place before an audience (beginning with Greek tragedy and with dramatic rituals in many non-Western cultures) are forms of exhibition. For our participants, of course, the canonical form of exhibition was the traditional cinema, with its unique apparatus for defining the spectator's point of view. Finally, earlier forms of presentment include television and in a sense the printed book. For the last several decades television viewing may have been the canonical form of presentment for our culture.

We were asking workshop participants to consider how digital technologies might refashion the space defined by earlier media forms. This refashioning is what one of us (Bolter) together with Richard Grusin have called 'remediation.' Such refashioning or remediation has been going on throughout the twentieth century and even earlier, as new media (photography, film, television) were introduced and set up as rivals to existing forms. For supporters of the new media form, the justification for such a refashioning is that the earlier media form has not succeeded in achieving an authentic representation or in providing a compelling experience for the viewer/user. The new form is supposed to make up what the previous one lacked. We stressed for our participants, however, that the work of refashioning can never be completed. Each cultural moment revises its definition of authenticity, and these revisions are expressed in and through the current technologies of representation.

Today's digital media provide our culture with new spaces for representation and new opportunities for defining authentic and compelling viewing experiences. The special quality that our culture associates with digital representation is a new form of interactivity. We still want to tell and hear stories, but we also want the

experience of telling and listening to be interactive. So the task of the digital storyteller is to refashion the forms of installation, exhibition, and presentment as spaces of interaction. It is interactivity that is supposed to reform the spaces of the analogue art installation, the cinema, or television. In other words, the task is to redefine or reposition the meaning of 'interactivity' in a way appropriate to digital media, for creators and supporters in each of the earlier media can and do claim that their forms already provide for interaction.

In our 1987 paper, we had taken part in this process of refashioning, although we had not reflected on the history of this strategy for positioning a new media form. We argued that hypertextual fiction, which we would now call a form of presentment, allowed the reader to interact with the text in a way different from (and implicitly more authentic than) the interactive pleasures of traditional reading. As writers and students of literature, we were then focusing on the ways in which computer technology could refashion verbal texts in general and the printed book in particular. Because most of our SAGAs participants were studying in traditional film programs, they wanted to consider how new media technologies could refashion the authenticity and immediacy of film. Furthermore, given their scriptwriting backgrounds in particular, they understood the move from the plane of potentiality to the plane of presentation as a move from the words of a script to the images and sounds of an edited film. In the traditional cinema, the plane of participation is provided by the collective experience of the audience seated in the theater experiencing those images on the screen, and filmmakers and critics would claim that this experience constitutes a true participation and a worthwhile interaction. Our SAGAs students, however, were concerned to define interaction in a way different from that offered by film. As we have already noted, most of them chose the radical path of rejecting even the spatial form of the cinema, suggesting that authenticity of representation and experience might require a different visual and physical relationship between the representations and the viewers.

Time Within Space

Ever since that first hypertext conference in 1987, there has been a debate about how to combine narrative and interaction or whether such a combination was even possible. Can the sense of a story be preserved (or even enhanced) by giving the reader or viewer meaningful choices? Traditionalists such as Sven Birkerts

and Laura Miller say no, because they operate from the printed-based assumption that only linear narratives can construct the authentic or the real. Yet, for the past decade and longer, hypertext authors have offered other forms of storytelling that emerge through the interaction of the reader with the text. They have been working primarily in what we call presentment spaces, in which the text presents itself to a single reader seated at a computer with a keyboard and mouse. Our SAGAs students rejected simple presentment as well as exhibition spaces and preferred hybrids in which the users or viewers could move about in a physical space, while exhibitions and presentments (computers or videoscreens) might also be taking place. Providing a narrative experience in such hybrid spaces has been much less thoroughly explored and is perhaps inherently more difficult because of the 'degrees of freedom' available to the viewers or participants. The authors or designers have much less control of the order and the character of the participants' experiences. It is harder to determine what the participants will see or hear and what they will add to the space or leave behind for others.

The problem for our SAGAs students was to make the three planes of participation converge within the physical and conceptual space that they had chosen. The plane of potentiality represented the story that the students wanted to tell, which often had the structure of a more or less traditional filmic narrative. Working sessions often sounded like film pitches, as our participants would tell what amounted to an elaborate backstory for their project: the story of a girl's troubled relationships with her mother and grandmother, who occupy different floors of the same house; the story of twins, of whom one is a woman and the other is a male transvestite, who conspire to seduce the same young man at a party; the allegorical tale of a dancing instructor and his two young colleagues who must perform a real *danse macabre*. Although none of our student groups created traditional Hollywood tales, their backstories did have a temporal sequence and could have been made into a traditional film.

Our students went beyond film form not in plane of potentiality, but in their refashioning of the planes of participation and presentation. They sought to disrupt the conventional flow of the film, in part by letting the participants move into a physical space that would ordinarily have been the *mise-en-scène* of the film. Thus, the participants might actually walk through the house in which the girl and her relatives lived, or they might visit the club in which the twins and their young man were partying or the studio in which the

dancers were rehearsing. Our SAGAs participants were, however, too creative to imagine that they could simply place their audience inside the space of a movie. (Enthusiasts for 'VR movies' often espouse this naïve and relatively uninteresting notion of interaction.) Our students sought to complicate the experience of participation by adding other representations to their original physical space. They put exhibition or presentment spaces inside their physical, installation spaces. Participants might view parts of the narrative on computers or videoscreens, or they might view themselves or others viewing their own participation in the space. In other words, the dance studio might have computers inside on which the participants could learn the history of the dancers; the nightclub might have videoscreens in which the participants could see themselves as members of the partying crowd.

In making their planes of participation and presentation unfold within a physical space, our SAGAs students had to confront the tension between the script with its implied sequential narrative and the open form defined by the space. They were refashioning the temporal form of cinema in a space that did not lend itself to strict sequencing. They were trying to move beyond what an interactive cinema maker like Weinbren has termed the 'temporal grammar of classical film continuity' to the 'open and indeterminate' possibilities of what he calls 'experienced time.' Here Weinbren's phrase captures the assumption beyond all such remediations: that the interactivity of digital media can provide a more authentic experience. Perhaps the tension between experienced time and open space is what led our SAGAs students to hybrid spaces that combined installations with other forms. Their solutions were ones that worked simultaneously in cooperation and in conflict with the temporal form of traditional cinema.

Indeed, their projects reversed the relationships between time and space that we understand from traditional film. In a linear film, space is represented on the screen and is held separate from the space of the movie theater itself. The filmic space is revealed in and through a temporal flow–by the panning and tracking movements of the camera and by the edits and varying points of view that the camera assumes. The conventions of continuity editing (such as the 180-degree rule) are designed to give the viewer a grammar by which he or she can understand the space in which the action unfolds. By contrast, in new media installations in which the participant is free to move through a physical space, we could say that the temporal experience unfolds *within* the space—that the space encompasses time as it is experienced. Certainly,

time unfolds within space in traditional live drama as well; however, the dramatist and the directors and actors have more or less complete control over that temporal flow. For this reason, drama can (although it does not have to) tell a story in the traditional format that is difficult to achieve in installation spaces. On the other hand, in this respect at least, hypertext fictions in presentment form are more like books and cinema than they are like new media installations. The hypertextual reader explores the space these fictions evoke by moving from node to node; her movement is a temporal experience through which the space is unfolded.

Refashioning Identity

In refashioning the time and space as represented in film, our SAGAs students were also unavoidably refashioning the filmic representation of identity. Since the 1970s, theorists have argued that identity and subject position in film are defined through the camera's point of view as much as through the narrative itself. Laura Mulvey and many others have claimed that the camera locks the spectator into a particular pattern of looking, a gaze that is characteristic of an appropriating and masculine attitude toward the objects of viewing. At least in the conventional Hollywood cinema, the camera shots and the editing constrain the viewer into identifying not only with the usually male protagonist, but with the male gaze itself. Even though this argument has been critiqued and revised over the past twenty-five years, it has continued to dominate the discussion of identity in film, and we continue to regard film as a form that constructs identity and subject position for the viewer through camera technique and editing. Trained in film, most of our SAGAs students understood the question of identity in these visual terms, and it is not surprising that their installation projects often posed questions of identity and gender—both within the story itself and as a problem for the spectator or participant. Many of their backstories featured gender transgressions, homosexuality, or Oedipal conflicts (which are always conflicts of gender and identity), and all of their installations problematized the participants' viewing of these backstories.

In literary hypertexts and electronic writing in general, the problem of identity is obviously engaged through words rather than images. Hypertexts refashion in the first instance printed or written forms, such as the novel, the essay, and the letter, where the subject position of the reader is determined by the literary (rather than the visual) point of view—by the voice of the text. Hypertext

has often been criticized for fragmenting the voice of the text, which is supposed to remain constant, at least in some influential traditions of printed narrative. This collection of articles is in part an attempt to answer that critique and to explore the ways in which electronic writing spaces promote a new construction of identity.

A MUD or MOO is one answer to the critique of electronic writing, for in a MUD each participant can assume shifting, but not necessarily incoherent, identities through her exchanges with other participants, who are themselves engaged in similar shifts. MUDs offer a new construction of identity that seems to be appropriate to our cultural moment. As Sherry Turkle puts it in *Life on the Screen*:

> MUDs imply difference, multiplicity, heterogeneity, and fragmentation. Such an experience of identity contradicts that Latin root of the word, *idem,* meaning "the same." But this contradiction increasingly defines the conditions of our lives beyond the virtual world. MUDs thus become objects-to-think-with for thinking about postmodern selves. Indeed, the unfolding of all MUD action takes place in a resolutely postmodern context. There are parallel narratives in the different rooms of a MUD . . . . (185)

In fact, the MUD is the remediation of the novel or play in electronic form, and it refashions the single author's voice (of which all characters in a traditional novel and even a play are ultimately expressions) as a sometimes harmonious, often cacaphonous, chorus of player's voices.

Thus, our SAGAs students were often imagining a visual analogy to a MUD. Their installations refashioned the cinematic point of view as a set of different viewing (and therefore subject) positions. Some of these positions were made available to the participants as they moved physically through the installation space; some were provided by the different media forms that they could observe in the space.

Yet these projects also begin to suggest, and begin to take steps toward, an even more radical refashioning of identity, one proceeding from the perspective of what Aarseth calls cybertext and where:

> the cybertext reader is a player, a gambler; the cybertext *is* a game-world or world-game; it *is* possible to explore, get lost, and discover secret paths . . . , not metaphori-

> cally, but through the topological structures of the textual machinery. This is not a difference between games and literature but rather between games and narratives.

To be sure Aarseth's vision of post-narrative tellings (or however, bereft of narrative, one shall term these gaming experiences) might themselves seem the age-old story of a quest for unmediated experience, were they not so media-dependent. Aarseth's cybertext theory sometimes seems to have bought into a positivist, post-modern-day, and (to the extent that it seems to suggest that electronic fictions can function as narratives and games at the same time) protestant equivalent of the evolutionary model of Artificial Intelligence which the proto-cybertextualist and storyteller Joseph Weizenbaum so deftly subverted with his program Eliza, whose responses playfully mirrored its reader/clients in an ornate language game.

Yet Aarseth's protestant typology and textonomy of cybertexts—only four score and ten user functions shy of the famous 95 theses—has already spawned some exuberantly catholic and hybridized notions of mixed game and narrative forms. For instance in a recent talk whose title "Cybertext Narratology" summons our own of ten years ago but whose conclusion ("please forget hypertext fiction. It stayed static and cybertext fiction replaced it") not so gently chides it, one of Aarseth's most creative successors, the radical Finnish novelist and media theorist, Markku Eskelinen re-imagines the MOO "from the perspective of Augusto Boal's Invisible Theater" where "participants do and can not know the boundaries separating the realms of fictive and real-life communications, or those between persons, actors and roles . . . [and where they] participate but they do not know for certain in what."

More Radical Fashioning

Eskelinen proposes not merely new media but also new post-hypertextual, and indeed post-narrative, story forms in which "the attitudes and speech acts of our real world are given their chances to inflict the fictive world" and where A-life "emergent traits" and "glider narratives" lead to "ecologically delicate islands getting easily off balance" and are subject to "alzheimerian filtering" and "tel quelian . . . search engines" generating "kinetic textual dance."

One group of our SAGAs participants imagined, and indeed produced a prototype video of, a kinetic interactive dance in which point of view shifted to a coffee spoon and a consumerist audience was armed with barcode readers, as they made their way through

the hybridized fractal plane of an interlocking story of abduction and seduction. During the time of our workshops elsewhere in Germany, the filmmaker Tom Twyker (not in any way affiliated with SAGAs) created a cult favorite film in the form of a videogame, *Run Lola Run (Lola rennt)*, with multiple image textures (film, video, cartoon) and compressed multiple-narrative sequences running through in the non trademarked sense of quick time. Even as we write, another filmmaker has gone into production with a project designed so that four separate images will be projected on the screen simultaneously and the audience can edit with their eyes, shifting attentions among the images as their stories unfold and interweave.

Our trajectory from our paper at the first Hypertext conference to the SAGAs workshops is similar to that of many others engaged in creative work with, and the critique of, new media. While we remain committed to exploring the computer as an environment for verbal communication, we have also come to see its potential for refashioning the audiovisual media of film and television and whatever media of what might be called 'motion textures' that come after them. In our taxonomy of three interactive spaces, we have sought to recognize the multiplicity and interpenetration of verbal and visual representations of which new media are capable–i.e. the multiplicity of earlier media forms that our culture is choosing to refashion in digital form and the as yet unrecognized hybridized and bastard off-spring which they spawn in the name of newness. In our three planes of interaction, we have sought to recognize how the creator and participant can engage each other in interactive space, even when one or both of them are themselves at least partly creations of what Aarseth characterizes as text machines "for the production and consumption of verbal signs" (11).

As our SAGAs projects have shown, the engagement between creator and participant inevitably engages us in the redefinition of identity or of the processes by which we construct identities for ourselves and for each other in the stories we tell or which, some propose, may eventually tell themselves to us. By summoning the history of our own uncertain attempts at understanding and indeed creating our own new stories, we mean to suggest that what is new in new media is our seeing ourselves own images.

Real novelty, Bolter and Grusin suggest at the end of *Remediation*, would have to reside in "a new medium that did not refer for its meaning to other media at all" (271). Though those two suggest that "for our culture such mediation without remediation

seems to be impossible" (271), we two (fully aware how much our corporate and collaborative authorship mirrors theirs) might suggest that novelty, like any mirror, is both more and less than it is cracked up to be.

Works Cited

Aarseth, Espen. *Cybertext: Perspectives on Ergodic Literature*. Baltimore: The Johns Hopkins UP, 1997.

Binkley, Timothy. "Refiguring Culture." *Future Visions: New Technologies of the Screen*. Eds. Philip Hayward and Tana Wollen. London: British Film Institute, 1993. 10 Oct. 1998 <http://www.rochester.edu/College/FS/Publications/BinkleyCulture.html>.

Birkerts, Sven. *The Gutenberg Elegies: The Fate of Reading in an Electronic Age*. Boston: Faber and Faber, 1994.

Bolter, Jay and Richard Grusin. *Remediation: Understanding New Media*. Cambridge: MIT P, 1999.

Bolter, Jay David and Michael Joyce. "Hypertext and Creative Writing." Proc. *Hypertext '87*. Nov. 1987, Chapel Hill, North Carolina. New York: ACM, 1989. 41-50.

Cameron, Andy. *D I S S I M U L A T I O N S*. 10 Oct. 1998 <http://www.wmin.ac.uk/media/VD/Dissimulations.htm>.

Eskelinen, Markku. "Cybertext Narratology." Digital Arts Conference. Atlanta. 1999. 3 March 2000 <http://www.lcc.gatech.edu/events/dac99/>.

Eyzaguirre, Alan. *Hypermedia as Film*. 10 Oct. 1998 <http://www.atdesign.com:80/~ake/cgi/reel/base/webcraft/03/>.

Johnny Mnemonic. Dir. Jonathan Wiedemann. Propaganda Films,1995. SONY Playstation.

Joyce, Michael.*Othermindedness: The Emergence of Network Culture*. U of Michigan P, 2000.

—-. *Of Two Minds: Hypertext Pedagogy and Poetics*. U of Michigan P, 1995.

leGrice, Malcolm. *KISMET, PROTA GONY, AND THE ZAP SPLAT SYNDROME*. 10 Oct. 1998 <http://www.wmin.ac.uk/media/VD/ZapSplat.html>.

Manovich, Lev. *Cinema as a Cultural Interface*. 10 Oct. 1998 <http://jupiter.ucsd.edu/~manovich/text/cinema-cultural.html>.

Miller, Laura. "www.claptrap.com." *New York Times* 15 March 1998.

Mr Payback. Dir. Bob Gale. SONY, 1995.
Mulvey, Laura. *Visual and Other Pleasures*. Bloomington: Indiana UP, 1989.
Murray, Janet. *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*. Cambridge: MIT P, 1997.
Penny, Simon. *The Darwin Machine: Artificial Life and Art* 10 Oct. 1998 <http://www.uiah.fi/bookshop/isea_proc/nextgen/penny.html>.
Run Lola Run (*Lola rennt*). Dir. Tom Twyker. X-Filme Creative Pool, 1998.
Samsel, Jon and Darryl Wimberley. *Writing for Interactive Media: The Complete Guide*. New York: Allworth P, 1998.
Shaw, Jeffrey. *The Legible City*. 1989/91.
---. *Place—a User's Manual*. 10 Oct. 1998. <http://www.kah-bonn.de/1/17/0e.htm#1>.
Taylor, Mark C. and Jack Miles. *Hiding*. Chicago: U of Chicago P, 1998.
Tikka, Heidi. "Vision and Dominance—A Critical Look Into Interactive System." *ISEA'94 Proceedings, the 5th International Symposium on Electronic Art*. The Inter-Society For The Electronic Arts, Aug. 1994, Helsinki Finland. 10 Oct. 1998 <http://www.uiah.fi/bookshop/isea_proc/nextgen/j/10.html>.
Turkle, Sherry. *Life on the Screen*. New York: Simon and Schuster, 1995.
Weinbren, Grahame. "In the Ocean of Streams of Story by." *Millenium Film Journal* 28 (1995): Interactivities, 15-30. 10 Oct. 1998 <http://www.sva.edu/MFJ/GWOCEAN.HTML>.
---. *March II*. 1997. 10 Oct. 1998 <http://www.creativetime.org/html/weinbren.html>.

Appendix:
An Interactive Taxonomy

1) Environs

Imagine the space where viewers encounter this work. No talk here of interfaces, etc., merely
where are the images?
where is the audience?
how many in the audience?
how are they situated (seated, standing, etc.)?
do others see the audience?

2) Movement

does the audience move?
does audience movement affect the point of view?
do the image frames (presentational planes) move relative to the audience?
do other scenic elements (sound, etc.) move relative to the audience?

3) subjunctivity

does the audience know what might have been?
can the audience retrieve lost possibilities (what might have been) within a single viewing without returning to the beginning?
can the audience return to the beginning ?
can the audience return to other scenes which hold the promise of recovering what might have been?

4) emotions

if we begin with the assumption that a conceptual remake preserves the emotional impact of the work it is based upon, what emotions drive this particular remake?
how and where do humans normally experience these emotions?
how do they convey this experience?
how do they confirm that others feel likewise or similarly?
what scenic elements represent these emotions in this scenario?

5) variations

what sorts of things happen repeatedly in this scenario?
who controls the repetition of events/experiences?
are repeated events/experiences available throughout the work, or do some have a temporal order (do some come before another)?
do some events/experiences degrade or disappear once they are presented?
are some events/experiences presented by default (temporal order, dramatic necessity)?
do some events/experiences merge or overlap with others?
do the images alternate between mediums (film, video, computer animation, etc.)?

do some events/experiences depend upon actions of the audience (back story, mystery, secret, puzzle, reward)?

6) events

are all events depicted within the image frames or scenic elements ?
or are some events not depicted and rather recognized/enacted by the audience?
can an individual audience member control the viewing or must there be some consensus?
can individual audience members encounter different events/experiences?
if so, can individuals discover what others experience?
are there human or other actors outside the image frames or scenic elements ?

V

Stories from Wired Desktops

Teaching with Technology