

# INTERACTIVE NARRATIVE; A FORM OF FICTION?

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*The narratives of the world are numberless. Narrative is first and foremost a prodigious variety of genres, themselves distributed among different substances-as though any material were fit to receive man's stories. Able to be carried by articulated language, spoken or written, fixed or moving images, gestures and the ordered mixture of all these substances; narrative is present in myth, legend, fable, tale, novella, epic, history, tragedy, drama, comedy, mime, painting..stained glass windows, cinema, comics, news item, conversation*

(Barthes-The Structural analysis of Narrative in Image-Music -Text )

**N**arrative permeates every aspects of our lives: all societies and cultures and individuals generate and live by the stories they tell themselves. In the personal sphere we are constantly converting the past into an ordered edit of the significant..or trivial, in other words: memories. While these may be recalled in an associative or seemingly random manner, they are tied to a structure implicit in the history of the individual. Once in the social domain, linearity seems to become an essential part of communication.

The problem is that the addition of Interactivity places an intolerable contradiction on what is understood as traditional narrative. It implies that the reader/spectator be transformed into a true authorial role as shaper of events , weaver of stories, a possessor of agency:

*Interactivity replaces the concept of the passive viewer by the active participant....An interactive cinema needs to offer a fundamental range of choices to the user ...This cannot be confined to a few alternative linear routes, endings or character view-points in an otherwise linear narrative structure.*  
(Malcolm LeGrice -Virtual Dialogues)

For the artist the struggle for appropriate form is never an easy one:

*Most people imagine there's a spectrum between conventional written stories on one side and total interactivity on the other. But what I believe is that what you really have are two safe havens separated by a pit of Hell "*  
(Walt Freitag in 'Wired ' August 1995)

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But the challenge is worth the labour, since the rewards of the new medium are manifold:

*...it is the quality of direct physical and kinesthetic engagement, the rolling of hapticity in the service of both drama and the dramatic, which is not part of the cinematic mode.*  
(Allucquere Rosanne Stone)

Inertia in artistic practice and commission ensures that, although interactive narratives will soon become common-place through broadcast on cable, satellite, network or CD-rom; such forms as exist often remain mere extensions of spectator modes such as video, or cinema; only becoming truly interactive when the author attempts to transcend the syntax of earlier art forms and invents a coherent artistic language for interaction in the virtual world, capable imaginatively engaging the audience at the deepest levels of serious art.

The issue of narrative and dramatic structure is not one that will easily be resolved. Robert Coover remarks about Hypertext in Camerawork hold true for all interactive forms:

How does one judge, analyse, write about a work that never reads the same way twice?

Obviously, new criteria are needed to evaluate such a radical departure from tradition, but the form itself defies precise definitions

*These explorations are crucial to how the world can be redrawn and viewed in an art whose power is in its openness and polyphony.*  
(Regina Cornwell)

A process of education is also desperately needed for the growing audience of such works. Recognising the narrative codes of traditional media is now a daily unconscious act. On opening a newspaper, switching on the television, going to the theatre - we adjust automatically to the medium's unspoken code and its implied etiquettes. I doubt that we have yet learnt as audience the code and language of the interactive, or even that such a language has been fully formed by any practitioner.

Pioneers of interactive narrative such as Luis Borges and Robert Coover anticipated some of the negatives of the form and of the game as a narrative vehicle, before it actually existed: In 'An examination of the works of Herbert Quain', Borges invents an English multi-linear novelist of the 1930s and both anticipates hyperfiction and Barthes's contention of the death of the author, when he makes Herbert Quain say of his second novel, 'April March':

I lay claim in this novel... to the essential features of all games: symmetry, arbitrary rules, tedium. Indeed, Quain was in the habit of arguing that readers were an already extinct spe-

cies. "Every European", he reasoned "is a writer, potentially or in fact"

In the work of Robert Coover we find a different approach: the sudden move from stream to stream of parallel lives or consciousnesses. In 'The Babysitter' interwoven scenes are re-told in ever more fantastic salaciousness, as though a heavy breather had control of a joystick and kept pressing the more bizarre button.

In many ways traditional written Narrative resembles musical code in the discipline of its elements:

*art is without noise..art is a system which is pure, no unit ever goes wasted, however long, however loose, however tenuous may be the thread connecting it to one of the levels of the story.....writing is inescapably distinct*  
(Barthes-The Structural analysis of Narrative in Image-Music -Text)

To understand the failures of most current attempts to create interactive fictions it is first necessary to determine the grammar of traditional narrative forms. In his essay in 'Dissimulations' Andy Cameron wisely quotes Barthes in support of his claim that traditional fiction cannot sustain the conversion into interactivity. And indeed, on re-examining structuralist analysis it becomes obvious that most interactive fictions in hypertext form tend to be a collection of 'cardinal functions' or narrative hinge points without the necessary 'indices' and 'catalysers' which add depth and flow to the narrative:

*These (nuclei) are both consecutive and consequential ....a catalyser... accelerates, delays, gives fresh impetus to the discourse..the catalyser ceaselessly revives the semantic tension of the discourse, says ceaselessly there has been, there is going to be, meaning...A nucleus cannot be deleted without altering the story, but neither can a catalyst without altering the discourse*  
(Barthes-The Structural analysis of Narrative in Image-Music -Text)

and even more crucially, lack the full orchestration involved in successful form:

*Narrative thus appears as a succession of tightly interlocking mediate and intermediate elements; dystaxia determines a 'horizontal' reading, while integration imposes a vertical reading..each unit is perceived at once in its surfacing and its depth and it is thus that the narrative works*  
(Barthes-The Structural analysis of Narrative in Image-Music -Text)

But Cameron's argument is ambiguous about future strategies for creating interactivity, centering as it does on the computer game as a way forward, and ignoring other forms of narrative where interpretation plays a stronger role than in the linear novel.

In many ways Drama differs from narrative fiction through the freedom of interpretation given to the performance. There are as many versions of Hamlet as there are directors; music is even more vastly dependent on the interpreter. The composer's original coding is given new 'interactive' life with each performance-in this we seem but one step away from Barthes's conclusions about authorial authority:

*We know now that a text is not a line of words releasing a single 'theological' meaning (the message of the Author-God) but a multi-dimensional space in which a variety of writings, none of them original, blend and clash. The text is a tissue of quotations drawn from the innumerable centres of culture ..but there is one place where this multiplicity is focussed and that place is the reader..The reader is the space on which all the quotations that make up a writing are inscribed without any of them being lost; a text's unity lies not in its origin but in its destination.*

(Barthes-The Structural analysis of Narrative in Image-Music -Text)

However, whilst we know how much influence such interpretations and inflections beyond the authorial can have on the fixed codes of the script or score in music or drama, in the case of interactive narrative must the logical conclusion be that we are reduced to the role of amateur architects and builders, constructing our own storylines, as in Max Whitby's metaphor?

*By giving the audience control over the raw material you give them precisely what they don't want. They don't want a load of bricks, they want a finished construction, a built house.*  
(Max Whitby-Multimedia Corporation)

And if, by necessity, Hyper-fiction narrative structures are composed of multiple hinge points; are all first attempts at interactive fiction then doomed to take an obvious 'tree' structure form with all its inherent disadvantages?

*The volume of story web increases exponentially with additional points of interaction. An author is faced with an inevitable and depressing tradeoff - sacrificing time spent on the texture of the narrative, its literary or cinematic qualities, for an enhanced interactive complexity. The result can be interactive but schematic, resembling the outline of a story rather than the story itself.*  
(Andy Cameron, Dissimulations )

This schematic domination of the structure at the expense of content is vividly critiqued by Gareth Rees :

*These writers have all come up against the exponential problem, the combinatorial explosion of the number of endings as the number of choice points goes up. With ten binary decision points, there are a thousand endings, with twenty, over a million. .. If every English-speaking person wrote a single section, together they could not complete all the branches on a*

*tree with 28 decision points ( a story in Chinese would get one decision point further) .."*

(Gareth Rees -Tree fiction on the World Wide Web )

And the absurd reductionism of such an approach tellingly satirised in an imaginary interactive Hamlet:

*1.[the battlements of Elsinore Castle]*

*HAMLET: To be or not to be, that is the question*

*If Hamlet takes up arms against a sea of troubles, go to 3;*

*if he shuffles off this mortal coil go to 2*

(Gareth Rees -Tree fiction on the World Wide Web)

In our own production of 'Media Myth & Mania' (Ship of Fools research group, based at the university of the West of England, Bristol) we encountered the intrinsic problems of the tree form, forcing the participant to repeat a part of the logic branching on each replay and constraining any true freedom of choice in the development of narrative.

Designed as an interactive spoof game, using digital sound and photographic sequencing, it examines issues of power and control of the mass media by a multi-choice biographical journey through the life of a media 'Mogul'. The individual player identifies with the protagonist and makes moral choices at various life stages viewing the consequences in dramatised photo-romance style tableaux.

Photo-realistic image based adventure games are a growing section of the computer games market and are spearheading the penetration of interactive CD into the domestic environment. Our game was an attempt to subvert this process by de-mystifying the use of representation within the genre, through both form and content. Density was achieved through themes related to the role of public media and their relation to the domestic sphere being questioned via hidden quotes and layered juxtapositions of facts embedded behind the tableaux.

Photo-romantic magazines and adult comics provided the inspiration for the visual 'feel' of the piece. Actors were posed for various life situations and placed digitally against computer-generated photomontage backgrounds. In a sense this updated the Citizen Kane idea of rooting the public figure in the personal depths of childhood. Biographical parallels to the lives of such contemporary 'Moguls' as Maxwell and Murdoch are explored.

In consequence the piece was structured as a dual branching choice seven ages of man or woman interactive biographical narrative, with the player assuming the role of the either male or female Mogul . The player chose between two action options at each level. There were more than 80 Interactive tableaux images in the whole game, plus accompanying sound, text and Quick Time movies. A mythic parallel universe of neo-classic futility interweaves the narrative at various key points as a metaphor for the ultimate emptiness of the scramble for media control.

A different structural form is offered by Coover's idea of parallelism or concurrent streams between which the viewer can alternate without breaking the narrative flow. In Graham Weinbrene's interactive cinema piece 'Kreutzer Sonata' the viewer is offered control over the aspect of the narration - the screen is divided into four temporal regions, left for flashback, right for the present, up for an expanded present and down for filmic elements which are outside of the time of the story altogether.

In Jon Dovey's Moviola Toybox CD rom: 'The Desktop Theatre of Amnesia' (Jon is a member of the Ship of Fools group) the techniques of parallelism were tested, as emotional states and their visually equivalent symbolic analogues are mapped onto a matrix of Quicktime minimovies, like multiple personalities inside one frame.

In 'The 12 Most Beautiful Things I Know' my colleague Chris Hales created a lyrical piece of interactive cinema when the syntax of interaction involves flow rather than branching, where the visual clues as to active screen areas are hinted at by the use of colour and movement within the frame.

In its participatory form interactive narrative is found in networked interactions with events with no director, but many equal players who are also the audience; in situations open at both ends, engineered by the artist for shared development. But, as a short exploration of such sites on the Web makes only too clear, so much of this type of interactive art has been concerned with simply exploring its own matrix of delivery, that some of the concerns of mainstream art practice have taken a secondary role. It is no accident that as virtual forms became a fashionable currency, artists like Damien Hirst and Gilbert and George turned to ever more visceral installations of bodiedness. (This situation is starting to change with a rush of fine artists such as Helen Chadwick, whose previous work has been deeply physical, trading tactility for the level of interaction afforded by CD-rom)

This participatory aspect of audience as performer is im-plicate in most VR sessions. Brenda Laurel has already explored this in her 'Place holder' experiments at Banff Centre in the early 1990s, where local Canadian Native Indian myths were incorporated into a participatory performance. This extension of drama into Virtual Reality marked a profoundly important step in the development of narrative forms.

Participants could create their own stories within the broad boundaries set by the artist. Laurel's work fused improvised theatre with the cutting edge of VR simulation, combining sensor feedback for arms and torso as well as hands and head. The participants could alter their voices electronically to match the mythic characters whose identity they assume, and can swim or fly through the recorded video landscape mapped onto a computer 3D model.

In 1989 in the 'Legible City' Jeffrey Shaw also broke new ground, combining multimedia effects with a virtual reality environment. The City is a computer controlled and projected virtual urban landscape made up of solid three-dimensional letters that form words and sentences instead of buildings along the sides of the streets. The architecture of text replaces exactly the positions of buildings in a plan of the real cities (New York and Amsterdam). This spatial transformation of narrative is literal in every sense.

Bicycling through this city of words is a journey of reading, choosing a direction is a choice of text and meaning. The image of the city is projected on a large video screen in front of the bicycle which is fixed like an exercise-bike. The image is computer generated in real-time using a combination of a humble PC and a Silicon Graphics Iris workstation. Feed-back mechanisms attached to the pedals and the handle bars control it so as to simulate a feeling close to that of cycling through a real environment. Just in front of the viewer is a small liquid crystal display which locates the cyclist within the overall plan of the city. The texts have a close correlation to the history of the city, being fictional tour-guide monologues delivered by illustrious sons of the city, such as, in the case of New York Frank Lloyd Wright and Donald Trump

Although the Spatial metaphor is a prevalent form in many interactive narratives, as Cameron points out this is:

*more than just the change from a simple line to a more complex diagram or space, it involves moving from one kind of representation to another.*  
(Andy Cameron-Dissimulations)

The role of the artist is radically challenged in the construction of such immersive narrative environments, The action of the artist/author begins to resemble the designer of a model and although the artist may describe its properties in great detail, he or she is no longer author of the events set in motion by the audience, here one can guess at a new critical theory drawn from architecture as much as from theatre, from cybernetics as much as literature.

As Cameron contends, Games have also been seen by many as coherent templates for new forms of interactive narrative and even such commercial models as 'Sim City' or 'Civilisation' are fascinating examples of complex simulation of story shells. The Player/ Participant/ Gamer follows formal and rule-based interactions for pleasure and stimulus, but is nevertheless conscious of participating in an apparently reductive medium, incapable of addressing the deeper existential concerns of art. This lack of resonance, seems precisely caused by the random shifting nature of its unfolding narrative (although the causality of time and action is maintained).

But we do have access to quite other models than simulation games in examples of social and participatory story spaces such as are provided by Ceremony, Carnival and Ritual- symbolic affirmations of spiritual watersheds or transitions, precise narrative codings of resonant moments in a culture's development as well as in individual lives, a rules-based and compelling immersive experience, often embodying the primary narratives of adolescence, maturity and death.

In dreams as well a form of associative narrative occurs, seen as the 'Royal Road' into the unconscious by Jung and Freud alike. Narrative does appear to underlie our deepest mental structures -Jung has outlined the narratives of the collective unconscious and the process of individuation and demonstrated how ritual and rites of passage externalise such structures culturally. Narrative as a spatial metaphor is ubiquitously implicit in every cultural expression : in mythology (Aboriginal Songlines) ; in the visual arts (sculptures of Richard Long) and everywhere in architecture. and engineered social space.

A Gothic cathedral such as Chartres is the work of many hands, guided by a shared vision. Its beauty is both in the detail and its overall shape, a metaphor of stone forests, filtered light, soaring trunks, interlaced branches-immediately recognised, it can be read by the pilgrim as a series of self-directed journeys or as a guided ceremony, for example by tracing the floor maze as a analogue of life spiralling towards death.

This serves as a useful model for an immersive narrative environment -the only limits of agency are the fixed walls and the rules-based rituals of Christianity, where the mediaeval mind found a living enactment of religious narrative

In the current Dreamhouse project, Ship of Fools were seeking to bring such an experience up to date, combining spatial, ritualistic and dreamlike elements. As in many other games we find ourselves in a house. However here the house stands as a place of identity, a place that offers us experiences that reflect upon who we are. In the dream world, the house represents self, a space of memory and formation. Here it is a place where we tell stories, a narrative space. Stories which inter-relate to create a space of reflection.

Our walk through house offers access to a number of rooms or experiences. Each has been designed by an artist reworking traditional storytelling structures. So the house becomes an interactive theatre, where different tales are triggered by audience exploration.

The bland domestic environment of a real suburban house (in fact a real Barrett's 'Show Home' in a suburban estate at Bradley Stoke, the negative equity capital of the U.K.) is the main interface. Through various devices-doors, windows, mirrors and other objects, gateways to the narratives of a semi-mythological world are opened by the user. The piece focuses

on the transmuting of known mythologies into more personalised or contemporary forms. Various rooms are appropriately matched to the different psyches of those involved in authoring the piece. Short connected narrative fragments can be awakened by the viewer through an examination of the interface environment. A visitor to the house can interact with these presences and be caught up in their world, often through a response to a riddle or enigmatic question.

A major part of the content involves a decoding of the family as a construct. Themes of restriction and drudgery sit alongside those of the forgotten or hidden worlds of childhood- the chest in the attic, the secret garden etc. Images we keep from the world, but pass on freely to our own children.

The themes of intimacy and alienation are explored through non-linear narratives presented through such devices as multiple talking heads, each with their particular fragments, or through a hall of sleepers who can be individually awakened. The interactive house is a place of magic, permeable to other mythic spaces, but the narratives involved attempt to form a bridge between the personal and the political. Various sources of narrative structure and imagery have been adapted, ranging from Oedipus, Orpheus and Euridice, Theseus and the Minotaur, Icarus and Daedalus, Celtic domestic myths and legends, Biblical reference and stories and the modern mythologies of Science and Technology.

In speaking of the pleasures and engagement of VR environments Janet Murray of MIT Media Lab identifies "Immersion, rapture and agency" as the key requisites of interaction in virtual space. While these certainly identify the pleasures of the medium, they do not of themselves create the complexity of meaning found in the fixed structures of traditional forms.

In the search for narratives without predetermined scripting, I believe that through use of independent agents, artists will increasingly be led towards what I would term 'The Pinocchio strategy'-at present more a pious hope than a reality.

Laurel's researches in interactive narrative led directly to the Oz project at Carnegie Mellon which used live actors and directors to test Laurels's rules-based for dramatic interaction in Virtual space-the ostensible reason was cost, but perhaps encoding the complex rules of drama and character were well beyond any Artificial Intelligence programmer's ability at present. The end of such simulations must be in convincing forms of artificial life and the complex coding of autonomous agents using genetic algorithms. The state of the art seems to be at the level of MIT's attempts at programmed behaviours exemplified by Bruce Blumberg's virtual dog in the 'Artificial life Interactive Video Environment', where a computer generated ball-fetching creature is mapped onto a mirror image of the real user's

environment. The wooden nature of such experiments to date suggest that they might need more than the attentions of a Good Fairy to breathe artistic life into their frozen hearts.

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*Media, Myth and Mania* was produced by Ship of Fools , a mixed group of six male and female electronic artists, as a research project at the University of the West of England in 1994 , part of *Silver to Silicon-The photograph in the Digital Age* , an interactive CD-rom exploring the impact of the digital on photographic practice (a joint Artec / University of the West of England / Watershed / Focal Point research project)