Creating Screen-Based Multiple State Environments: Investigating Systems of Confutation

Submitted to Glasgow School of Art for the degree of Doctor of Philosophy
September 2004.

Declaration

I hereby declare that this submission is my own work and that to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma of the university or other institute of higher learning, except where due acknowledgement has been made in the text.
Date: 08.09.04

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Abstract of the research

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Donna Leishman, 2004

The intentions of this practice-led thesis are to investigate the interplay between Internet based digital narrative, image and interaction, and ultimately develop new practice, which primarily within the experiencing of the artwork articulates a new contribution to the field of study. The dual literature and contemporary practice reviews highlighted this as desired output. The predominant research in the field is not focused on the production of new projects but uses various forms of literary and critical theory to search out new interpretations and structural understanding of the artefacts in question. Similarly the reviews revealed a strong set of visual hegemonies - namely the ascent of neo-minimalism and a preoccupation with the replication of reality. My practice sits between these poles as being a hybrid of detailed line art, handcrafting and popular imagery, and as such, functions with uniqueness. The interstitial paradigm is used to support the practice, as parallels are drawn not only in the aesthetics of the work but also the politic of the communication.

The thesis is organised in three sections, Chapter 1 is theoretically orientated, aimed at defining the context for the practice. Chapter 2 is focussed on the artworks and in the main discusses the thinking behind, development and the production of two new projects -- *The Bloody Chamber* and *Deviant: The Possession of Christian Shaw*. Chapter 3 presents the discoveries rooted in the practice, concludes the thesis and finally offers some possible vistas for further research.

The research questions were set-up to investigate the structural and aesthetic possibilities on offer to the practioner when aiming to create artworks that interstitially function on the premise of confutation and resistance whilst still attempting to create a sense of narrative immediacy.

Through a combination of making practice, reflective evaluation and the appraisal of existing artworks I developed a new aesthetic in answer to the research questions. This aesthetic is termed as the "fragital". The fragital is an uncommon pairing of the digital experience -- that being the individualized remote onscreen touch, and the sense of a material and sensitive tangibility. This was used as a means to significantly and emotionally immerse the participant within the multiple state environment, whilst still in the structural accessing of the project, utilising the powers of confusion and disturbance as inherent in interstitial practice.

The culmination of the research and an example of the fragital at work -- is located in the project Deviant: The Possession of Christian Shaw. The artwork is elucidated using critical insights from a group of twelve invited expert participants and an in-depth self-analysis. This group was invited on

the basis of their interdisciplinary abilities, personal voice and commitment to my research area. The objective viewpoints of these participants was used not only to aid further understanding of the perception of the project but also to help me as the artist to extract extra arguments, complement my subjective understanding and gain additional contextual insights about my work.

The different strands of the presented research work together to offer new insights into the production and concept of screen-based multiple state environments, and an original artefact *Deviant: The Possession of Christian Shaw*, which stands as a method to experience the core of research argument. The insights and discoveries as located in this thesis would be of use to other digital narrative practioners and those studying new media art.

Foreword

The work as presented in this thesis is articulated through and resides within digital practices and in order to maintain an intellectual consistency and continuity of the argument the work is submitted in an entirely digital format. The structuring of this thesis in done in a manner that reflects the epistemological grounding for the research. This grounding was contextually multiplicious and interwoven. Thus the body of commentary texts where appropriate contain links to the practice, live external websites, and extended commentaries. The extended commentaries are of a richer than normal footnote style and are intended to offer to you the reader a further discursive vein. Please note if you choose not to explore the various links or the extended areas of reference you will experience another type and more surface reading of this thesis.

The results of this practice-led research study comprises of:

1. Thesis - this volume.
2. Sketchbooks, notes, and a computer hard disk, which combined, provide additional supporting material for the thesis. Please note indicative samples of such materials are digitally represented in this volume.
3. The website: http://www.6amhoover.com (2001+) which served and continues to serve as a basis for contact and the dissemination of my practice into a broader context.

Technical Notes

To read/participate with this thesis the suggested technical requirements are:

1. Please enable pop-up windows & JavaScript.
2. DSL or Broadband Internet connection.
3. Screen Size Minimum: 1024 x 768 pixels. Preferred Size: 1152 x 864+ pixels.

4a. In order of preference -- Internet Browser **PC**:

. Internet Explorer 6.0 + or Netscape Navigator 6/7+

4b. Internet Browser **Mac**

. Safari, Netscape Navigator 6/7+ or Internet Explorer 5.2 +

5. Macromedia Flash Player 7
6. Audio Card & Speakers.

Guide for use

- Icon denotes a live URL external pop-up window

- Icon denotes an offline external pop-up window

- Icon denotes return back to previous location

- Icon denotes link to Chapter 1

- Icon denotes link to Chapter 2

- Icon denotes link to Chapter 3

Please note: when within Chapter 1 for example, the icon represents a link to another section of the same chapter. To return to your previous location please use the "Back" button in your browser, ditto with Chapter 2 and Chapter 3 .

The icons when present outside their designated Chapter, will significantly link to a new location in another chapter. To return to your previous location please use the "Table of Contents" menus on the left hand side of the thesis interface.

Chapter 1

1.0 Introduction

In 1961 Digital Equipment Corporation's new model, the *PDP-1* minicomputer, arrived at MIT's electrical engineering department in the hope that the students would be able to use the technology to come up with something interesting [1]. Their work resulted in two developments. It was the genesis of the digital gaming culture. Also, it resulted in the non-academic use of a linked network of early computers which, combined with a late 1970's by-product of the *ARPANET* (US Department of Defence's Cold War project to create an nuclear war-proof communications network) saw the birth of a much more recognisable network: the Internet. Four decades later the primitive blips and whirs of such machines have been replaced by the smooth dulcet tones and the alluring curves of the *eMac* circa 2003; ultra fast and lightweight Sony laptops; a plethora of mobile technologies. The website address (u (niform) r (esource) l (ocator)) and the art of the videogame have become integral parts of our cultural psyche, which compete for our custom and daily attention. Interestingly however, neither videogames nor the Internet and its native practices have ever been regarded as intelligent or particularly sophisticated creative pastimes, that is, until very recently. The majority of Internet traffic is taken up by email, the other standardised uses are booking flights, hunting down bargains, searching out incredulous news or our old classmates [2].

Technologies unearthed decades ago are still finding utterly new uses. Ever-expanding worlds of imaginative creators adapt them to their own needs. In the early days, these blooming communities centred on software technologies: IRC / MUDS, ASCII, HTML, Flash [3], though conceptually, they communicated a multitude of different concerns. Perhaps more importantly, both the artists and their audiences have taken advantage of the Internet's unique ability to unite people irrespective of geographical location through online forums, links, blogs [4] and email groups. These many cultures share a palpable attitude that is an extension of the avant-garde [5]. Practitioners are interested in the process of creating something new that is independent of established modes of expression. The Internet provided them with a virtual location that was ideal; it was uncharted, unmonitored, unmarketed, where artefacts could be distributed freely. Until very recently, it was not a commercial network. The Internet appears to be a polar opposite of the mass communication model, in that there is often a high degree of intimacy between the audience and the art. For example, participants can view it and use it both in their home and at work; this experience is in the main individualized and unlike elsewhere in media. Such relationships amongst creative peers and responsive audiences can border on the invisible: enclosed and intimate and rewarding. The Internet, in the relatively few years that have passed since its inception, has seen a huge amount of dichotomous development in that both the corporate

presence and the development of small, niche and personal practices have significantly blossomed.

1.1 Introduction to the context

My field of interest is screen based and more specifically Internet based digital visual art. Within responsive works the participant uses primarily perceptual and explorative actions: looking, listening, selecting and then interpreting. These types of communication exchanges are unconventional because perceptual and interpretive functions are married with explorative interactions [6]. My interest is the investigation of these actions and their relationship to the seeing and understanding of the narrative artwork. I search out difference and confusion as a main method to entice the participant. The practice as submitted in the thesis utilises the multiple features of:

·   hyperfiction theory's treatment of closure [7],

·   post-modernist notions such as ambiguity and fragmentation [8],

·   and a representational style that offsets these nonconformist agendas by interpretative accessibility in the directness of the visual communication [9].

I propose that these responsive multiple state systems offer new modes of exchange and new, unusual and participant led methods of reading. These systems can be conceptually difficult opposed to the "ease of use" that modern communication exchange continually aspires towards. A long-standing tradition dictates that the interface designer creates systems of clarity and coherence, to ultimately evoke rewarding generalised and intuitive responses from the participant. I propose to react against this insistence by subverting the practice of what is commonly called "interface design" [10]. Interface can then offer the artist a context and an illusionary two dimensional window by which to play with and challenge participant expectations, offering different kinds of responsive experiences unlike commonly found in commercial website and multimedia projects [11].

Literature Review

Contemporary Artwork Context Review

1.2 Purpose of study

> "Storytelling is fundamental to society, culture, and communication. Narrative is the basic structure by which we share our ideas and experiences. As we begin to use the Internet to tell stories, the narratives we communicate will have the benefit of interactivity, programmatic behaviours, non-linearity, and physidigital space and multi-user environments -- aspects that traditional media has (sic) never truly understood." Josh Ulm [12].

The aim of the study is to explore the potential, purpose and effects of developing responsive and multiple state systems that refute the commercial Human Computer Interaction (HCI) [10] designated rules of interaction. The research shall challenge conventional methods of constructing meaning from image-based communication such as traditionally offered by the visual artist to the participant. I will clearly concentrate on developing participant responsive systems that utilise multiplicity of form and hybrid aesthetics. This is offered as an alternative to the growing hegemony of new media practice and new media aesthetics. I am interested in the interplay between representation of symbol, icon, cultural metaphors, semi-recognisable opposed to abstracted form and the participants' interactive enquiry.

The final aim of the research is to offer a theory of what tropes, trademarks and opportunities (social value) this new form of narrative practice offers to participants

The thesis argument is framed around both positioning and revealing a new form of practice -- the practice of responsive interstitial [13] pictorial based narratives. The argument is constructed through two research questions, which are answered by the practice; commentary texts (made up of practice documentation, self analysis, and analysis of context); as well as using the insights from invited expert participants.

1.3 A word about me

My position is that of a practitioner working with unconventional responsive pictorial narrative and Macromedia Flash. And as such, I have a particular perspective on the various established and emergent fields of practice as situated within the Internet -- that being someone who has always existed on the edges of the major Internet narrative cultures, e.g. populist Flash and literary hypertext fiction.

My first published responsive narrative was *RedRidinghood* 🔲. This project was posted onto the Internet in December 2000. Since then it has been regarded by many as a seminal digital narrative. It has been much used as a curriculum text within the blossoming fields of digital media and hypertext fiction studies [14]. Over the last four years, during which the research has been conducted, I have further investigated the interplay between narrative, image and interaction, developing my practice in search of a compelling and new narrative form. This has resulted in a preparatory project as sketch -- *Angel Interceptor* 🔲; and two significant projects -- *The Bloody Chamber* 🔲 and *Deviant: The Possession of Christian Shaw* 🔲. These four years were charged by change: firstly the "end of books" debate [15], the digital utopia mindset [16], the resurgence of textual poetics [17], the perceived death or failing of hypertext fiction [18], the rise of Flash art [19], the appearance of new mobile and networked technologies [20], the ascendancy of ludology [21]and finally the publication of the first new media reader anthology [22].

In the act of demarcating this thesis, I have uncovered more of what I am not than what I am. For example I am not a hyperfiction theorist, nor a visual narratologist, nor a games designer. I believe my position is best described as a critical practitioner. For example I use the practice as the significant research method. This is unlike the majority of associated research in my field of study 🔲. Such research mainly uses various forms of literary and critical theory to search out new interpretations and structural understanding of the artefacts in question and is not engaged in the practice of producing the work. My practice sits between the main research domains and as such, I can be called an interstitial artist [13]. As a practitioner, my main concern is in the production of a certain kind of digital artefacts. These create specific types of digital and participatory experiences in which the research argument can found. I have discovered

that to adequately describe both what my practice does and what issues it addresses I have had to create some new terms. These will aid in the discussion of my artworks in relation to the stated context.

Literature Review
Contemporary Artwork Context Review

1.4 The research questions:

This thesis will address the following questions:

A   Which aesthetic techniques can the artist develop within responsive multiple-state systems when they structurally secede from interaction mechanisms learnt within the context of traditional and new media narrative forms?

B   How does the artist develop an interactive style and visual vocabulary, which evokes rich[23] responses from the participants whilst challenging them to counter conventional interaction tropes?

Question A

When enquiring into the creation of and phenomena surrounding narrative multiple state systems, the structural premise of the practice is a fundamental aspect as to how the practice communicates to the participant. The research question is set up so that it reveals and illustrates the key structures being deployed in contemporary practices, the most traditional of which being the "dramatic arc". The findings of the research question A will serve as a context which research question B will depart from.

Question B

The review of contemporary practice revealed a strong set of prevailing hegemonies, which have interesting parallels with certain camps in hypertext theory. Their claim is that the dissemination of artworks to a broader audience is impeded by a lack of visually aesthetic texts[24]. Thus research question B is set up to test the possibilities and limitations of creating a visual aesthetic which offers a rich and different sense of immersion in the face of the prevailing new media hegemonies.

The combined and concluded outcomes of both research questions are situated in a new artwork, which in turn function as embodiment of the thesis argument. Many of my comments reside within the artwork, though these are externally supported by some commentary texts and the insights from invited expert participants.

1.5 Thesis methodology

I use a mixed method approach, combining in a triangulated manner:

1. A short historical literary appraisal
2. A contemporary review of practice
3. Both of these illustrate the context of screen and Internet based digital visual art practice. From these reviews I established the field of study. From this contextual base I devised the research questions, which are answered primarily by the practice. This critical practice makes up the third point to the triangle. The practical element is further supported by external critical reviews from expert participants. Full thesis methodology

1.6 Terms and definitions

Many of these terms have been loosely used or misconstrued and are often the root cause of many disagreements between various research domains. Adequate terminology has been a major issue within the critique of responsive artworks (especially defining the limits of narrative -- closely followed by defining interactive). Below are a selection of terms and a description of the rationale as to how and why they are used in the thesis.

Artist or practitioner

In this thesis "artist" or "practitioner" are used instead of author, creator, designer, maker or new media developer. The words "artist" or "practitioner" as used hereinafter refer to a visual artist/practitioner. An artist is someone who uses imagination and skill to create works of aesthetic and cultural value.

Participant vs. user

The term "participant" is used instead of user, reader, interactor, player, viewer, wreader, vuser [25], or audience.

I prefer participant as it suggests a more fluid or reflective role. User (the most ubiquitous term from the above) can suggest more aggressive or commercially driven exchanges. Participant suggests a more equal relationship and has appropriate associations with theatre, open dialogues, and group playing.

Within my own practice, and many of the other types of online artworks, I see the works as types of performances and not aligned to the historical association of object-based art that is conventionally located in galleries or museums.

Responsive vs. interactive or ergodic

In this thesis, the term "interaction" is defined by the cybertext paradigm as laid out by Espen Aarseth in 1997. Interaction is when "nontrivial effort is required to allow the participant to traverse the text" [Aarseth 1997]. Aarseth posits the term "ergodic" instead of the vague term interaction. I have substituted ergodic / interactive with the term "responsive". This is taken to mean a text / artwork that is structurally intended to respond / react to the participant's enquiry. To use the term responsive indicates the emphasis on both the artwork's inbuilt predilections and the participant's choices. Also to use the words responsive/ respond, allows for a more non-fetishized or un-idealised usage in comparison to the heated discussion around interactive or ergodic texts.

Cybertext

In this thesis, the term "cybertext" is used in a looser form than Aarseth' s definition, that being any instance of symbolic communication significantly mediated by a computational feedback loop [26] e.g. when the system responds instantaneously to every action of the participant, which in turn provokes a new response. This definition is not limited to hypertext (a very specialized form of cybertext) but includes distributed Internet applications, virtual environments, games, simulations, and various forms of generative experimental art forms.

Narrative vs. narrative-like

Traditional narrative media are taken to mean books and films. I subscribe to narratologist Gerald Prince's definition of narrative as "the representation of at least two real or fictive events or situations in a time sequence, neither of which presupposes or entails the other" [Prince 1982; p 4]. This highlights the importance of both temporal and causal exchanges between a series of events. Within the practice as submitted in this thesis, the narrative is significantly open. This openness is sited in part with in the visual ambiguity and in the multiple possibilities of sequencing and accessing the narrative. The participant's rules of behaviour are unconventional and as such the narrative may often initially be obscured or hidden. In this sense the narrative is narrative-like or postmodernly narrative rather than traditionally narrative.

Multiple State Environments

Multiple State Environments, or hereafter MSE's, refers to structures that have not one true static state but have different possibilities, and as such come with implied, designated, or yet to be discovered rules which govern the participant's performance in creating the different structural positions. As the ludologist Gonzalo Frasca illustrates:

> "… there is a very particular kind of toy, known as "Transformer". Based on a Japanese animated television series, the Transformers are robots that can transform themselves into different machines. When you first open a box containing a Transformer, you see a puppet with all the characteristics of a robot. After certain manipulations --which may be tricky and, in certain cases, puzzle-like -- the robot can be transformed into, let's say, a plane. The toy is articulated, made of connected moving parts but at any moment you have to dismantle it into different pieces: the transformation takes place without the toy losing any matter. Obviously, the toy has two different states: robot and plane...Our problem starts when we try to understand the Transformer as a whole. Is it a robot or a plane or both at the same time?"

> "Imagine that we gave a Transformer to a child who has never watched the television series and is not familiar with its ability to change. If the transformation is not easy to perform --actually, it is quite common that you have to use a lot of pressure to transform the toy -- the child will just use it as a robot and never discover that it could also become a plane. In order to fully appreciate the toy you need something more than the mere object: you need a rule of behavior. In this case, the rule is "if you perform certain movements, your toy will change its state." Without that rule, the toy is simply a robot; with it, it becomes a Transformer, a dual state toy." [Frasca *Videogames of the Oppressed* 2001].

I have extended Frasca's term "dual state" into "multiple states" and attached the open term "environment" to mean a representation of space instead of worlds, stages, or sets. MSE is used in preference to interactive narratives or digital narratives

Further permutations of MSE's:

(V) MSEs: Visual Multiple State Environments, unlike text based MUD's or MOO's [3].

(Vec) MSE's: Vector based visual Multiple State Environments, unlike virtual reality caves or commercial games, which often use Bitmaps and 3D renderings.

(N) MSE's: Narrative based Multiple State Environments.

Interface

Interface is generally taken to mean a surface forming a common boundary between adjacent regions, bodies, substances, or phases. In this research project the "interface" in question is the onscreen, thus constrained

representation as seen via the computer monitor. This interface is the surface of the digital environment.

1.7 My aesthetic

In my practice, "aesthetic" means the pursuit of particular strain of a visual and digital onscreen interface. One that is a hybrid of detailed line art, handcrafting and popular imagery. In addition to this pictorial style I use a post-modern approach to closure and the structural design of the artworks.

A particular quality of my aesthetic is what I would like to term as "fragital". This implies an uncommon pairing of the digital experience i.e. the individualized remote onscreen touch, and the sense of a material and sensitive tangibility which is located in the drawing, movement, composition and the responsive actions of the visual practice.

Another distinctive attribute to my aesthetic is the sense of hybridity. This is found in the visual language and how it is combined with the handling of the narrative -- the sense of movement and anachronism, the total effect being unconventional an un- or semi-reality in relation to the overarching aesthetic poles of the [replication of reality and neo-minimalism](#) ⬎. This unreality is built upon to create a sense of disturbance, which often fluctuates between a sense of familiarity and the alien. This ideas-in-conflict sensibility as well as the fragital powers much of the aesthetic. The familiar is achieved in the main by the visual language being a mix of popular icons, fashions and the drawn "comic strip" rendering style. The sense of the alien is found in the distortion or subversion of some of the visuals, e.g. physically they are mutilated, or they are in improper historical order and most importantly in the ambiguous non-prompted nature of participants' position. Each project shares the binding signature marks of a central female protagonist, the recurrent dichotomy of blooming and falling down and the hand drawn nature of the rendering. This hybrid of the foreign and the familiar as used to create a sense of disturbance is to be desired within my aesthetic.

1.8 Techniques and technology

The tool I use to construct, render and publish these narrative works is Macromedia Flash (versions 5.0 and MX). This software allows for timeline structuring, drawing and layout, animation, sound manipulation, interaction, programming and most significantly has a uniquely pervasive Internet viewing player [27]. Mostly, I draw by hand with a computer mouse, using this software.

Unsurprisingly, given its ubiquity, using Flash as a production tool is regarded by some artists as being worthy of contention. In his "On the Six Rules Towards A New Internet Art" [Salvaggio 2002], Internet artist Eryk Salvaggio (*Salsabomb*), reflects on damage that Flash has on the developing Internet art scene,

> "from 1998/99… The designers began using Flash and Flash began trickling into art, a complete reversal of the traditional exploitation of the avant garde that usually occurs in the marketplace. The artists, looking to reflect the web as they saw it, learned the tools of the corporate media and things began to blur… The (SFMOMA 2001) site has overloaded on itself and become a parody of bad design and in doing so, set up a new expectation of what net.art was supposed to be: sleek, contentless, indecipherable and above all else, sleek. Did I mention sleek?"

He claims this is part of larger and more serious situation where Internet art has become "more about the "Net" than it was about "art."" and although I use Flash as the core tool I do agree in part with Salvaggio's sentiment that the convergent and parasitic nature of the Flash trend saw:

> "the disappearance of aesthetics in "academic" art, and an overbearingly strong aesthetic in "pop" art - the cult of programmer meets the cult of design; and a giant unified goal where every site must look like Josh Davis' *Praystation* or else it is a failure."

Where I disagree with Salvaggio is with his refutation of the pop aesthetic; fundamentally I support the conceptual premise of pop art (e.g. the return to representational art or tangible objects in a reaction against abstraction -- using materials that are drawn from the everyday world of popular culture-comic strips, advertising etc…), though I suspect that he is referring to the simplified vector style that is easily achieved using Flash. This Flash "pop" style [28] is produced not as a conceptual decision but rather the inbuilt outcome if you use the standardised drawing and colouring tools. Another argument I have with him is that I propose some (not all) of such pop styles will have been the defaulted outcomes of the first generation of outputs. This is mirrored within my own evolution. There is a marked difference in the level of drawing and complexity of shapes in comparison between the *RedRidingHood* project and the *Deviant* project. This is because to draw naturalistically or haptically within Flash requires desire, determination and skill to work in a sense against what the software is set

up to do efficiently. The proliferation of first generation Flash websites (circa 1998-9) were posted up with excitement and energy, often as a result of the practitioners having created interactive or animated artworks for the first time in their lives. This begat an explosion of immature visuals and conceptually thin styles, but one I feel that has grown up [29]. These first generation Flash works were simply sketches albeit globally distributed. Salvaggio goes on to propose:

> " I don't think it is enough for a programmer to discuss code with his code, much as I believe a camera aimed at itself would not have become the most widespread form of media in the 20th century."

On this latter point I strongly agree. Internet art should engage and communicate ideas that exist in media outside the Internet as well as explore the issues that are revealed from the technology and the specific internal mechanics of the network.

Artists statement for further discussion

1.9 The hegemonies of the new media aesthetic

The points below are observations of the prevalent trends growing within the production of contemporary pictorial responsive forms -- videogames, new media art and commercial interface design.

The choice of visual representation is relevant when we discuss methods of successful immersion within responsive systems. LeDiberder brothers state that a characteristic of a simulation (a type of responsive system) is that it pays great attention to detail [LeDiberder 1993]. We can see that within the aesthetics of recent computer games (the Playstation2, X Box, Game Cube) opposed to Internet based practices, there is a move towards photo-reality/replication/illusion of reality, which, for many, is seen as a way to improve better human sensations of presence and immersiveness [30].

Although many practitioners and theorists share this belief, there is a growing realisation at least in the practice of game play, that it has become secondary to the graphical appeal. This opinion has been voiced by Hiroshi Yamauchi, the ex-president of the Japanese game giant Nintendo [31],

> "the game industry should be making games, not movies, and that the development of truly new games, new types of having fun, has all but stopped. The situation is, in one sense, alarming, but this also leaves room for those who are able to stop the insane race for

more polygons per second and concentrate on making games that are fun to play".

Similarly, Scott McCloud reflects that the simple image enables the viewer to have "universal identification", rather than a specific reality.

> "The cartoon is a vacuum into which our identity and awareness are pulled…an empty shell that we inhabit which enables us to travel in another realm" [Ibid; 2 p36]. McCloud questions why we respond to the cartoon as much or more than to a realistic image, and answers "amplification through simplification" [Ibid; 2 p30].

Being human, he claims, we can assign identities and emotions were none exist. Indeed, I believe it is short-sighted to see the aesthetics of screen based forms as being best when photo-realistic or indeed verbal. We should open our minds to mixed realities, when metaphor, icon and symbol are all employed to create other pictorial worlds somewhere between stylised, abstract and photographic. We do this when responding to the rules of behaviour, both in real life and make-believe. McCloud gives an example,

> "In some comics the split is far more pronounced, the Belgian "clear-line" style of Herges *TinTin* combines very iconic characters with unusually realistic background, this combination allows readers to mask themselves in a character and safely enter a sensually stimulating world."[Ibid; 2 p43]

LeDiberders' notion of detail can also be applied not only to imagery as well as craft, into detailed levels of interaction, of movement, of smoothness of experience or complexity of content. The detail can be the glue holding our attention in a well-designed system. I am interested in the development of a kind of digital craftsmanship. An example of this new media craft would be the detailed Internet pixel art style, which often relies on a convincing (though not realistic) representation of the source system e.g. *Habbo Hotel* [32], where each pixel unit of the artificial simulated world is plotted and brought to life.

Another major trend, which sits in opposition to representing reality, is a resurgence of the abstract minimalist style which some have called a "neo-minimalism" [33]. But firstly there existed and to an extent still exists a preoccupation with the mechanical digital, cyborg and the post-human whereby the artworks could be seen to use blinking green pixel type (as seen in the early adventure games), a prosaic use of circuit boards (as a methapor of connectivity and all things computerised) and the appropriation of the syntax of programming -- this could be termed an aesthetics of the technology [34].

Today's trend can be said to be the neo-minimalist aesthetic, which is often a result of programmatic based experiments. In this instance the computer, as instructed by the artist, yields geometric patterns with can either move

independently or as a reaction to the participant, or recently, to external sonic input (typified by *Insertsilence* [35]). This is directly linked to algorithm / trigonometry based equations used within the programming. This resurgence of neo-minimalism is mostly attributed to the Macromedia Flash software and its Actionscript capabilities. As a category, neo-minimalism is often sited alongside notions of post-conceptual (where there is no distinction between works of self-expression and works of social critique i.e. they are part and parcel of the same activity). Other commonly found features of this type of new media work is in the collaboration with post-digital [36] electronic music and the use of the loop/remix as binding metaphors. Rarely are these neo-minimalist projects woven into a sequence or used as a narrative base.

1.10 The short literature review

The history of responsive narrative systems goes as far back as the ancient oral epic [Ong 1982], through role-playing [37], from *Choose Your Own Adventure* books [38], from early games, from postmodernist / modernist literature [39] down to today's digital opportunities -- whereby responsive systems can come in a multitude of shapes and sizes [40]. Contemporary digital responsive or interactive narratives have many manifestations, each of which offer different qualities to the participants' experience. It can be said that the first instance of digital interactive storytelling appeared in the form of textual games (*Adventure* on ARPA net 1967, Donald Woods, Will Crowther). Then by the early 1990s digital hypertext narratives [41] had established themselves as another and new literary form [Joyce 1987+]. Alongside these verbalized hypertexts came the development of the Internet art (Entropy8zuper! , Alexei Shulgin), Flash art (circa 1999), commercial videogames [Miller and Miller 1993], cybertexts, MUDS and MOOs. For all intents and purposes, digital and Internet narrative practices look set to continue to expand.

What follows is a summary of the most influential voices and positions in the recent study of interactive narratives and how each of their contributions relate to my practice and approach.

Brenda Laurel -- Aristotelian Poetics

Brenda Laurel is a designer, researcher and writer. Her work focuses on interactive narrative, human-computer interaction, and cultural aspects of technology. Her career in human-computer interaction spans over twenty years. Her doctoral dissertation was the first to propose a comprehensive architecture for computer-based interactive fantasy and fiction. Recent work has seen her research focus on teen and female groups in the videogames industry. Within the ensuing debate amongst academic circles, Laurel's *Computer as Theatre* [Laurel 1991; 2nd edition 1993] stands as an early serious attempt to look at computers as a medium. She makes two distinctive claims: first, that software design can learn and develop from "Aristotelian Poetics"; second that both videogame design and software design alike can benefit from the principles of drama in that, unlike narrative, it focuses on user performance. She views the user as a performer and not an audience member. The title of the book draws the analogy between constructing theatre experiences and those that involve sitting and interacting with a computer. Yet, it seems that this perception of computers as theatre is not established as securely as the comparisons with traditional narrative forms. During the last decade, researchers such as George Landow or Jay Bolter [Bolter 1991; Landow 1992; Landow 1994] have concentrated on the textual hypertext form. They linked this expression of storytelling and poetry to existent post-structuralist and other literary theories rather than to the performative, theatre lineage as posed by Laurel.

Some aspects of Laurel's perspective are appropriate to my approach in that I regard the audience as a participant rather than a user. For example, the role of participant is akin to the role of a performer. Visually, my project *Deviant* uses onscreen space in a way that suggests parallels with the theatre. Its narrative visual contents are set immobile in a tableau-like composition, then sometimes short, sometimes looping animated bursts of movement occur after the participant explores the objects.

Janet Murray -- Narratologist

Janet Murray's *Hamlet on the Holodeck* [Murray 1997] is a popular and seminal and early text dealing with narrative in cyberspace. In this book, the computer is seen as a new technology by which to practise storytelling. Her studies include videogames along with hypertexts, web serials, and interactive chat characters. She distinguished three main qualities of this new medium: immersion, agency, and transformation. By immersion, she means the power of the medium for helping the user to construct beliefs rather than suspending beliefs. Agency is the capacity of the medium to allow the user to perform actions that have consequences on representation (responsive interaction). And finally, transformation is the ability to move agilely between multi perspectives. It simulates worlds that can enhance the two previous characteristics. Murray argues that the concept of storytelling must expand to include traditional forms (literature,

drama, film) and towards interactive forms (videogames, hypertexts, conversational AI). Murray identifies "interaction" with participation, and unlike Aarseth (below) is not particularly concerned with the detailed working of the machinery in a system but rather the participant's sense of agency. Agency "is the satisfying power to make meaningful action and see the results of our decisions and choices" [Murray 1997; p126]. Her definition of Interactive fiction is concurrent with Jay Bolters [Bolter 1991] as electronic writing containing episodes or topics, connected by decision points or marks.

My main point of contention with Murray's propositions is that I do not agree with Murray's idea that digital narratives are in a "protean state"; this to me infers a traditionalist search for canonical master texts. From my practice led perspective, I see digital narratives as been / always being outside the mass or populist narrative consumption, and indeed this non-commercial position, I believe, inspires many practitioners to produce (also see Paul *Digital Art*[42]).

Espen Aarseth -- Cybertext

While both Laurel and Murray describe the computer as medium and discuss the new phenomena such as graphical interfaces, social practices and the cognitive behaviour needed in games and hypertexts, Aarseth focused his *Cybertext: Perspectives on Ergodic Literature* [Aarseth 1997] on the deeper analysis of solely textual forms. Most of these are computer-based forms. He also makes the point of showing a lineage back to ancient and conventional texts, disputing the common belief that literal interaction within narrative is a shocking new development. Instead of drawing comparison with drama or narrative, he investigated their "behaviors", comparing them to meaning-making machines. Aarseth's "cybertext" is a term derived from cybernetics, a discipline that studies system dynamics, often applied to the study of complex systems, including organization and human behaviour and particularly computer simulation. This definition of cybertextual form acknowledges the change of signs and signifiers and thus multiple readings. It also restricts any medium bias as the aesthetics and social context of these machines are not the primary issue. More important are the functions and the principles that underlie them. Aarseth ranks interactive narratives (by which he means literary hypertexts) hierarchically lower down among cybertexts where the machinery of a programmed system controls and evolves the type of story produced [40]. He argues that cybertexts are dynamic and hypertexts are static (however he concedes that if the linking system is large enough and dense enough the presence of randomness comes to play, a credited cybertext feature). Aarseth is concerned with the author-computer-text triangle in contrast to the author-text-reader alignment. However he does accept that "to claim that there is no difference between games and narratives is to ignore essential qualities of both categories. And yet, as this study tries to show, the

difference is not clear-cut, and there is significant overlap between the two." [Aarseth 1997; p5] Aarseth also states that in open-ended readings the interpretation of the experience is fundamental and that literary theorists' attempts to "uncover literary ambivalence in texts with linear expression" are no longer valid when variable expressions are at play. Aarseth also posits the term "Ergodic", to be used instead of the vague well-used term "interactive", and prefers to describe these new forms as Ergodic literature, defined as texts where "nontrivial effort is required to allow the reader to traverse the text." By nontrivial he means active participation rather than turning the pages of a book, which does not modify the shape and reading of the text itself.

In my thesis, the term "cybertext" is used in a looser form than Aarseth' s definition, i.e. as any instance of symbolic communication significantly mediated by a computational feedback loop. This definition is not limited to hypertext (a very specialized form of cybertext) but includes distributed Internet applications, digital environments, games, simulations, and various forms of self-generating experimental art forms.

I found the cybertext perspective useful in its direct focus on the structural set up of how the various ergodic practices generate multiple meanings. However I found the implied hierarchy that proper cybertexts should be significantly complex in structure a little reductionist. This is because practices such as mine have an inherent accumulative nature, where even simple structures can create over-proportional results. So the end result is far more complex (cognitively) than the basic layout appears.

Gonzalo Frasca -- Ludology

Frasca (the founder of Ludology.org 🡕) is positioned out with the literary circle having previously researched play and the history of games. His master's thesis, *Videogames of the Oppressed - Videogames as a means for critical thinking and debate* [Frasca 2001], studies simulation theory and videogames as a tool to foster critical thinking. Aarseth and others have commented on the simulation genre found in videogames, but Frasca goes further by adding the transformative / dual state of videogame systems into the discussion of semiotics. Another interesting point is his acceptance of non-real source systems for simulations, where fictional rules of physics and laws of society are acceptable. He gives the example: "is the word unicorn not a sign since its referent is not real…?" Frasca offers a hypothesis as to why the term Ludology is more appropriate when researching videogames -- Ludology is derived from the Latin word "ludus" (game). The term has historically been used to describe the study of games and particularly of board games. Before this perspective (pre-1997), researchers for the most part explained computer games through previous existing media (drama, narrative, film). Frasca (like the cybertext school) believes:

> "That by studying videogames as something else than games, they are denying its main potential. This potential is not narrative, but

simulation: the ability to represent dynamic systems. A picture of a dog represents a particular dog: we can learn about its shape, color, etc. A simulated dog as Sony's Aibo or Mindscape's Dogz is not only made through signs but also through rules of behavior. In order to understand Aibo we do not only interpret its signs, but we also must experiment with it in order to be able to infer some of its behavioral rules. To make a long story short, representation is about signs, while simulation is about signs and behavior. This is the ontological difference that makes me claim that games cannot be understood through theories derived from narrative." [43]

Frasca focuses not only on understanding the functionality of simulations, but also on the possible social usages of simulations. My approach parallels his in my interest in re-presenting and transforming narrative subject matter that comments on the female gender. In this context, this critical commentary is found in both the visual language employed and the way the rules of exploration are set up and governed. In turn, the critical commentary recurs in the subsequent responses from the participation.

Lev Manovich -- Film Theory

Manovich comes from a cultural and film studies background (specialising with the Russian Futurists), Russian in origin but teaching and working in the USA. He is also the director of the new media art communication organization Rhizome and author of *The Language of New Media* [Manovich 2001]. Similar to Frasca, he has come from a non-literary critique background. Today his emphasis is not in simulation and the history of games but in contextualising mediums and placing New Media and the Internet into a media ecology.

Manovich points out the problems that occur when a medium becomes blurred, when mass and art cultures collide. Video and photography on their own pose no problems; photographs deal with still imagery, video relates to film; but video can also relate to television where both have the same material base (electronic signals which can be transmitted live or recorded on a tape) and also involve the same conditions of perception (television monitor). The only justification for treating them as separate media are sociological and economic, i.e. the differences in sizes of their respective audiences, in mechanisms of distribution (via television network versus museum and gallery exhibition), and in the number of copies of a tape/program being made [44]. He claims that new media art is a relatively new instance of mass distribution technologies being used in the gallery context, where the art establishment has applied an inappropriate fetishism on the "art object". This can be witnessed in gallery shops where we find limited edition DVDs of Internet art.

One of Manovich's distinctive takes on this situation is that software should be, or is, part of the sender-message-receiver equation. It is influenced by the way we send and experience or receive the message. The abstract rules of programming combined with the speeds of the display tool sometimes provide the sole inspiration for the artists. Contemporary design and experimental art such as that shown at Flashforward2001 Amsterdam [45] highlights this issue. Some artists take it one step further and program their own software to mediate their expression and help them to create the visuals they desire. Artist Joshua Davies talks about building personal coded "engines" and feeding graphical elements into them to create experimental unimagined (he can't anticipate what the computer will "spit" out at him) landscapes such as his *Mountain Pass* or *Insect and Machine* [45], after which he applies narrative themes as he interprets the animations. At this stage, or at the beginning, he works with collaborative musicians to enforce or complement the emotional quality. This process then leads him to fine tune these "engines" and the graphics. Recently [46] Manovich discussed the recent trend in new media art as data visualization, whereby setting up formal rules of calculation (in Java or C languages), the artist can interpret traditionally overwhelming data groups. An example is Lisa Jevbratt's *1:1* project (shown at the Whitney Biennale 2002 [47]), which includes the creation, maintenance, and visualization of the C5 IP database, containing the IP addresses to all hosts on the world wide web. The project uses this database to create five interfaces (*Hierarchical, Every, Petri, Random, Excursion*) for navigating the web and to generate a new topography of the web.

Similarly co-collaborators Paterson and Pitaru, build on this idea by synchronizing the animations they create not to random or pre-ordained mathematical plotting of positions but as visualisations of the resonance and pitch of the accompanying audio (see *Pagan Poetry*[45]) which was played live on a piano hooked up to a computer at their Flashforward2001 Amsterdam presentation. Also of interest is that Paterson draws out his forms (a sliding scale from abstracted Burrows-esque distorted drawings to Giacometti like figures) and literally shreds or slices them with the Flash lasso tool and plots this into the animation/interactive engine, which in turn abstracts further and contorts his forms. The computer is the mediator (co-creator and display tool) by which artist and participants alike are excited by these new -- and sometimes unimagined -- forms, which seem impossible to conceive through other means.

Primarily, Manovich's perspective reaffirms and supports my awareness of the neo-minimalist or "soft modernism" (Flash) aesthetic. Whereas he sees this trend in a positive light "(Flash) uses neo-minimalism as a pill to cure us from post-modernism" [33], I see it as an interesting phenomenon, but one that is limiting, at least in respect to rendering narrative environments. His other contribution, of proposing that the software used to produce a

communication actually conditions the sender-message-receiver equation, is one that I have personally experienced. In using Macromedia Flash. The software's characteristic ability to present precise graphic crispness at any level of scalability (being vector based [48]) led me to develop and push the tropes of the pan/zoom and pixel-level detailing.

Marie-Laure Ryan-- Independent Scholar

"There are plot types and character types that are best for the novel, others are best for oral storytelling, and yet others are best for the stage or the cinema. The question, then, is to decide which types of stories are suitable for digital media." [49]

The above quote encapsulates much of Marie-Laure Ryan academic interests -- in the crossover between narrative, interactivity and digital media. She is less well known than the previous researchers I discussed, although she has published over fifty articles on narrative theory, genre theory, linguistic approaches to literature, digital culture and is the author of *Possible Worlds, Artificial Intelligence and Narrative Theory* [Ryan 1991], *Narrative as Virtual Reality: Immersion and Interactivity in Literature and Electronic Media* [Ryan 2001] and editor of *Narrative Across Media* [Ryan 2004].

This situation is perhaps due to the tasks she often undertakes. These are often seen to be outmoded. For example, she has located or reclaimed narratology for game theory, has bridged the gaps between narrative and media studies and clearly articulating unpopular opinions such as: the problematic relationship that complexly non-linear narrative structures has with creating sufficient user closure [50]. Ryan also goes on to suggest that the new media aesthetic of postmodernism is clearly anti-immersive because the user cannot achieve a sense of location and/or an affinity with a narrative character [Ryan 2000; p.120].

Ryan is undoubtedly critical and questioning, and like Douglas (below) is not interested in futurology, however she does attempt to posit some solutions or avenues that may answer her own questions. Of interest to Ryan is the relinquishing of the model of the novel in favour of localized experience of narrative such as short episodic, provocative or poetic structures. Ryan also suggests that hypertexts depart from verbal textuality and should include images, spoken word and sounds [Ryan 2001;p.266]. She also reaches into the territories of conceptual visual art. This Ryan feels will enable a better sense of user immersiveness and generate more appropriate stories for digital media.

Ryan's perspective primarily supports my position that visual resources, the built-in spatiality of pictures can help the participant's immersion within the narrative by giving them a sense of space. She also supports my belief [Leishman 2000] that participants need to be gently "initiated into point-and-click interactivity" [Ryan 2001: *The future of interactivity*], which was seen not to happen in the early rebellious structures of verbalized hypertexts. However I disagree that post-modern immersion fails to offer cognitive space in which the participant can recall or create a global narrative, I believe that it can, if the postmodernity is located (but not exclusively) in the visual language more than the structural set up.

J. Yellowlees Douglas -- Hypertext

Douglas is a contemporary of the cornerstone hypertext creators and theorists Michael Joyce, Stuart Moulthrop and John McDaid. In her book, *End of books- or books without end?* [2000 [51]) Douglas positions herself on the here and now (in contrast to what she called the futuristic zero-frost positions of Aarseth and Murray) of interactive forms and the practice of close (multiple readings) of hypertexts such as *Afternoon* [Joyce 1987].

At the time of publishing, Douglas commented on the scarcity of examples of interactive narratives to study. In her eyes there were still as few artefacts as a decade previously although the Internet and technology had proportionally grown [52]. In 1998 the culture of disillusionment or cynicism was rife with statements such as "Interactive fiction is mostly a fiction-great concept what about the demo models" [18]. Recently Raine Koskimaa has taken up Douglas's position as a close reader and interpreter of hypertext. He has been so bold to use and define the term "new wave of hypertext fiction" [53]. Here he sees the new wave of hypertext fiction as works that have gone native in the Internet, where there is a fruitful feedback loop between the texts and contexts not seen in the majority of early hypertext fiction. Therefore, the new hypertext fiction is written for the web, and is aware of its own on-line existence. Examples cited are: Michael Joyce's *The Sonatas of Saint Francis*, M. D. Coverley's *The Book of Going Forth by Day*, Nick Montfort's and William Gillespie's *The Ed Report*, and Talan Memmot's *Lexia to Perplexia* [53].

Literary critics did not see what Douglas calls "digital narratives" (generally regarded as the CD-ROM and video gaming industries) as a serious threat to modern literature, and to a certain extent still do not. Rather more worrying for this group (conservative literary critics) are those writers who can be understood in that they follow a long lineage of contemporary literature and use recognizable traits such as developing complex locations, characters, plot and modern styles of prose. Instead of using the printed book, these writers have experimented with hypertext systems to build structures to construct the form of their texts, relinquishing the bound and

printed book. These scholarly writers, who challenge post-modern fiction and are putting into practice post-structuralist theories, represent the traditionalist camp's major threat to the "book" as they know it.

However the dissemination of these works has not significantly altered society's perception of how narrative can be consumed (hypertext forms are at least 20 years old). Perhaps it has heralded the next chapter in contemporary writing techniques or indeed an interesting testing of reader-response philosophies. Whereas the image-led equivalent hypermedia / visual cybertexts have succeeded in gaining a larger audience base, and even the ability to cross fertilize other media (successful computer games being translated into linear Hollywood blockbusters), and on a lesser scale Internet based forms find themselves being mass downloaded with browsing viewer numbers rocketing. Indeed, in recent years, we have witnessed the advent of contemporary gallery spaces install and screen such artefacts [54]. The style of digital art has been constrained by limitations of the Internet -- file size restrictions, bandwidth problems. Online aesthetics have to be frugal compared to traditional viewing locations like art galleries, the cinema, theatre, and in print. Independent and non-trained artists, animators and filmmakers worldwide continue to post up new forms of expression and conceptual works. Long term, the Internet and its art audience has rewarded the dedicated and the impassioned Internet producer; as elsewhere, technical virtuosity and artistic creativity and talent hold the audience captivated, the transience and anonymity of the work types however adding a new quality. Image based cybertexts or digital narratives have in my opinion a different (and less respected) lineage coming down from early games, popup and comic books, abstract cinema [55], and animation instead of the Gutenberg Press.

Douglas comments that "digital narratives" have no exalted lineage from which to gain acceptance and respectability, unlike avant-garde fiction and other digital narratives and their "shaky, jerky video clips" [Douglas 2000; p8] do not bear comparison. However, this is to miss the point entirely and is the crux of another problem -- that however adroit and innovative such literary critics are, they are misplaced in applying their perspective to the art and visual fields. The "shaky jerky video clips" can be seen as constituting the birth of a stylistic development, though perhaps Douglas is commenting on the early CD-ROM productions' huge (in memory size) and unrealistic design, played on the small processor speeds of the first generation Apple Macs. These were truly stuttering animations which were never intended to be viewed as such but the low tech-ness (in terms of computer graphics) of the early computer graphics (Nintendo games, early Macintosh interfaces) have spawned a retro style of their own. Some artists and illustrators alike can now be seen to specialize in pixel art [56] and in animation techniques. This involves almost enlightened primitivism. High audio, complex and visually lush animations do not run well on the

Internet. Their art is reminiscent of Victorian Pop up books and movable paper cut out puppet shows [57]. And yet they sit side by side as the low-tech "indie" and non-friendly (in attitude) brother of the billion dollar industries of commercial videogame production and their state of the art realist animation.

The zero frost position of Douglas (in contrast to Murray's) appeals to my practice led approach which is concerned with creating responsive multiple state systems, testing them, making mistakes, and elucidating their meanings. This is distinct from unbound speculative thinking of what may develop. However I disagree with Douglas on the problematic lack of linage for these digital narratives, indeed I support Moulthrop and his interstitial perspective (see below) in which the artwork:

> "… expatiates upon the materiality of expression. It embodies precisely the opposite of "seeing through," in that it holds forth its own mediation, along with that of other texts, for relentless inspection. It does not take us beyond mediation into the pure and timeless realm of story. It does not lead to the holodeck."
> [Moulthrop *Gamely Interstitial* 1999]

In this paradigm, lineages are found in non-traditional spheres such as: comics, games, experimental novels etc… [58] all of which occupy cultural interstices, tenuous gaps not covered by "comfortable old hierarchical" [59] forms.

The above theoretical standpoints veer from contemporary literary theory, such as the vindication of poststructuralists [Landow 1992; Joyce1995], to the realisation of the postmodernist sociologists' and psychologists' point of view [Turkle 1996], from the perspective of futuristic cultural studies of Lev Manovich [Manovich 2001] to the provocations of contemporary videogame researchers [Friedman 1997; Eskelinen 2001; Frasca 2001;Juul 2001]. The narrative form is back in the fore. Definitions of new genres, methods of construction and reading are ongoing and hotly contested by all camps.

1.11 Supporting critical theory

Preferred perspective: the interstitial and cybertext paradigms

The critiques of works such as mine are shared between games studies, literary studies, communication design (semiotics), new media art, media/film studies and the field of human computer interaction.

These positions have different emphases. This may be because the artworks themselves are inherently diverse in form, and in contextual allegiances. Commonly, these artistic works are achieved individually and outside the commercial realm (videogames are an exception), thus the creative and conceptual choices open to the practitioner are vast.

Three main perspectives exist within this research. Firstly (in chronology) are the hypertext theorists who viewed the practices of hypertext fiction (typically early 1990s [60]) within deconstruction and poststructuralist ideologies. This paradigm for the most part has been criticised for being overly theoretical and complex, focusing on a small body of verbalised master texts (thus convergent) rather than applying an external awareness of new and developing artefacts. Recent hypertexts have included image and audio elements, further aligning themselves with the histories of concrete poetry.

Secondly and more recently, there is a developing scholarly collective of game studies researchers (circa 1999, [61]). They specialise in a cultural media contextualisation of games, as well as researching the formal attributes such as the aesthetics and issues of spatial and visual intelligence as offered by videogame products.

Arguably, a subsection or hybrid of the two previous positions is the cybertext perspective as instigated by Espen Aarseth (1997). Cybertext was an early and significant domain that was seen to place computer games within the realm of literary critical enquiry. Cybertext is a structural and conceptual position open to various media if they qualify as being "ergodic" (e.g. when nontrivial effort is required to allow the reader to traverse the text). Aarseth himself focuses on literature and verbal transactions, though does not rule out the analysis of image-led structures.

Finally and still emergent is the broad field of new media art (which covers software art, data visualisation art, web serials, streaming performances, ASCII art etc…). A significant amount of new media art can be seen as a reaction against the field of commercial HCI (Human Computer Interaction [10]), and a commentary on the fields of communication and media theory. This domain is typically lacking a clear critical discourse, though it can be broadly sited in post-digital and post-contemporary paradigms [36].

The cybertext paradigm involves the belief that the system in question should be significantly mediated by complexity or dynamic behaviours rather than being a simply linked non-linear structure such as hypertexts, CD-ROMs, and basic games (cybertexts are generally taken to mean digital however need not exclusively be), whereas the interstitial paradigm (Moulthrop) is essentially less formal than cybertext but more conceptual or philosophical in nature.

Stuart Moulthrop is a digital practitioner of classical hypertext fictions such as *Victory Garden*(1991) T*he Colour of Television* (1996; with Sean Cohen), *Hegirascope* (1995/1997), and *Reagan Library* (1999). As well as in his body of artworks, Moulthrop has shown in his numerous essays and talks that he is interested in both the broader changes in literacy and fiction and the possible implications that hypertext and the Internet have on our cultural landscape.

Moulthrop at the Digital Arts and Culture Conference 2001 prominently used the term "interstitial", in his closing keynote speech. It was from his observation of the contemporary practices and the participant's experience of new media art (see jodi.org [62]) and cybertexts (especially Riven, by Miller & Miller, 1997) that he reapplied the term interstitial. Originally it was used by Michael Joyce in *Of Two Minds*, 1995. Moulthrop appropriated interstitial to describe works that are inherently "difficult", and whereby interstitial artists are imbued with a "trickster spirit"-- referring in particular to John McDaid, Noah Wardrip-Fruin and the conference based "readings" of John Cayley, Jim Rosenberg, Judd Morrissey, and Lori Talley.

Moulthrop's use of the term is an evolution from Joyce's, in that Joyce used interstitial to describe the more stylistically obscure sections of his book that were placed between two or more focused sections of writing. When I asked. Moulthrop to expand upon his motivation in using the term interstitial, he replied:

> "To me, Michael's usage always seemed more than arbitrary or technical, really almost metaphysical or spiritual -- as if the standing-between stood for something deeply related to the truth or purpose of what we were doing with hypertext, where as I take it we are always betweening something."
> ([Moulthrop, email correspondence, July 2004](#))

Moulthrop defines the interstitial:

> "At its most direct, interstitial design insists and expatiates upon the materiality of expression. It embodies precisely the opposite of "seeing through," in that it holds forth its own mediation, along with that of other texts, for relentless inspection. It does not take us beyond mediation into the pure and timeless realm of story. It does not lead to the Holodeck… Comics, games -- and, yes, experimental novels -- all occupy cultural interstices, tenuous gaps not covered by "comfortable old hierarchical" forms. What is a comic -- a novel with too many illustrations, or a very fast film? What is a [Cyan] game -- a novel with no characters, or a film with too many cuts? Interstitial fictions represent breaks in the illusion of necessity foisted by major media forms. They reveal unauthorized vectors; they make us aware of interfaces, of media, of different ways to go. All of which may be meaningful..."
> Moulthrop, *Gamely Interstitial, Narrative, Excess, and Artifactual Interstanding*, 1999.

> "In phenomena like comics and adventure games, or for that matter in imaginative cybertexts and unconventional novels and films, we may be seeing the emergence of a fictive sensibility more finely attuned to gaps, inconsistencies, tensions, and fissures than to unbroken traditional lines."
> Moulthrop, *Misadventure: Future Fiction and the New Networks*, 1999.

The Moulthrop definition of interstitial art is that it exists in the interstices (spaces between), and capable of binding two or more things together. Closely linked to this interstitial is the term "inter-standing" as discussed by Mark Taylor and Esa Saarinen in *Imagologies*:

> "When depth gives way to surface, under-standing becomes inter-standing. To comprehend is no longer to grasp what lies beneath but to glimpse what lies between.... Understanding has become impossible because nothing stands under. Interstanding has become unavoidable because everything stands between." Taylor & Saarinen 1994, p. Interstanding 1.

Though in its nature not fixed, the term interstitial suggests celebrating all practices that fall between currently established genres and forms, one example could be -- practice that can be said to problematise the labels of fiction and non-fiction, games and art. The artworks located in this thesis can be said to be interstitial practice.

Interstitial practice with its fractures and gaps can be said to create what Eco calls *Open Works* -- when the artist has made a decision to leave the arrangement of the depending on your intention, the artwork 's constituents to chance, thus giving the artwork not a single definitive order but a multiplicity of possible orders [Eco 1989]. This is in direct contrast to the prevalent mindset of today's interface culture and its "ease of use" ideology. Interface seen in HCI terms, should be logical, intuitive and satisfying to use [10].

This thesis is underpinned by the interstitial paradigm and its subsequent poststructuralist ideology.

1.12 Introduction to the contemporary artwork and context review [Example of Practice](#) 🖼

The following sections are semi-categorised examples of visual artistic practice as found over the Internet. The artists have been selected to give an accurate impression of the varied contemporary visual practices evolving within the Internet as pertinent to this research. Those included are in different ways relevant to my specialised area of research (pictorial narrative and responsive structures). I feel this demarcation is not only justified but also essential considering that the Internet holds a vast quantity of websites of both varying technical, aesthetic and conceptual quality and has an ever increasing and shifting volume of content. The practices highlighted in this review have come to my attention through their critical successes (e.g. they have received media accolades via awards, exhibitions), through inspecting the Internet for individuals and communities relevant to my research and my first hand experience of the design orientated Flash community.

Text contains (where necessary) hyperlinks to live sites; these links at the time of writing are accurate and correct. The fluctuating stability of website addresses and hosting servers means that these links may not be accessible in the future. To compensate for this I have endeavoured to take multiple snapshots -- "screen grabs" of the practice as it appears in Spring/Summer 2002 (second round Summer 2004). These are organised and laid out in this directory 🔄 as Jpegs -- a universal (both PC and Mackintosh) digital format, thus allowing other researchers and archivists direct and editable access. All rights reserved to the artists featured in the review.

1.12.1 Introduction to new media art Example of Practice 🔄

Back in the early 1990s, a collective of disparate Internet based multimedia works were gathered together under the loose name of new media art [63], or as sometimes called: net.art, web art, network art, internet art, hypermedia, hypertext, tactical media, hacktivism, interactive art, cyberart or digital art [64]. At this point, artists and their works had a healthy disregard for the established gallery context -- the "Art world", and were best described as being more aligned to existing fanzine and pirate cooperative cultures. After all, how would native Internet based work (at this point with low visual value) be shown in a pristine white gallery space? Today we see a change with increasing amounts of new media art conceived with the gallery context in mind. New media and the Internet have inevitably become part of our mass media consciousness. The language, syntax, and its visual style have been absorbed into diverse everyday forms such as magazine design, television and banner advertisements.

There is also a recent trend for the corporate technology companies, such as Macromedia, to support visually motivated practitioners who use commercial software. These sponsors offer another route in addition to the not for profit funding bodies and galleries. Such selection and funding (via showcase projects and conferences) inevitably breeds its own kind of

blurred commercialism as artworks and the applications' inherent characteristics become intertwined, elitism (in the non-altruistic selection of the artists), hegemony and an element of genderism can also be seen to be emergent [65]. I believe originally the new media artists were attracted to the Internet's lack of hierarchal structure, positions of worth, physical identity and the potential for a close knit, low cost, and highly communicative community of practitioners.

It could be put forward that politically and stylistically most new media art can be generalised into being aligned to either the neo-modernist aesthetic of simplicity and reduction or the postmodernist traits of simulacra, re-sampling and collage, both of which groups continue to sustain the non-fetishized open source ideology in the distribution of the work -- as once digitised practically all media can be downloaded, screengrabbed and reused.

An ongoing debate within new media art and increasingly in contemporary galleries is that the Internet was seen to be one place where no rules of categorisation or cultural worth were applied, yet at the same time unspoken rules are being developed about what does or does not constitute "Art". For example what is the difference (if any) between digital artists who make "Art" and technologists experimenting with concepts and aesthetics? I believe it is not only the presentation but also the works themselves that are of interest and as with established pre-digital art forms: intent. I propose that several considerations are of equal importance. This includes why something was created; what individual context gave rise to it; how it interacts with us emotionally and intellectually; as well as the particular excellence or innovativeness in the use of the digital tool.

1.12.2 Introduction to design Example of Practice

Design practice over the Internet is a diverse and continually growing activity. In the beginning, design entailed making palatable and legible early HTML (Hyper Text Markup Language) websites with their limited colours and fonts. With the development of new software technologies (such as Adobe Photoshop, Discreet 3D Studio MAX, Macromedia Director, Flash and Dreaweaver) Internet design has come to absorb and extend the established print conventions of magazine, advertising and packaging design. This enabled once merely functional website design to become more experimental. These new new media software options offered to the designer, almost for the first time in history, the ability to integrate programming, database systems, audio, motion (animation/film) and interactivity, yielding an uncharted matrix of options.

Another departure for new media design (similar to what was happening within the new media art spheres) was the development of the Internet as a platform for global receivership, thus creating new audiences, peer groups, virtual studio communities and collaborations. As these became more established, another trend appeared. This was a wave of commercial

designers who began to develop experimental personal websites that were outside of a commercial network. Often, these personal sites were the ones that delivered the pinnacle of experimental animation, graphic and audio design. Their content was available free to anyone with an internet connection. This, in turn, has launched a number of new media designers as international design leaders. Occasionally, some of them have emerged as new media artists in their own right (Joshua Davis 🔗, James Paterson 🔗 , Amy Franceschini 🔗).

1.12.3 Introduction to programmatic art 🔗 Example of Practice 🔗

Programmatic media art is undoubtedly a new phenomenon within visual art history Its contemporary origins can be found in the Java Applets of John Maeda (circa 1996 [66]). When the term "programmatic" is used, I am referring to any practice that is sufficiently mediated by programming: by using formal instructions to create behaviours as a fundamental part of the work. However, it must be said that all Internet new media practices use a basic level of programming to sustain themselves over the Internet, e.g. to sit within a browser page, to be the target of a link from somewhere else or to provide a link to other sources. All Internet practice is in a partnership with technology. However, this new generation of programmatic new media art [67] has taken this relationship further, to a point where the practice is heavily if not completely mediated by technology (its code about code). In these instances, skills which previously belonged traditionally to primarily non-visually creative people (e.g. computer programmers, mathematicians) have now successfully impacted on a new visual digital culture. Surprising perhaps is the volume and diversity of work created by this marriage of skills.

Programmatic practice can veer from reactive physical performative codes (*Digit* and *Insertsilence* [35]), to abstract trigonometry data visualisation (Golan Levin and the Radical Software Group [68]) to developing artificial digital life forms (*Soda* and James Tindall [67]). In recent days an aesthetic has been seen to emerge from these programmatic practices, a new neo-modernism (reflecting the 1920's early Modernism), which uses a structured cleanliness and precision to create often beautiful and delicate onscreen textures. These are supported by symmetric, repetition based looping abstractions as generated by the computer [52].

Contemporary programmatic new media art is arguably only seven years old, since the release of Flash 3.0 (1998-9), with its basic and easy to comprehend "Actionscript" representing a new generation of programming languages [27]). Pre-Flash there existed another Macromedia product called Director, which was predominately used for CD-ROM, kiosk interface production and low-level responsive games Director movies were self-running and portable, but there was no feasible way to put them online, at least not until the Shockwave plug-in became available in 1995. Director uses "Lingo" as its programming language. Flash 3.0 was seen as a radically more accessible program. With this, Macromedia actively began to

distribute their Flash Player plug-in, so that online and offline audiences could view the content created with the program. Today, Macromedia reports that 98% of total Internet users have the Flash player installed, making Flash a highly pervasive content medium. No longer is Flash just a way to display animations online; it has spawned a culture of highly reactive practices.

1.12.4 Introduction to hybrid art [Example of Practice](#) 🖼

> "The only thing that will stay the same is that things will change."
> (Sage Francis, lyricist, Personal Journals, 2002)

The word "hybrid" is derived from the Latin hibrida, hybrida, meaning "mongrel". In technical terms it can mean combining two different technologies or systems. Artistically it can mean the marrying of two or more distinct lexicons or conceptual structures. When we discuss visual based Internet new media practice, there intrinsically exists sub and mixed cultures. These contain separate aesthetic ideologies, histories and linage.

Specific Internet based new media cultures:
I have grouped the producers of internet-based new media cultures into four categories.

Media artists: Media artists often have a modernist awareness of themselves and the media systems that they use or subvert, which in turn influences the work. Such artists often have a preoccupation with the interface and modes of modern communication exchanges e.g. mass, group or individual [Thompson and Craighead [70]].

Cyber identity artists: These people work within the virtual invisibility that the Internet offers. Their work can be found dealing with trans gender issues, fictional role-playing, remote inter-human relationships etc… [*Mouchette* [71]]

Data visualisations: Data visualisations are types of work that represent graphically and often differently a mass of previously unseen or unimagined data volumes (Jevbratt [[47]]).

Other: This category can include non-partisan social simulations, avant-garde narrative, and visual /concrete poetry and other yet to be formed emergent practices.

One has to go hybrid because of the continual flux between it and the established pre-Internet "Art" category, which for the most part is deemed to mean physical, non-networked, possibly conceptual, or craft orientated works. The new media art category tends to mix the contemporary media self-awareness with non-material new media technologies. In contrast, the new media design category shares the commercialese of its brief history with experimental practices such as the recent data visualisation trend (a clear trait of new media art). While these areas are likely to continue to

merge and repel from each other, there lies a significant space to create un-categorical hybrids. I am interested in this open interstitial position as the place in which to talk to multiple domains, to react against canons of practice which infer patriarchal dominance and do not allow for multivalence.

These categories should be deemed as loose, as they are inherently unstable. These base categories as listed above are useful in understanding the cultural history from which the practice projects itself forward.(note: my practice sits within the "other" category). This fluctuating situation or growing hybridity is typically highlighted by the Flash Forward Conferences, whose categories over the years have continually changed and merged "Design" with "Art", commercial applications with experimental interfaces. Similarly Ars Electronica (Linz, Austria), one of the world's major centres for art and technology (who have been awarding Golden Nicas to various digital practices since 1987) awarded their "Net Vision / Net Excellence" 2001 prize to the French design team *cHmAn* 🔗 (for *Banja* 🔗) and Flash designer/artist Joshua Davis (for *Praystation*🔗), then in 2002, the "Net Vision / Net Excellence" Nica was awarded to the Radical Software Group (for *Carnivore* 🔗, included in the collective was Joshua Davis and new media designers Josh On/ *Futurefarmers* 🔗(for *They Rule* 🔗) [72].

1.13 Artist statement

Prior to my academic pursuits I have worked professionally as a Internet designer, animator and digital illustrator at *Blackid* 🔗 (Scotland) then as a Flash animator and digital illustrator at *Bullseyeart* 🔗 (New York), where I was part of the team Emmy nominated for Season 5, 2000-2001 *Rosie O'Donnell* Show. From these two companies I had the opportunity to both engage with the intimate and niche Flash community (as both companies were at the forefront of Flash development) and experience the world of commercial usability and HCI in practice; this insider experience has been invaluable in my research.

Outside of commercial practice, I have been occupied with creating visual narrative and the sequence of narrative for over ten years, the last five of which has been specifically involved with the academic study of responsive narrative experiences.

Through my artistic career I have been interested in folklore in relation to society and mythic symbols, the female gender, places of otherworldliness and how and why they offer the viewer spaces to dream, imagine and decode hidden meanings. The literature I enjoy reflects my other interests

in the uncanny, the mysterious, and the visceral language of the gothic, such as deployed by the likes of Edgar Allan Poe, Angela Carter, Ian Banks and the pulp horror novels of Anne Rice, Stephen King, and James Herbert. These thematic concerns of the folkloric and gothic have carried over and into my study of interaction within narrative.

In contemporary culture, the folkloric subjects and the oblique nature of their communications are becoming transplanted by more mass and reality driven messages. As narrative forms become more generalised, the language employed, the visual referents become less complex and thus less demanding. I found the involved nature of interactivity interesting as such exchanges could return the viewer to a less passive role. The founding origin of this interest comes from my teenage experience of board and dice orientated role-playing games (RPGs).

Today, my practice consists of taking stories that have been told in conventional print, and retelling them in a digital and responsive medium, transplanting the limitations of the book for the challenging computer screen interface. This retelling often involves reinterpretation, visual transformations and places my authorial intention in a different space whereby I relinquish control over the sequencing or indeed the level of closure the participant will attain.

The narratives I favour have normally had a multiple of retellings, show an aptitude for cross media mediations, in some level refer to gendered stereotypes and normally contain a clear protagonist. This latter point allows for levels of identification for both the participant and myself as the re-interpreter. My retelling occurs primarily in the pictorial plane (with the additional support from both audio and movement) and in the structuring of the participant's experiences.

Through this research and its attributed practice, I have found my voice as a particular type of storyteller, with a particular politic. As an artist, I am interested in themes and subjects that traditionally exist outside of the Internet and as such may be seen as "old-fashioned" [73], though my work has been created for and mediated by the Internet. This I believe offers a strong interpersonal dialogue between myself as the remote author, the original narrative text (if known to the participant), the responsive artwork and the Internet connected individual participant.

1.14 Synthesis

At the simplest level this thesis researches the interplay between narrative, image and interaction by the act of creating new artworks. The field of

study was devised by the analysis of both the research context ([hypertext, cybertext, interstitial](#)) and a review of [contemporary Internet art practices](#). These reviews established that the field has substantial amounts of supporting theory (given its relative youth), involves many different domains, but highlighted a lack of predominately visual opposed to verbalised artworks directly tackling the issues of interactivity and narrative. I only intermittently refer to the domain of videogame development -- this is due to its commercial focus and inappropriateness to my practice

I came from the position of being an artist who had already began to develop a practice of visual interactive texts (*[RedRidingHood](#)*), and as such sought to contextually support the work. At least in the early years of the research, this was difficult, as contextually I felt the nearest works to my own practice were text based hypertext, neo-minimalist Flash and bitmapped albeit Hollywood style RPG games. That is to say I felt isolated [[74](#)] in my critical practice. As these formats had only aspects which interested me, e.g. the hypertext's subversion of standardised sequence and its anti passive reading stance, Flash art's sense of onscreen delicacy and the magic of kinetic empowerment, the RPG game's sense of otherworldliness and 3D space, but none adequately communicated the type of practice I had started to develop. This led me to acknowledge that I was a type of hybrid and interstitial artist.

The lack of adequate examples, I believed, could be answered by the pursuit of a new narrative artform that was visual and encouraged an emotional, tactile and sensual type of immersion for the participant. Such engagement would offset the narratively dangerous situation that occurs when non-linear structures are employed [Ryan 2001]. This *visuality* would play a large part in creating a new digital onscreen aesthetic: that being one that is a hybrid of detailed line art / handcrafting / popular imagery with the digitally enabled post-modern treatment of the narrative sequencing.

The balancing of traditionally oxymoronic ideals -- creating an intrinsically interstitial experience which uses links, gaps, participant based risks etc… with the emotionally immersive and someway-resolved experience for the participant, functioned as a creative "brief" for the practice as submitted in this thesis.

1.15 Question A
Introduction

When enquiring into the creation of narrative multiple state systems (MSE's), and into the phenomena surrounding them, the structural premise of the practice is a fundamental aspect as to how the practice communicates to the participant.

The research question: "What types of narrativity can the artist develop within responsive multiple-state systems when they structurally secede from interaction mechanisms learnt within the context of traditional HCI and cinema?"

Is set up to investigate the key structures being deployed in contemporary practices, the most traditional of which is the "dramatic arc". The findings of the research question A will serve as a context from which research question B will depart from.

Context

MSEs are set apart from other narrative media in the way the system is programmed to allow or deny participant control [75]. This is the key characteristic of this approach. The levels of participant control can veer from quasi-linear click and move onwards action to the other extreme whereby the participant's onscreen input actively destroys or renders the image and narrative so complex or abstract it is unreadable.

The structure of the early visual cybertexts (circa 1990s) then called hypermedia / hypertext fiction gave rise to a lot of theory. In my opinion this was over theorising, given the newness of the form. This in itself may not be a destructive thing. It was a rare crossover of often-non-material conceptual thinking with practice-based artefacts. However, these early works apart from a few notable exceptions [Jackson 1985] were of low aesthetic calibre and were predominantly text-based models (which in design terms had a lack of sophistication in typography). The preoccupation of the structural supremacy (e.g. the more technically and literally complex come up top) outstretched and left behind a developing audience pool who found the non-visual language of many hypertexts unappealing and the content, given the structural permutations, too dense [76]. Hypertext fictions tended to be made by literary artists or acolytes of the prevailing theories and similarly read (in the main) by a keen literary culture. Visual artists had at this point very little impact on this niche field. In recent years this has been addressed by a more inclusive cybertext paradigm and by the growing field of game studies.

Link to interactive diagrams of delineated narrative structures:
Diagrams

1.15.1 Summary Question A

Linear

Traditionally, different media types have used key structures to relay their messages. The main or dominant structure is the linear sequence, which simply starts at the beginning, and moves through a prescribed sequence of events and finishes and the end. No direct non-trivial interaction or manipulation of this structure is asked of the participant, who is thus passive in such types of sequential communication exchanges. This linear experience is typically used in films and novels. Linear sequences can be regarded as a chain that is made up of singular events, which when seen in a particular sequence, has causal relevance to the whole and final experience. The imagery and characterisation of these singular events can be manipulated and cut to contrast and build tension within the chain.
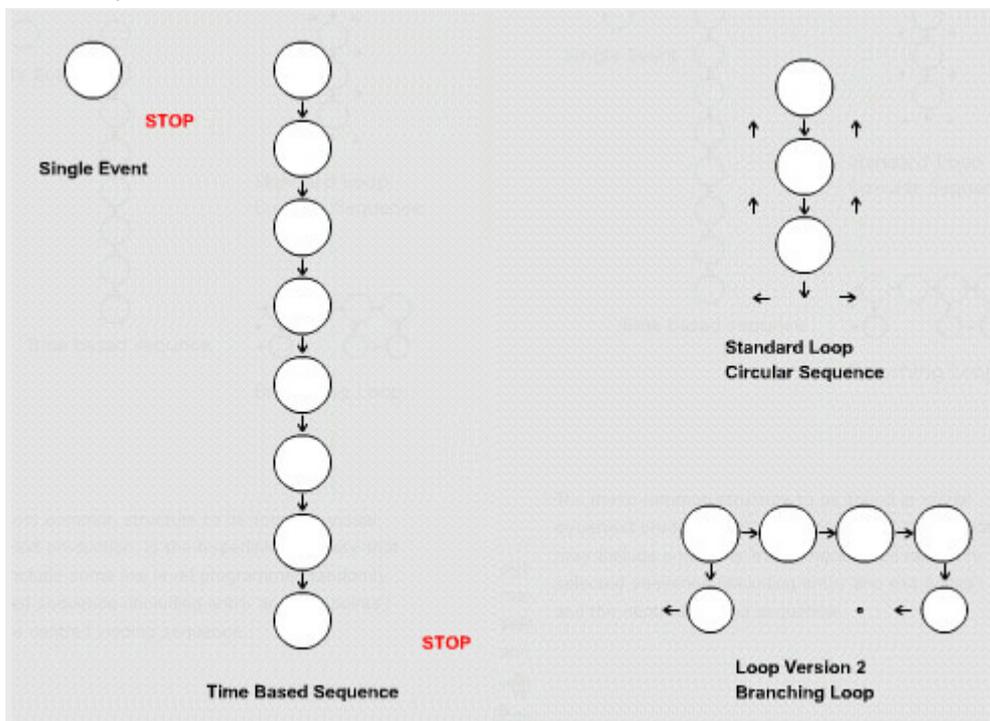

Standard and Branching Loop

Is similar to the above, in that they start at a beginning and play a linear sequence. However, looping structures go one step further in that once initiated they return to this start point and loop either for a set amount of time or typically ad infinitum. Thus, it is argued, the loop actually defies the

idea of beginnings and endings, and as such should be afforded some conceptual weighting as being a contemporary digital metaphor (Manovich 2002 [52]). Loops are frequently found within modern music, short animations, and media board visual displays. Loops are also strongly linked to the generative calculations programmed within the makeup of responsive visual art (e.g. the base calculations are looping enquiries (If/Else statements) as to the on-screen mouse position).

Branching Tree

The branching tree structure is said to have a more historical base seated within diverse subject areas such as biology and natural history (think of human family trees and evolution). The literary world has experimented with open ended structures (e.g. *I Ching* and Apollinaire's *Calligrammes* [77]), however until the advent of computer technologies and the easy to use hyperlink, branching tree structures had not yet been significantly explored as an artistic practice. The most important reason is that any meaningful organisation and creation of true branching tree system was very laborious and voluminous. The capabilities of the modern computer and the powerful database systems has in turn made the structure more viable. However the notion of a fully open-ended branching tree still verges on an unattainable ideal. However the branching tree's more limited siblings (e.g. where each branch need not spawn new branches but could loop, be a dead-end or return you to a previous point) have found much more success. The main stay of cybertext systems (as especially witness in the 1990's) has been these deviant (not true open-ended) tree structures, where the branches return the participant back to locations that are in some way meaningful to the developing narrative. Such systems can veer from large and densely linked to simple branching experiences, the latter of which are arguably quasi linear.

Branching Tree (Open)

Ad Infinitum

Dual State Form

Interactive/Responsive
Red arrows = alive opportunity
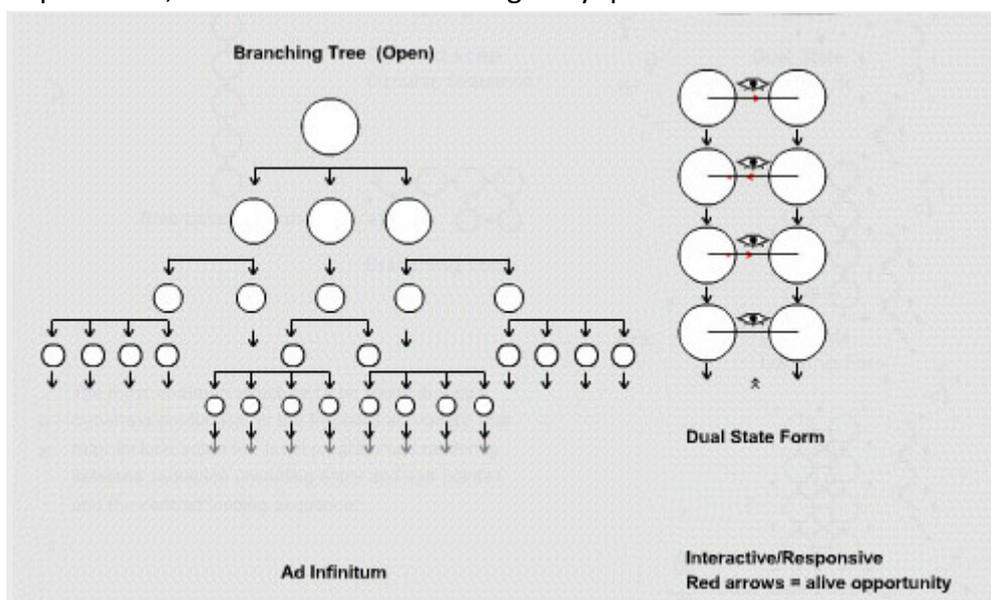
Polycentric and Dual / Multiple State Form

The above structures -- linear sequence, loops and branching tree variants can be collectively regarded as centred sequences, in that they have one central beginning point and generally one central vein or core which carries through the experience. I believe that there is another method available, that of the polycentric structure and multiplicity. Polycentricity exists when instead of one central force and beginning there are two (or more), so the participant has to make meaning out of (for example) two streams of structures simultaneously. Cinematically this can be seen in experimental films and more recently within Hollywood releases like *Traffic* [78] and before that *Time Code* [79]. In these instances the screen is divided and different narratives are simultaneously relayed with or without intersecting causal moments.

A clear example of polycentric structures can be found in randomised hypermedia. These structures can have various programmed features such as conditional access -- where you can only travel a path if you have met the right conditions e.g. travelled the right combinations of paths. Or similarly, the structure can have randomised elements where the same points in the structure yield different paths on any re-usage. Another and rarer element is that the structure has options for the participant to add data, words, images or sounds directly into the core structure. This feature can be called textonic [Aarseth 1997]. Similar to textonic (see below) structures, "clever" hypermedia structures can monitor your choices and allow you to review your path, or can, on a return visit, create a new bespoke experience by blocking the previous paths. Unlike dual or split screen structures, these random/conditional/textonic hypermedia forms are utilised by the hypertext field and to a lesser extent with Internet artists. Within these relatively open descriptions of structures, it is often the case that these polycentric objects in their sub sections contain recognisable linear sequences and or indeed branching trees, thus creating a hybrid structure. This treatment can lead us into a rhizome like structure if sufficiently complex and / or generative.

Hypermedia

Abritary Access
Hypermedia

Random Access Hypermedia
with User Textonic
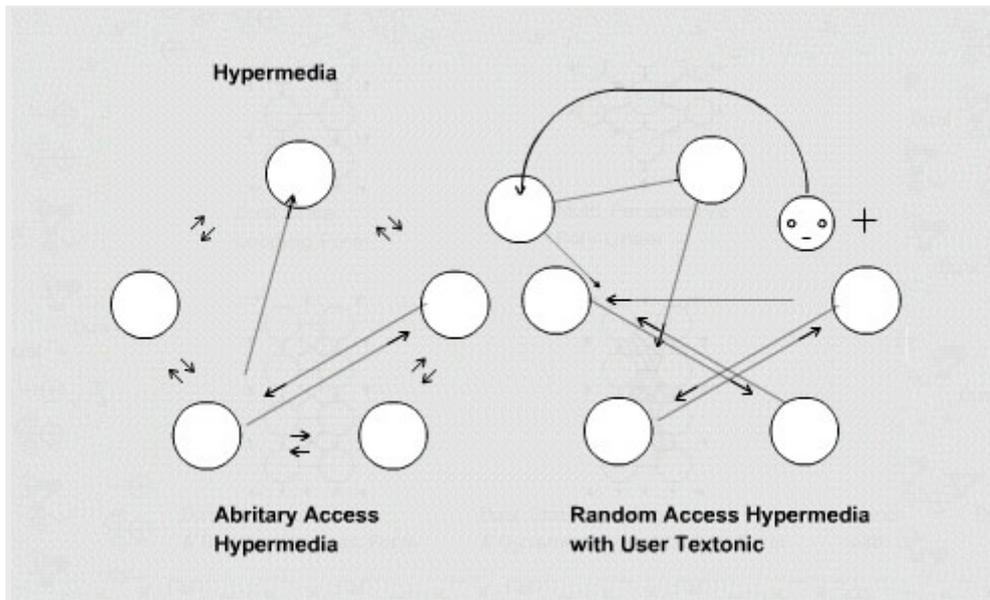
Rhizome

Is typically understood as having no governing point or central organisation. It has multiple entrances and exits. If one of its links are broken, it will continue to exist and spread. Rhizome is regarded as an ultimate example of multiplicity. The term rhizome is traditionally used in describing specific types of botanical roots, whereas the term has been appropriated by postmodernist and cyber theorists as a symbol of the digital organic complexities as seen within our modern existence. An example of a contemporary rhizome structure is the ever-evolving co-linking growth of the Internet. Another might be the evolution of a cosmopolitan city, where outside the original "planned" paths the growing population in turn add and create their own paths as they travel around their homes and in and about the city.

Random Access
Hypermedia

Rhizome
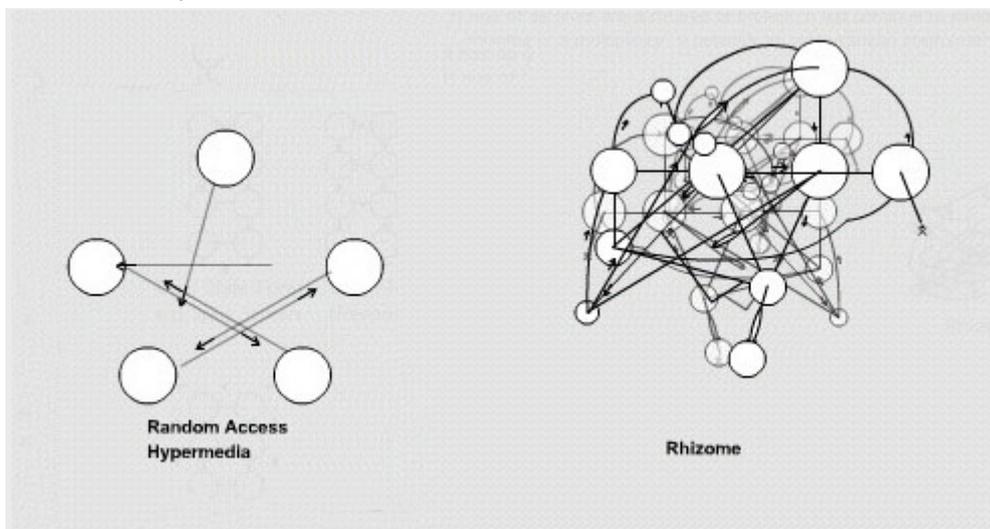
Videogame structures

These are typically unlike the complex and randomised structures of hypermedia, and more akin to the limited branching tree, where all the paths are pre-determined (non-evolving) and disguised as being more complex by the graphics and pitch of game play. Via a series of prompts and narrative clues, the participant is normally guided along the path to the climatic finale. Video games are in essence centred structures, anchored by linear "cut scenes" of narrative action (Full Motion Video Clips). However, the linearity is often challenged by offering different conclusions based on the paths chosen. Games also normally employ sophisticated AI (artificial intelligence) engines to calculate and then respond to the participant' s real-time actions. They often deliver demanding combatants. This dynamic tracking of the participant is distinctive to commercial videogames. One must note that different genres of videogames offer different levels of these elements, e.g. simulation games offer no set paths to follow, but expect textonic input from the participant to respond to the pre-set rules and thus the participant creates their own game.
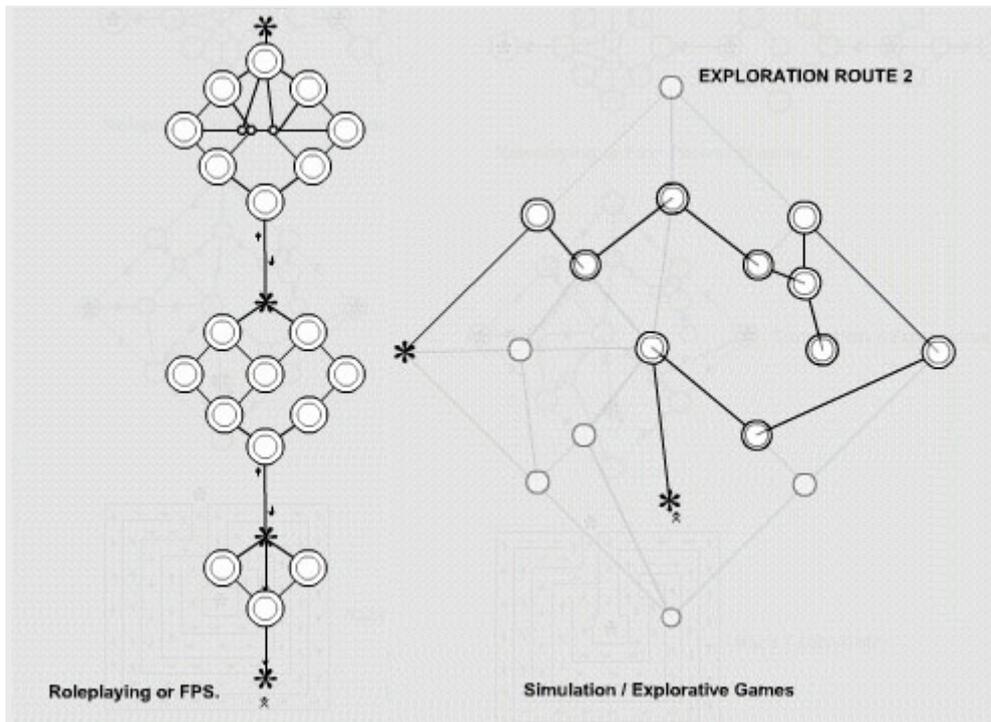
1.15.2 Conclusion

In the broader context it has been accepted that "true" interactive narrative systems are at present a fallacy [80]. This in part comes from the

biases in defining what is a worthy narrative experience in a responsive environment. In one corner, narrative should still adhere to the traditional dramatic arc and in another, narrative should be of a substance to challenge the canonical modernist texts. Also a significant issue -- is the complex level of programming required to support a fully interactive exchange [80].

A similarly exclusive treatment is found when theorists regard the subject matter and style of communication -- these normally have to adhere to the doctrines of high and not low e.g. entertainment tainted art. I believe that the main stay of successful visual cybertext or MSE production is the ability to create immersive visual trompe l'oeils, working with the participant's position and interpretation, creating the diametric feelings that s/he has power, ability and influence over the "text" and then realisations that s/he may have none at all.

Imposing the traditional dramatic arc isn't always necessary. Narrative can be parallel and loosely causal. The mode of interaction and the representational style of the narrative can cushion the lack of a standard arcing plot by being enticing, innovative and emotionally powerful. The archetypal interests in narrative events (the fabula [81]) -- even if they break away from using standardized formal cues -- are fundamentally what still attract both the practitioner and participant to these artefacts.

Theorists are preoccupied by the structural design. This is the way in which the interaction happens, for example, the links in a hypertext novel. In my opinion, this has led to their neglect of the visual aesthetics of allurement, the visual cues or tropes have been made secondary.

In summary, I propose that structural design should not be treated as all-important. At least equal precedence should be given to the way the artist produces the work, the rationale behind it, and the way the participant is involved. I argue that an important way to extract and examine this level of information, of insight, is to source it directly from the practitioner. As such a practitioner, I aim to undertake a body of work with extended production notes and complement this material with feedback from more objective expert participants to reveal practice based and rich primary source material.

This phase of the research is framed by the research question:

B	How does the artist develop an interactive style and visual vocabulary, which evokes rich responses from the participants whilst challenging them to counter conventional interaction tropes?

Expansion

1. Arrival of the *PDP-1* minicomputer at MIT and subsequent creation of *SpaceWar* is well described in Steven, 1984. ↴
2. And of course for some the consumption of online pornography. ↴
3. *Internet Relay Chat* (IRC) A chat protocol, which allows servers worldwide to link and allow for users to access them with special software and chat (type back and forth) in real time.

   MUDs (Multiple User Dimension, Multiple User Dungeon, or Multiple user Dialogue) and MOOs (MUD Object Orientated): are computer programs users log into and explore. Each user takes control of a computerized persona, avatar, incarnation, or character. One can walk around, chat with other characters, explore, solve problems, and even create ones own rooms, descriptions and items.

   ASCII (American Standard Code for Information Interchange) is the most common format for text files in computers and on the Internet. ASCII Art is the drawing of pictures and designs on a computer, using only ASCII characters. ASCII art appears a lot in text-based media, where other graphic images cannot be shown.

   HTML stands for "Hyper Text Markup Language" by embedding control characters in a file you can determine the way text, images, and links are shown in a World Wide Web document.

   Flash is a multimedia technology developed by [Macromedia](#) ⬈ to allow interactivity and animation within a relatively small file size. Flash contains is own programming language "Actionscript" as well as a powerful vector based (opposed to Bitmap) drawing and animation toolbox. ↴

4. Weblogs or "Blogs" as a new phenomena appeared around 1999. This "blogging" explosion is much attributed to the easy to use and free authoring tools such as Blogger (blogger.com 🔗) and Pitas (pitas.com 🔗).
Blogs tend to be communal portals for discussion in which an individual author/editor "posts" subjects / topics for discussion and "members" can then in turn post replies. The most simple criterion for what a blog is, is that the website consists of dated entries, though most blogs contain hyperlinks, commentaries, personal notes and are updated frequently - often at a daily rate.

    Examples of personal blogs:
    Williams, Evan, http://www.evhead.com 🔗
    Hourihan, Meg, http://www.megnut.com 🔗
    Walker, Jill, http://huminf.uib.no/~jill 🔗
    Pax, Salam, http://dear_raed.blogspot.com 🔗
    Costikyan, Greg http://www.costik.com/weblog 🔗

    Examples of community blogs:
    http://www.metafilter.com 🔗
   http://www.gamegirladvance.com 🔗 ↩

5. Being 'avant-garde' implies futurity - change by disturbing the status quo. Status quo can be located in many arenas such as the art world as a marketplace. In this instance avant-garde within the Internet is represented by the anti-commercial, fanzine and co-operative cultures, which since "...the 1990s threatened the entire system of information dispersal, ownership, and control [Betancourt 2002]." Similarly the association of avant-garde and its emphasis on experimentation vs. formal traditionalism -- as typified by the French Salon circa 1860s -- can be seen not only within the conceptual ideas covering content and criticism but also in the technological tools and programming used to access new methods of experimentation. Specifics of a new media avant-garde as Manovich [*Avant-garde as Software* 1999] proposes are the computer-led access, manipulation and analysis of information. "The new media avant-garde is about new ways of accessing and manipulating information. Its techniques are hypermedia, databases, search engines, data mining, image processing, visualization, simulation." ↩

6. **Aarseth's typology**
    User function: explorative, configurative, interpretative, textonic.
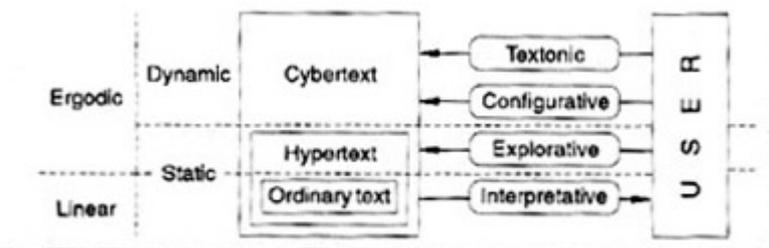
    Aarseth, E., Cybertext: Perspectives on Ergodic Literature, p 64, Baltimore: Johns Hopkins Press, (1997). ↩

7. **Hyperfiction Theory and closure**

Much of hypertext theory deals with hypertext fictions' unique resistance to conventional readerly closure (e.g. Afternoon by Joyce). This is much discussed and sited in the practice of reading non-linear texts by hypertext theorist Jane Yellowlees Douglas see:
[Douglas 1994; p.159-88]
[Douglas 2000] ↵

8. Although there are no solid definitions of post-modernism, its attributes are generally understood to be: re-use, appropriation, media-critique, re-presentation, cut-up, deconstruction, ambiguity, fragmentation, surface, mini -narratives, androgyny, metatextuality and self-reflexivity. The post-modern ethos resists unified, all-encompassing, and universally valid explanations. ↵

9. **Dense Communication.** Please Note the following has been previously published by the author in *On The Horizon* (International Journal) - ISSN: 1074-8121, in the: *Special Issue on Games, Simulations and Interactive Media in Learning Contexts*. Paper title: Visual Literacy and Learning: Finding some online territories for the slow learner. May, 2004.

The balance between close connection of the sign vehicle and signified concept can be seen as a two contrasting axes: at the far end we can interpret with certainty (specific, denotative, deduction) to the other pole where we cannot interpret with ease due to ambiguity (vague, connotative).

Certainty <--> Vague

In general non-pictorial icons (letters) have fixed and absolute meanings. The letterform "a" will always be understood as meaning "a", though when combined with a "c" and "t" its forms the word "cat" referring to a furry friend. If the string is broken down the letter "a" is still recognisable, however if it is distorted by illegibility or by the method of presentation e.g. hand drawn or part of a kinetic animation, the perceived meaning moves more towards the ambiguous nature of abstracted visual marks.

Such marks are the constituent elements of an image. Broken down they are often meaningless squiggles, dots and lines. Though once fully re-constructed, the image has the ability to be understood with certainty and to speak to the reader in a much more direct manner (note the adage *a picture can tell a thousand words*). We need very little formal education to understand pictures when they are specific (such as a photograph). Modern society's proliferation of image-based and time based communication allows for an ever more sophisticated understanding of complex images turning pictures into visual icons. The traditional opposition of text as perceived (learned) and image as received has blurred. Today we often see pictorial icons with illegible text, a crossover instigated in and by contemporary culture. An

example of this occurrence is the "technotext" *Lexia to Perplexia* by Talan Memmott (2000).

Understanding signs in an interactive environment demands more perception/more commitment, as the structure and rules of behaviour tend not to be standardized or taught to us at a young age. Physical (onscreen movement or point and click) as well as mental action enables this accommodation, this learning. The visual signs allow a more immediate immersion, freeing up our cognitive energy to perceive the rules. The viewers enter into a kind of discourse with the expression, becoming active participants in the exchange, facilitating their own cognitive growth through trial and error. The danger with offering both dynamic content as well as an experimental or unrecognised visual style is that the user may be overwhelmed and vertigo/confusion can take over. It could be argued that the experimental interactive environments of this nature do not allow any common points of entry and thus are elite, excluding many participants apart from the niche, masochistic or the most determined.

10. HCI is an abbreviation of Human-Computer Interface.

[Shneiderman 1998; p. 638]

Human-computer interaction is a discipline concerned with the design, evaluation and implementatin of interactive computing systems for human use and with the study of major phenomena surrounding them.

Human-computer interaction arose as a field in the early 1960s from intertwined roots in computer graphics, operating systems, human factors, ergonomics, industrial engineering, cognitive psychology, and the systems part of computer science. Alongside information visualization, another predominant area of study is the computer interface (GUI - Graphical User Interface) as experienced in commercial software packages, information driven websites, various computer operating systems, auto tellers, GUIs are present in any instance of interactive screen based communication with a human user

The ultimate goal of HCI is to enable fluid or intuitive interactions with the particular computer system in question. In this fluid state the user would not have to think about what menu to choose, or which mouse button to click, but could naturally and fluently perform the necessary actions to achieve their goals - the interface would then become transparent.

This ultimate goal is broken down into eight golden rules of HCI:
1. Strive for consistency.
2. Provide shortcuts for experts.
3. Offer informative feedback.
4. Ensure closure of tasks.
5. Avoid user errors.
6. Provide easy reversal of actions.
7. Support user control.
8. Reduce memory load.

11. Commercial websites

Similar to the eight golden rules of HCI (see above), commercial websites strive to attain the user's attention, satisfaction and return custom. This is normally achieved

by using a clear and standardized or hierarchical graphic layout that uses logical menu systems, sitemaps (to enable a complete overview) resulting in consistent, intuitive and transparent interaction. Also of importance is that the website has a fast download time and has a high level of cross browser, plug-in and platform compatibility.

The Webby Awards (www.webbyawards.com) are used as a benchmark in identifying the best of the Internet. They use an expert panel and a user vote to award their prizes. For the commerce category the winners were seen to be:
2004 (panel) www.apple.com/itunes/store/shop.html
2004 (users) www.ebay.com
2003 (panel) www.amazon.com
2003 (users) ditto
2002 (panel) www.idealist.org
2002 (users) ditto
2001 (panel) www.travelocity.com
2001 (users) www.cafepress.com
2000 (panel) www.babycenter.com
2000 (users) www.amazon.com
1999 (panel) www.amazon.com
1999 (users) www.ebay.com
*Note no commerce section in the years 1998 and 1997.

12. Ulm, Josh, digital artist, Flash Forward Conference, New York, (2001).
Available in electronic format:
http://www.ioresearch.com/
http://www.theremediproject.com

13. **Cracks and crevices- the interstitial**

Stuart Moulthrop is a digital practitioner of classical hypertext fictions such as *Victory Garden* (1991) *The Colour of Television* (1996; with Sean Cohen), *Hegirascope*(1995/1997), and *Reagan Library* (1999). As well as in his body of artworks, Moulthrop has shown in his numerous essays and talks that he is interested in both the broader changes in literacy and fiction and the possible implications that hypertext and the Internet have on our cultural landscape.

Moulthrop at the Digital Arts and Culture Conference 2001 prominently used the term "interstitial", in his closing keynote speech. It was from his observation of the contemporary practices and the participant's experience of new media art and cybertexts (especially Riven, by Miller & Miller, 1997) that he reapplied the term interstitial. Originally it was used by Michael Joyce in *Of Two Minds*, 1995. Moulthrop appropriated interstitial to describe works that are inherently "difficult", and whereby interstitial artists are imbued with a "trickster spirit"-- referring in particular to John McDaid, Noah Wardrip-Fruin and the conference based "readings" of John Cayley, Jim Rosenberg, Judd Morrissey, and Lori Talley.

Moulthrop's use of the term is an evolution from Joyce's, in that Joyce used interstitial to describe the more stylistically obscure sections of his book that were placed between two or more focused sections of writing. When I asked Moulthrop to expand upon his motivation in using the term interstitial, he replied:

"To me, Michael's usage always seemed more than arbitrary or technical, really almost metaphysical or spiritual -- as if the standing-between stood for something deeply related to the truth or purpose of what we were doing with hypertext, where as I take it we are always betweening something." (Moulthrop, email correspondence 🔗, 2004)

Moulthrop defines the interstitial:

"At its most direct, interstitial design insists and expatiates upon the materiality of expression. It embodies precisely the opposite of "seeing through," in that it holds forth its own mediation, along with that of other texts, for relentless inspection. It does not take us beyond mediation into the pure and timeless realm of story. It does not lead to the Holodeck… Comics, games -- and, yes, experimental novels -- all occupy cultural interstices, tenuous gaps not covered by "comfortable old hierarchical" forms. What is a comic -- a novel with too many illustrations, or a very fast film? What is a [Cyan] game -- a novel with no characters, or a film with too many cuts? Interstitial fictions represent breaks in the illusion of necessity foisted by major media forms. They reveal unauthorized vectors; they make us aware of interfaces, of media, of different ways to go. All of which may be meaningful..."

Moulthrop, *Gamely Interstitial, Narrative, Excess, and Artifactual Interstanding*, 1999.

"In phenomena like comics and adventure games, or for that matter in imaginative cybertexts and unconventional novels and films, we may be seeing the emergence of a fictive sensibility more finely attuned to gaps, inconsistencies, tensions, and fissures than to unbroken traditional lines."

Moulthrop, *Misadventure: Future Fiction and the New Networks*, 1999.

The Moulthrop definition of interstitial art is that it exists in the interstices (spaces between), and capable of binding two or more things together. Closely linked to this interstitial is the term "inter-standing" as discussed by Mark Taylor and Esa Saarinen in *Imagologies*:

"When depth gives way to surface, under-standing becomes inter-standing. To comprehend is no longer to grasp what lies beneath but to glimpse what lies between.... Understanding has become impossible because nothing stands under. Interstanding has become unavoidable because everything stands between." Taylor & Saarinen 1994, p. Interstanding 1.

Though in its nature not fixed, the term interstitial suggests celebrating all practices that fall between currently established genres and forms, one example could be -- practice that can be said to problematise the labels of fiction and non-fiction, games and art. The artworks located in this thesis can be said to be interstitial practice. ↪

14. *RedRidingHood* 🔗 is an early interactive animation. Launched in December 2000, its remit was to draw new audience types to the medium of interactive storytelling. Its narrative is a retelling of the familiar fairytale. Below is a sample list of the departments who have or had used the project as curriculum:

School of Literature Communication and Culture, Georgia Tech, Ivan Ellen College, USA.

College of Liberal Arts and Sciences, University of Florida, USA.
Available in electronic format,
see: http://www.clas.ufl.edu/users/cmartin/ENC1102/ENC1102%20Syllabus.htm

Networked Writing Environment, College of Liberal Arts & Sciences, University of Florida, USA. Available in electronic formats, see:
http://www.nwe.ufl.edu/~jdouglas/
http://web.nwe.ufl.edu/~jdouglas/interactive_fiction.html

Sarah Lawrence College, NYC, USA.
Available in electronic format, see:
http://pages.slc.edu/~strickla/

University of Denver, USA.
Available in electronic format, see:
http://www.du.edu/~treddell/4850/04_calendar.htm

University of Arizona, The Center for Computing & Information Technology, USA.
Available in electronic format,
see: http://www.u.arizona.edu/~kimmehea/svrhet/cs.htm

Illinois State University English Department, USA.
Available in electronic format, see:
http://www.english.ilstu.edu/351/fall2003/edge.html

Department of Humanities at Michigan Technological University, USA.

15. "Eloquence is being redefined. "Text" has lost its canonical certainty. How does one judge, analyze, write about a work that never reads the same way twice? And what of narrative flow? There is still movement, but in hyperspace's dimensionless infinity, it is more like endless expansion; it runs the risk of being so distended and slackly driven as to lose its centripetal force, to give way to a kind of static low-charged lyricism -- that dreamy gravityless lost-in-space feeling of the early sci-fi films. How does one resolve the conflict between the reader's desire for coherence and closure and the text's desire for continuance, its fear of death? Indeed, what is closure in such an environment? If everything is middle, how do you know when you are done, either as reader or writer? If the author is free to take a story anywhere at any time and in as many directions as she or he wishes, does that not become the obligation to do so?" [Coover June 21,1992]

16. The normative definition of "utopia", is an imaginary state with perfect political and social conditions where sexual and racial imbalances are banished. A place where conglomerate and capitalist machines cannot function, an eradication of rich and poor. Digital utopia, as instigated by the swell of Internet users in the early 1990's, refers to the belief in a global situation of non-discriminatory and networked communities as possible online. This ideology resurrects the idea of Marshall McLuhan

and his notion of a "Global Village".
This politic has been notably discussed by:
[Lewis 1999]
[Negroponte 1995]

In recent years the notion has come under much criticism, mainly because the global distribution of information technology is grossly uneven (between the west and the rest of the world), making for what has come to be called the digital divide. Furthermore, the IT (information technology) situation is seen by some to be dangerous to the very fabric of our physical community. The idea of digital utopia is in fact a real and present digital dystopia, see:

Frank, Thomas, (2000) *One Market Under God: Extreme Capitalism, Market Populism, and the End of Economic Democracy*, New York: Doubleday

Boggs, Carl (2000) *The End of Politics: Corporate Power and the Decline of the Public Sphere,* New York: The Guilford Press. ↱

17 The resurgence of electronic textual poetics

The terms "ergodic poetry", "cyber textual poetry", "digital poetry", "electronic poetry", "e-poetry" or "computer-generated writing" are used to refer to the digital practices of innovative and often interactive poetry rather than to what might be called academic, formal, or traditional forms of poetry. This can range from simple hypertext structures, highly reactive visual/kinetic texts, ASCII art through to writing in networked and programmable media.

In tandem with the growth of hypertext fiction and net art, the 1990s saw a resurgence of experimental and verbalised poetry (sited in concrete/performance poetry groups and the Black Mountain School of the 1950s). Practitioners such as John Cayley, Simon Biggs, and Jim Andrews are still actively producing and generating a dialogue around such practices. For electronic texts, see:
Cayley, John, http://www.shadoof.net/ 🔗
Biggs, Simon http://www.littlepig.org.uk 🔗
Andrews, Jim, http://.www.vispo.com/ 🔗

In 1996, New York based visual artist, and writer DJ Kenneth Goldsmith started the *UbuWeb* as a place to easily locate such work. *UbuWeb* is the largest resource for the sound/concrete/cyber poetry on the net today.
For a list of contemporary artists see: http://www.ubu.com/artist_index.html 🔗 ↱

18. The Death of hypertext fiction?

In 1998 the culture of disillusionment or cynicism was rife with statements such as "Interactive fiction is mostly a fiction- great concept what about the demo models" [Niesz & Holland 1984]. ↱

19. Rise of "Flash Art"

The rise of artistic e.g, non-commercial usage of Flash practice is marked by the release of Flash version 3.0 (1999) and onwards. This practice was supported by a crop of prestigious contests and festivals (see below).

2000 - pres The Flash Forward festivals are sponsored by Macromedia.
Available in electronic format: http://www.flashforward2004.com

2000 - pres OFFF, The Online Flash Film Festival is this year sponsored by Diesel and MediaTemple

2001 - 2002 The Idn Conferences or Fresh conferences are sponsored by Adobe, Mackintosh and Macromedia. Available in electronic format: http://www.freshconference.com

2001 - pres Flash In The Can, the Canadian Flash festival is this year sponsored by Macromedia, Humber, and MediaTemple. Available in electronic format: http://www.flashinthecan.com

2002 - pres The French Flash Festival hosted this year at the Pompidou centre Paris is sponsored in part by Macromedia. Available in electronic format: http://www.flashfestival.net/2004

2002 Madrettor the Rotterdam new media festival had no corporate sponsorship. Available in electronic format: http://www.madrettor.org (offline)

Outside of being shown within the festivals and online on the festival websites, Flash as a technology has semi-successfully impacted the fields of broadcast television (see: kerb.co.uk and their work for cable channel Bravo.co.uk) and more successfully, developed content for Pocket IE (the pc pocket book interface browser (Bill Perry at pocketpcflash.net) and in the design of the new generation mobile phone interfaces (Hoss Gifford at flamjam.com).

20. The World Economic Forum (WEF) report titled 'Global diffusion of ICT,' reports that of the 6.2 billion people in the world, 1 in every 5 people is a cellular mobile subscriber, against only 1 in every 12 people three years ago. The number of cellular mobile subscribers at 1.15 billion outstrips the 1.10 billion landlines in operation.

Available in electronic format:
http://www.domainb.com/economy/general/200401jan/20040127_wef_report.html

21. **The Ascendancy of ludlology**

Though older in origin, the modern usage of the term was first coined by Gonzalo Frasca in his paper *Ludology meets Narratology Similitude and differences between (video) games and narrative* (1999).
Available in electronic format: http://www.ludology.org/articles/ludology.htm

Game studies and ludology have created a new generation of academics who devote themselves to analysing video/computer games. Rejecting the stigma that games are not intellectual, researchers around the world are making computer games the subject of serious academic pursuit alongside literature, music and art. In recent years universities have reflected this development by starting Ph.D. programs, research centres and online journals.

Notable Example:
Center for Computer Games Research IT University of Copenhagen was founded in Spring 2003, amongst its faculty are key ludology researchers, Dr. Espen Aarseth , Simon Egenfeldt-Nielsen, Gonzalo Frasca,
Dr. Jesper Juul, Lisbeth Klastrup and Dr. Susana Tosca. Available in electronic format: http://game.itu.dk/.

Other examples of academic departments researching computer games:
Georgia Tech graduate program in digital media directed by Janet Murray.
Available in electronic
format: http://www.grad.gatech.edu/admissions/programs/iac/digital_media.html

Massachusetts Institute of Technology's Comparative Media Studies program headed
by Henry Jenkins. Available in electronic format: http://web.mit.edu/cms

Ludology blogs and websites, available in electronic formats:
Digital Games Research Association, http://www.digra.org/
Gonzalo Frasca, http://www.ludology.org/
Peer reviewed critical website , http://www.gamestudies.org
http://www.game-culture.com/
http://www.igda.org
http://terranova.blogs.com/
http://www.gamegirladvance.com/
http://www.grandtextauto.org
http://www.jesperjuul.dk/ludologist/
http://www.costik.com/weblog/
http://terranova.blogs.com/

22. Wardrip-Fruin, N., Montfort, N., The New Media Reader, Cambridge (Mass): MIT, (2003).

23. In the context of this thesis the word 'rich' primarily means significant and meaningful opposed to intuitive and commonplace communicative exchange. Secondly, 'rich' appropriately connotes notions of sumptuousness and pungency, in other words experiences relating to the stimulation of one or more human senses.

24. **Text Dominance**

The dependence on the stability of meaning within verbalised forms has a stronger linage than with pictorial forms. When we "read" text we generally expect closure, whereas with the electronic inter-textuality and its traits of simultaneity, spatiality and movement (traits more commonly associated with the visual arts) this reading is fundamentally different and requires interpretive skills akin with reading experimental poetry or literature, skills which are broadly not populist. Whereas the visual equivalents, semi-abstracted film & animation (although still not common reading skills), are more easily engaged with as a different type of reading takes place -- a non fixed reception of the image, where importantly the reception is more socially acceptable.

25. "Wreader" [Landow 1994], "Vuser" [Seaman 2000].

26. Friedman (1995) claimed the "perpetual continual feedback loop" between human computer interaction is seminal in constructing that essential immersion within the gaming experience.

27. Flash is a multimedia technology developed by Macromedia to allow interactivity and animation within a relatively small thus Internet streamable file size. Flash contains is own programming language Actionscript as well as a powerful vector based (opposed

to Bitmap) drawing and animation toolbox. Macromedia Flash 3.0 (1998-9) is the earliest version of the software to impact on the design and art community (the first ever version was Flash 1.0 in 1996, previously named FutureSplash Animator). Flash 4.0 (1999) offered a more sophisticated interface for timeline manipulation and programming. Flash 5 (2000) consolidated the software as a powerful animation and programming tool. The most recent version - MX (Flash 6) has broadened its range of features into video manipulation and database programming.

The Macromedia Flash "player" allows Internet users to view and interact with Flash content. This plugin is free to download. Recent figures show that 98% of users have the player installed on their computers. Available in electronic format, see: http://www.macromedia.com/software/flashplayer ⬈ ↰

28. **Bad Flash**

The first generation of Flash circa 1998/9 - 2000 were famed for garish colours, bad usability (without being intentionally subversive), and the infamous "Intro Scene", complete with "skip intro" button.
On the back of such practices came the "Flash: 99% Bad" article by Jakob Nielsen (2000)
Original article available in electronic format: http://www.useit.com/alertbox/20001029.html ⬈

Then in retaliation, Kevin Airgid and information architect Stephanie Reindel launched -"Flash 99% Good: A Guide to Macromedia Flash Usability", associated website available in electronic format: http://www.flash99good.com/ ⬈ (2002)

For general website design crimes see the website by Vincent Flanders, available in electronic format: http://www.webpagesthatsuck.com ⬈ ↰

29. **Grown-up Flash practice**

Paterson, James & Pitaru, Amit, available in electronic format: http://www.insertsilence.com ⬈
Franceschini, Amy & Olm, Josh, available in electronic format: http://www.futurefarmers.com ⬈
Stumpo, Nikola, available in electronic format: http://www.abnormalbehaviorchild.com ⬈
Hoogerbrugge, Han, available in electronic format: http://www.hoogerbrugge.com ⬈
Jugovic, Alexandria & Schmitt, Florian, available in electronic format: http://www.hi-res.net ⬈, http://www.donniedarko.com ⬈ ↰

30. Frasca, *Simulation 101: Simulation versus Representation*, 2001. ↰

31. From a transcript of an interview with Hiroshi Yamauchi, (note: original no longer available). Excerpts available in electronic format: http://www.kanga.nu/archives/MUD-Dev-L/2001Q1/msg01111.php ⬈ (February 2001) ↰

32. *Habbo Hotel* (2001), winner of the 2003 Prix Ars Electronica - Net Vision award, is an Internet based virtual hotel designed for 14 to 20 year olds in the UK. Once you log in you can explore and interact with the other residents of the hotel. Habbo Hotel is

made using Macromedia Director, is operated and owned by Habbo Ltd / Sulake. Available as electronic text: http://www.habbohotel.co.uk/habbo/en/

33. Manovich, *Generation Flash, Postscript: On The Lightness of Flash*, 2002.

Examples of the flash neo-minimal aesthetic, for electronic texts, see:
Davis, Joshua,
http://www.praystation.com
http://www.singlecell.org/june/index.html (June 2001)

Tan, Manny,
http://www.uncontrol.com

Mez (Mary-Anne Breeze), _the data][h!][bleeding texts_, electronic text, see:
http://netwurkerz.de/mez/datableed/complete/index.htm
Amerika, Mark, *Film Text 2.0*, electronic text,
see: http://www.markamerika.com/filmtext

35. **Reactive physical performative codes**

Typographic Tree, by Digit, is an interactive installation, which via a small signpost invites participants to sing to mushrooms, which sit on top of a tree stump. As soon as a participant begins, a digital tree begins to grow using nothing but the tone and volume of their voice they can control every aspect of the tree's growth. It's size, complexity, colour and even the amount of flowers in bloom.

Typographic Tree was exhibited at ICA, London, UK, (November, 2001) and The Media Centre, Huddersfield, UK, (July, 2002). Documentation available in electronic format:
http://www.digitfeed.com

A modified version of *Pagan Poetry*, by James Paterson and Amit Pitaru was performed at Flashforward Amsterdam (November, 2001). In this version their animation responded to volume and pitch instead of the participant's investigation. With a baby grand on the stage Pitaru played some improvised jazz piano and their animation responded to the volume and key of his live performance. Original version available as electronic text at: http://www.insertsilence.com

36. **Post-digital and post-contemporary paradigms**

Post-digital refers to works that rejects the hype of the digital revolution, e.g. the familiar digital tropes of purity, pristine sound and images and perfect copies are abandoned in favour of errors, glitches and artefacts [Cascone 2000].

Post-conceptual refers to work where there is no distinction between works of self-expression and works of social critique e.g. they are part and parcel of the same activity and they stand alone. Post-conceptual is associated with the anti-theory turn in art production of the mid to late 1990s. This paradigm abandons much of post-modernism's practices e.g. of re-use, appropriation, media-critique, re-presentation, cut-up, "deconstruction".

37. **Pencil and paper role-playing**

A role-playing game (RPG) is a type of collaborative and interactive game where players assume the role of a fictional character, via associative role-playing. A GM (games master) will normally control and create the narrative world's parameters, in association with the other players. Polyhedral dice are used to create statistics such as strength, dexterity, intelligence and charm of the characters.

38. The *Choose Your Own Adventure* series set the standard for basic-level gamebooks. The series started in 1979 and includes 184 books. No new books have been released since July 1998, and the entire series is now out of print. For a list and description of the series see the electronic text: http://www.gamebooks.org/cyoalist.htm

39. Sample of post -modernist / ergodic printed texts

Johnson 1969.
Pavic 1990.
Nabokov 1962.
Queneau 1961.

Post- modernism: although there are no solid definitions of post-modernism, its attributes are generally understood to be: re-use, appropriation, media-critique, re-presentation, cut-up, deconstruction, ambiguity, fragmentation, surface, mini -narratives, androgyny, metatextuality and self-reflexivity. The post-modern ethos resists unified, all-encompassing, and universally valid explanations.

40. **Sample of Aarseth's examples of cybertexts**

Adventure: One of the key texts in this study, is the role-playing game Adventure , by William Crowther and Don Woods, released on the U.S. research network ARPANet, the precursor of the Internet, in April 1976. As the microcomputer home market exploded around 1980, Adventure was made available on nearly every type of machine and became the first in a short-lived, but influential, textual computer game genre, which ended its commercial life when the graphic adventure games took over in the late eighties.

Racter: A computer authoring narrative machine, speech engine and Artificial Intelligence, designed by William Chamberlain, (1984). Chamberlain claims Racter wrote the mystery story "The Policeman's Beard". It was argued under inspection that Chamberlain wrote (at least partially) it himself.

Tale-spin: In the seventies, some artificial intelligence researchers focused on making systems that could analyse and write stories. A well-known project was James Meehan's program Tale-spin, which could construct simple animal fables of the Æsop type. Primarily, the researchers were not trying to achieve literary quality, and the stories that were produced typically testify to this lack of ambition. However, some of the "failures" produced by Tale-spin make strikingly original prose, succeeding where the successes failed.

MUDs (Multiple User Dimension, Multiple User Dungeon, or Multiple user Dialogue) and MOOs (MUD Object Orientated), see reference number 3

I Ching: An example of Cybertext in antiquity is the Chinese text of oracular wisdom, the I Ching (Wilhelm 1989). Also known as the Book of Changes, the existing text is from around the time of the Western Chou dynasty (1122-770 B.C.)

A Much simpler example of a non-linear text is Guillaume
Apollinaires *Calligrammes* from early in this century (Apollinaire 1966). ↱

41. **Hypertext fiction**

Often textual but can have multimedia elements. Based on the original concept "hyperlink": "let me introduce the word 'hypertext'* to mean a body of written or pictorial material interconnected in such a complex way that it could not conveniently be presented or represented on paper. (* the sense of 'hyper-' used here connotes extension and generality; cf. 'hyperspace.')" Ted Nelson, 1965 (National Conference of the Association for Computing Machinery)

Hypertext fiction normally presents information as a linked network of nodes which readers are free to navigate in a non-linear fashion. It allows for multiple authors, a blurring of the author and reader functions, extended works with diffuse boundaries, and multiple reading paths.

Hypertext fiction was originally created using the Storyspace software (sold by Eastgate systems since 1989) or HyperCard by Apple (recently discontinued). The sale of Storyspace for academic/ artistic use still continues today. ↱

42. "While definitions and categories may be helpful in identifying certain distinguishing characteristics of a medium, they can also be dangerous in setting up predefined limited for approaching and understanding an art form, particularly when it is still constantly evolving, as is the case with digital art." [Paul 2003; p.8]

Paul also claims that she doesn't believe that digital art will gain a mass or populist audience; she speculates that digital art may achieve a position in culture similar to that of video art (see the practices of Nam June Paik, 1967 - pres and Bill Viola, 1976 - pres). ↱

43. Frasca, *Ludology meets Narratology: Similitude and differences between (video)games and narrative* , 2001. ↱

44. [Manovich, Post-media Aesthetics, 2001] ↱

45. **Observations from Flash Forward Amsterdam 2001**

Davis, Joshua, one-man research and development web site, electronic text, see:
http://www.praystation.com/

Paterson, James, electronic text, see:
http://www.presstube.com/

Pitaru, Amit, electronic text, see:
http://www.pitaru.com/
Paterson, & Pitaru, Pagan Poetry, electronic text, see:
http://www.insertsilence.com/
http://www.showstudio.com/projects/031/031_interactive.html ↱

46. [Manovich , Data Art, 2002] ↱

47
. Lisa Jevbratt, 1:1(1999) electronic text, see: http://c5corp.com/1to1/

Part of the Net art at the Whitney Biennale 2002, available in electronic format:
http://www.whitney.org/artport/exhibitions/biennial2002/jevbratt.shtml

48
. **Vector**

A vector image is one of the two major graphic types (the other being bitmap). Vector graphics are made up of many individual objects. Each of these objects can be defined by mathematical statements and has individual properties assigned to it such as colour, fill, and outline. Vector graphics are resolution independent because they can be output to the highest quality at any scale.

Software used to create vector graphics is referred to as object-based editing software. Common vector formats include AI (Adobe Illustrator), SWF (Shockwave Flash (Macromedia)), and DXF (AutoCAD and other CAD software). Vector graphics almost always have much smaller file sizes than raster-based bitmaps.

49
. Ryan, in gamestudies.org, July 2001.

50
. "To me, the maintenance of some kind of narrative, and consequently linear coherence is crucial to whether new media literature will remain an academic fad, or will reach the wider audience of the educated public."

Excerpt from Marie-Laure Ryan's reply post (May 28, 2003 05:34 PM) on grandtextauto.org, available in electronic format: http://steel.lcc.gatech.edu/grandtextauto/archives/000022.html

51
. Note the book is almost verbatim her PhD thesis from 1991: *Print Pathways and Electronic Labyrinths* (New York University), thus the study is older than the date of publication would suggest.
Douglas, *End of Books or Books without end?*, 2000.

52
. There is a continuing scarcity of examples due to recent trends in new media art. The majority of the available examples concentrate on abstract visualization and looping experimental visual forms and not sequential or narrative structures, available as electronic texts:
Tan, Manuel, http://www.uncontrol.com
Brown, Daniel, http://www.play-create.com/pieces/flowers.html
Stearns, Jeff, http://www.deconcept.com

Manovich, (2002) *Generation Flash, Postscript: On The Lightness of Flash: Turntable and Flash Remixing*.

53
. New Wave Hypertext Fiction
[Joyce 1999].
[Coverley 1997- Ongoing].
[Montfort & Gillespie 2000].
[Memmot 2000].

54. There has been an increasing trend of native net practice and videogames being recognised and exhibited both online and offline by established contemporary galleries. Below is a selection of instances:

Joshua Davis (praystation) retrospective at the Institute of Contemporary Art, January -February 2003, London. Available in electronic format: http://www.ica.org.uk/index.cfm?articleid=11003

Whitney Museum, New York, Artport (2002) is the Whitney Museum's portal to net art and digital arts. Available in electronic format: http://www.whitney.org/artport/

GameOn showed at the Barbican Gallery, May 16th to September 15th 2002; then the Museum of Scotland, Edinburgh from October 2002 to February 2003; and then to venues in Europe, America and Japan.

Digital Flash and lingo artists Yugo Nakamura, Daniel Brown, Joshua Davis, collaborators James Paterson and Amit Pitaru, Tomato, showed at The Design Museum *Web Wizards*, 30 November 2001-21 April 2002, London.

Hypertext, game and visual artists Dane, Judd Morrissey, Donna Leishman, Michael Mittelman and Megan Hurst exhibited Internet projects at DeCordova Museum (Boston), in the exhibition Web Racket, June 8 - September 1, 2002. Available in electronic format: http://www.decordova.org/decordova/exhibit/webracket/Default02.htm

Barcelona Internet pioneers Jodi.org (*Untitled Game*), at the Glasgow Centre for Contemporary Art's re-opening exhibition Words & Things, October-December 2001

Since 2001, the Walker Arts Center in Minneapolis has had an extensive program exhibiting digital art.
Available in electronic format: http://www.walkerart.org/gallery9/

010101 : Art in Technological Times, is the SFMoMA's exhibition of web, installation, video, sound and digital artwork, 2001. Available in electronic format: http://010101.sfmoma.org/

55. Abstract Cinema formed a central strand of early American avant-garde filmmaking during the 1940s and1950s, particularly on the West Coast. Its non-objective colours, surfaces, and shapes create complex compositions of light in motion whose structures often echo those of music. In the work of Jordan Belson and James Whitney, cosmic principles found expression through the delicate vibrancy of light and abstract forms. Available in electronic format: http://www.iotacenter.org/calendar.html .

56. Examples of pixel art and animation
Available in electronic format:
http://www.emogame.com
http://www.sissyfight.com
http://www.habbohotel.com
http://www.eboy.com

57 **An enlightened primitivism in animation?**

. Available in electronic format:
http://www.mrandmrswheatley.co.uk
http://www.goultalightsgo.com
http://www.vectorpark.com

58 "Comics, games -- and, yes, experimental novels -- all occupy cultural interstices,

. tenuous gaps not covered by "comfortable old hierarchical" forms. What is a comic -- a novel with too many illustrations, or a very fast film? What is a [Cyan] game -- a novel with no characters, or a film with too many cuts? Interstitial fictions represent breaks in the illusion of necessity foisted by major media forms. They reveal unauthorized vectors; they make us aware of interfaces, of media, of different ways to go. All of which may be meaningful..." [Moulthrop, *Gamely Interstitial*, 1999].

59 "Comfortable old hierarchical forms" refers to "comfortable old hierarchical

. dominations to the scary new networks" [Haraway 1991, p.161].

60 **Selected hypertext theory texts**

. Bolter, Writing Space: The Computer, Hypertext, and the History of Writing, 1991.
Landow, Hyper/text/theory, 1994.
Landow, Hypertext 2.0: the convergence of contemporary critical theory and technology, 1992.

61 **Selection of Ludology texts**

. Friedman 1998.
Costikyan 1994.
Crawford 1997.
Eskelinen 2001.
Aarseth 1997.
Murray1997.
Turkle1997
Ryan 1994.
Mateas2002.
Scholder & Zimmerman 2003

62 *Untitled Game* is a CD (and web site) containing twelve modifications of the

. videogame*Quake* by artist ensemble JODI (Joan Heemskerk and Dirk Paesmans). The modifications result in a deconstruction of the traditional visuals and sound into another sensory experience, one that often challenges perception and meaning as the game world is reduced from anti-aliased pixels and colour palettes to primary minimalist colours and shapes. For the downloadable electronic text, see: http://www.untitled-game.org/

63 The first generation of net artists, or "heroic" net artists,are generally accepted to be:

. Jodi.org, collaborative artists Joan Heemskerk and Dirk Paesmans - known for their explorations into the aesthetics of error.
Electronic text: http://www.jodi.org
Vuk Cosic the early pioneer of ASCII art. Electronic text: http://www.ljudmila.org/~vuk/
Alexei Shulgin- mixes music, art and contexts to question cultural situations (since 1995).
Electronic text: http://www.easylife.org

Heath Bunting, environmental and Internet artist. Electronic text: http://www.irational.org 🔗 ↩

64. "The terminology for technological art forms has always been extremely fluid and what is now known as digital art has undergone several name changes since it first emerged: once referred to as 'computer art' (since the 1970s) and then 'multimedia art', digital art now takes its place under the umbrella term 'new media art' Paul 2003, p.7 ↩

65. Flash boys: Link to larger footnote 🔗 ↩

66. The Java applets of the media artist John Maeda (1996 - pres) are cited being the founding inspiration for programmatic visual artists; he is currently professor at MIT Media Laboratory.
Samples of his works are available in electronic formats, see: http://www.maedastudio.com/ 🔗 ↩

67. Before these designer friendly "layman" programming languages such as Lingo and Actionscript were available, there was (and still exists) a history of more formal programming languages which stem from the 1950's with Fortran, Cobol, C++, C (1980s) Visual Basic (1990s), Java (1995), Java Script (1995), HTML 1992), XML, Perl (1987) and CGI. ↩

68. **Abstract data visualisation**
The Secret Lives of Numbers, by Golan Levin (flong.com 🔗), plots the popularity on the Internet of the numbers between zero and one million. Available as electronic text: http://www.turbulence.org/Works/nums 🔗 (2002)

Carnivore by Radical Software Group (Alex Galloway) is a surveillance tool for data networks. At the heart of the project is CarnivorePE, a software application that listens to all Internet traffic (email, web surfing, etc.) on a specific local network. Its uses "clients" to animate, diagnose, or interpret the network traffic in various ways.

The artistic clients /contributions are from: Limiteazero, Joshua Davis/Branden Hall/Shapeshifter, Mark Napier, Cory Arcangel, Mark Daggett, Scott Sona Snibbe, Entropy8Zuper!, Vuk Cosic, Golan Levin, MTAA, Lisa Jevbratt, Jonah Brucker-Cohen, RSG, The Witness, Marcos Weskamp, RSG and Area 3.

Available as electronic text: http://www.rhizome.org/carnivore/ 🔗 (2002) ↩

69. Developing artificial digital life forms
Singlecell by Tindall, James (www.atomless.com 🔗).
Available as electronic text: http://www.singlecell.org/april/ 🔗 (2001) ↩

70. Jon Thomson & Alison Craighead are new media artists Thompson and Craighead (1991 -pres).
They are well known for their works such as *Trigger Happy* and *E-Poltergeist,*aesthetically their work utilises/subverts the language of Internet banner advertisements, animated GIFS, early text based games and the traditionally non-immersive experiences of search engines.

Their work is available in electronic format, see: http://www.thomson-craighead.net 🔗↴

71. Online there exists a particular strain of practices that play with real/false cyber identities e.g. the conversational system Eliza (www-ai.ijs.si/eliza/eliza.html 🔗) and davidstill.org 🔗. One of the most prominent websites of this type is Mouchette 🔗.

Mouchette.org is loosely-based on the 1937 book by Georges Bernanos and the 1967 Robert Bresson film. The website seems to expand upon the basic storyline of the film. The film portrays a girl suffering from the pains of abuse. According to her/his website, Mouchette is nearly 13 years old and lives in Amsterdam (he/she has been 13 for a few years now - the website has been online since 1996). You are asked to give him/her your e-mail address then he/she will invite you to partake in various events and forums.

The true identity of the alter-ego behind Mouchette.org has been a closely guarded secret, and still is. By concealing his or her identity, the artist preserves the first-person nature of the site, thus enhancing the thematic power. In this manner, the artist provokes heated debates of contemporary political and sexual issues. ↴

72. The *Prix Ars Electronica* is a yearly prize in the field of electronic and interactive art, computer animation, digital culture and music. It has been awarded since 1987 by Ars Electronica 🔗 (Linz, Austria), which is one of the world's major centres for art and technology.

The Golden Nica (10,000 Euros), the highest prize, is awarded to six categories, one of which specifically relates to Internet based projects. In the categories "World Wide Web" (1995 - 96) and ".net" (1997 - 2000), interesting web-based projects were awarded, based on criteria like web-specificity, community-orientation, identity and interactivity. In 2001, the category became broader under the new name "Net Vision / Net Excellence", with rewards for innovation in the online medium.

World Wide Web
1995 *Idea Futures* by Robin Hanson
1996 *The Hijack project* by etoy.net 🔗
1997 *Sensorium* by Taos Project
1998 *IO_Dencies Questioning Urbanity* by Knowbotic Research
1999 *Linux* by Linus Torvalds
2000 *In the Beginning...was the Command Line (excerpts)* by Neal Stephenson
Net Vision / Net Excellence
2001 *Banja* 🔗 by Team cHmAn 🔗 and *PrayStation* 🔗 by Joshua Davis
2002 *Carnivore* 🔗 by Radical Software Group and *They Rule* 🔗 by Josh On and Futurefarmers 🔗
2003 *Habbo Hotel* 🔗by Sulake Labs and Noderunner by Yury Gitman and Carlos J. Gomez de Llarena
2004 Creative Commons.org 🔗↴

73. The narrative in my practice can be said to be similar in the subject matter to the work of Entropy8Zuper! (Auriea Harvey, Michaël Samyn) which is often described as being old-fashioned in that it deals with human themes such as love, faith and war. Interestingly the aesthetic of my practice is drastically unlike that of Entropy8Zuper! 🔗 . ↴

74. **Almost alone**

Below are links to other visual practitioners who I felt had conceptual similarities and / or shared my visual style.
Ian D/Rolito, electronic text, see: http://www.rolitoland.com
Smith, Patrick, electronic text, see: http://www.vectorpark.com
Hanada, Kinya, electronic text, see: http://www.mumbleboy.com
Hanada, Kinya &Paek, Eun-Ha & Ackermann, Karl, electronic text,
see: http://www.milkyelephant.com
Endo, Toshi, electronic text, see: http://www.safeplaces.net/sp.htm
Mitsuse, Naoki & Morisaki, Masaki & Mitsuru, Sunday & Takada, Mon, electronic text,
see: http://www.goultralightsgo.com

75. **To allow or denial participant control**

I subscribe to the likes of Aarseth who point out that ergodic texts are more limiting than linear books. In fact an intrinsic feature of non-linear texts is that they are less about freedom of choice but more about the limits of choice. Aarseth illustrates this by pointing out that the reader has complete access to the novel in their hands, and are free to read it in any sequence. However, in hypertexts the reader is constrained by conditional or randomised links.

76. "Instead of being gently initiated into point-and-click interactivity, readers were intimidated by the forbidding complexity of a maze that they had no fair chance of mastering. With the arrogance typical of so may avant-garde movements, hypertext authors worked from the assumption that audiences should be antagonized and stripped and stripped of any sense of security, rather than cajoled into new reading habits." [Ryan 2001;p.265]

77. I Ching (Wilhelm 1989). Also known as the Book of Changes, the existing text is from around the time of the Western Chou dynasty (1122-770 B.C.)

Queneau 1961.

78. Soderbergh, Steven, (2001) *Traffic.*
Directed by Steven Soderbergh; written by Stephen Gaghan, based on "Traffik" created by Simon Moore,
Traffic used complex and fractured narrative structures that are initially tangled and as the film moves towards the conclusion the narrative threads become more (not completely) resolved and ordered.

79. Figgis, Mike, (2000) *Time Code.*
Director: Mike Figgis; screenwriter: Mike Figgis; producer: Annie Stewart.
Time Code plays on a quadruple-split screen, four separate stories unfold simultaneously in real-time, building to a final, climatic moment in which they all unexpectedly come together.

80. The normative definition of: "Truly interactive" denotes works that are made possible by a continuous feedback loop. That being: a participant who offers input into the programme, which will adjust what follows according to the participant's individual choice and ditto -- what follows is a loop of the previous exchanges -- ad infinitum. The output of which is a unique participant experience configured to his or her choices -- an experience that no one else will achieve.

Such a level of processing requires a complex and costly computerised parsing ability. Therefore feedback-looping artworks are at present extremely rare [for a rare example see Mateas2002]. Whereas the majority of artworks use pre-recorded or pre-organised content that are in turn called up as the participants make choices. Thus significantly more common than "true interactive texts" are structures that use forking paths and multiple-choices. ↩

81. Fabula (the fable / the events).

The terms fabula and syuzhet were coined by the Russian Formalists (1910s - 1920s) see Victor Shklovsky, Boris Eichenbaum, Vladimir Propp, Yuri Tynianov and Roman Jakobson.

The fabula embodies the action as a chronological, cause-and-effect chain of events occurring within a given duration and a spatial field, while the 'syuzhet' (plot /discourse) is the actual arrangement and presentation of the fabula in the film/novel/animation. ↩

Chapter 2

2.0 The preparatory practice - introduction

The practices located in these following sections are precursors to the *Deviant* project which was created specifically to answer the research question "How does the artist develop an interactive style and visual vocabulary, which evokes rich responses from the participants whilst challenging them to counter conventional interaction tropes?"

The following projects each investigate different aspects of developing responsive pictorial environments and as such support and are contributory to the findings of the *Deviant* project. In this sense the following artworks function as preparatory sketches.

2.0.1 Angel Interceptor

(8 week, part-time production project completed March 2001)

Angel Interceptor was created in the early stages of this research. It was primarily an exploration of Flash's rendering capabilities and a move towards a drawing style that approximates painting. This was a development from the simplified comic aesthetic and bright colours of *RedRidingHood*🔗. The narrative base, unlike the subsequent projects, was not sourced from an existing text. Rather it was based on a selection of themes -- namely the intricacies of the interconnections between humans in our contemporary situation and how we may reside in close proximity to others but share no intimacy with them. The enclosed world (as represented by the snow shaker) suggests a control and subjugation relationship between the participant and the figures located within the dome. The scale of the project was intentionally small (250 x 250 pixels) to create an interface situation whereby the participant would have to look intently at a microcosm.

See: *Angel Interceptor* sketches 🔗

See: *Angel Interceptor* 🔗

Summary of the outcomes from Angel Interceptor

1. This short project reaffirmed that my practice is fundamentally fuelled by a narrative source; working with looser themes did not allow a focussed interpretative voice.

2. It revealed that a powerful visual communication could be achieved within a small composition.

3.   It revealed that translucent/alpha channel layering of colour in Flash creates an interesting faux watercolour effect, indicating potential for a more painterly or detailed rendering style (fig1).

4.   It indicated that clear participant-led interaction and re-actions developed a strong connection i.e. "I did that" (notably in the section when the matchstick angels are "shaken" from the sky (fig 2)). This indicates potential for both empowered and de-powered complicity in participant positions.

(fig1). (fig2).

Angel Interceptor has been shown online at the: *Boston Cybertarts Low Bandwidth* Festival (April 2001), and as a projection in the exhibition *UKINNY* at the Parsons New School, New York (October 2001).

2.0.2 The Bloody Chamber (13 week project completed May 2002)

Unlike *Angel Interceptor*, *The Bloody Chamber* was conceived as a narrative re-interpretation. It was produced alongside the development of the contextual practice and literature reviews. Given this chronology, *The Bloody Chamber* tested many of the early concepts and interests as revealed by establishing the field of study. In specific:

1.   Can I both visually and structurally create voyeuristic and changeable multi - perspectives for the participant? [*Transformation* Murray 1997]

2.   How can I develop an aesthetic that both fosters a sense of intimacy and follows on from the detailed visual style as located in *Angel Interceptor*?

3.   Can a dual ending (as transformation of the original narrative) be made meaningful?

See: *The Bloody Chamber* sketches

See: 🔗
See: 🔗

What follows below is a description of my thinking and approaches to creating *The Bloody Chamber*. Interwoven are supporting comments from Jonathan Olshefski who critiqued the work in December 2003, 🔗.

Artist's statement The Bloody Chamber

The story of Bluebeard (*La Barbe bleüe*) was originally told by Charles Perrault in 1697. It is a fairytale about the horror that lies beneath a beautiful surface -- a materialistically idyllic marriage to the powerful Bluebeard. The bride's antecedents are Eve and Pandora, emblems of female curiosity that unleashed evil consequences onto the world. Traditionally in this story, the evil consequences fall to the wife who is put to death by her husband as a punishment for her disobedience (for knowledge of what lies within his private chamber). The tale has had many modern retellings primarily because it supports feminist contentions about gender oppression, the most notable of which is Angela Carter's *The Bloody Chamber*. In Carter's version, the Bluebeard's traditional ending is subverted by the wife's mother who decapitates the Bluebeard (thus the mother is the hero and not the wife's brothers nor suitors).

The Bluebeard narrative was challenging to work with. Firstly it portrays and deals with hierarchy in the very traditional sense. This comes in the form of the commanding male protagonist -- the Bluebeard. He is mysterious, hugely wealthy, an older man, almost kingly in stature. The Bluebeard is said to be ugly and frightening, not a classical romantic lead. Indeed it is his fabulous wealth and power that makes him attractive to both his wives and society. Traditionally he lives in the ultimate symbol of his status -- a majestic and enclosed castle located on the outskirts of a village.

Feminist readings of this narrative have repositioned the female protagonist (the bride), not as a victim but as a survivor, as an empowered victor who escapes (or kills) her brute of a husband. In my retelling, I am interested in developing another repositioning, that being that both the husband and wife characters are imperfect, are equals because both are dysfunctional and have flawed attributes. The Bluebeard has to overcome his history of failed marriages and his legacy of being the dominator. The bride has to overcome her possessiveness and possibly destructive fantasies. These psychologies are revealed to the participant through the various windows and entrances within the project. These apertures of sight mirror the limited understanding that the protagonists have of one another. Within this project the role of the participant is that of a voyeur who is in control of his or her own larger vantage point, as they can see

both of the protagonist's limited perspectives. This control means that they can see the fuller metamorphosis of the original text.

> "The perspective is at times omniscient, but at other times aligns itself with the point of view of either the protagonist or the husband. This variety of narrative perspectives gives much greater depth to the piece …We are able to identify with both characters and, at times, we identify with one through the other." [Olshefski 2003 ↗]

Design Dsecisions

Although visually re-imagined, the key narrative symbols can still be seen within this retelling of *The Bloody Chamber* -- the key, the blood, and the private chamber. What follows below is a short description of the various design decisions as pertinent to understanding the transformation of the original text.

Lack of Colour

The decision to render the project in shades of black and white was taken to highlight the idea of "limitation" and the usage of the colour red (see further below), would be seen as more conspicuous when placed in a monochromatic colour range. The palate also suggests the mundanity or melancholy of the narrative world.

> "Leishman portrays a man (Bluebeard) who is utterly isolated and suffering from acute loneliness."
> [Olshefski 2003 ↗]

This limitation of colour is only broken once and is found within the final chamber. In there, I use pale blue to narrate the presence of the outside world (the priorly unseen back view).

No Horizons

I chose to portray this environment as an enclosed thus limited world. There are no horizons, nowhere in the distance to dream about, no avenue for salvation. This helps to condense the relationships between the characters triangularly between themselves and the location; this limitation helps to give a feeling of claustrophobia.

The participant controlled "Zoom"

To complement this simulated re-imagined world, I designed a navigation system that allows the voyeuristic participant to view either in minute detail or at a distance. Clicking the small magnifying glass icons or pressing the designated keys on the keyboard achieves this. These magnification icons are explicit in their usage as they sit within the same space and retain their function through the entire project.
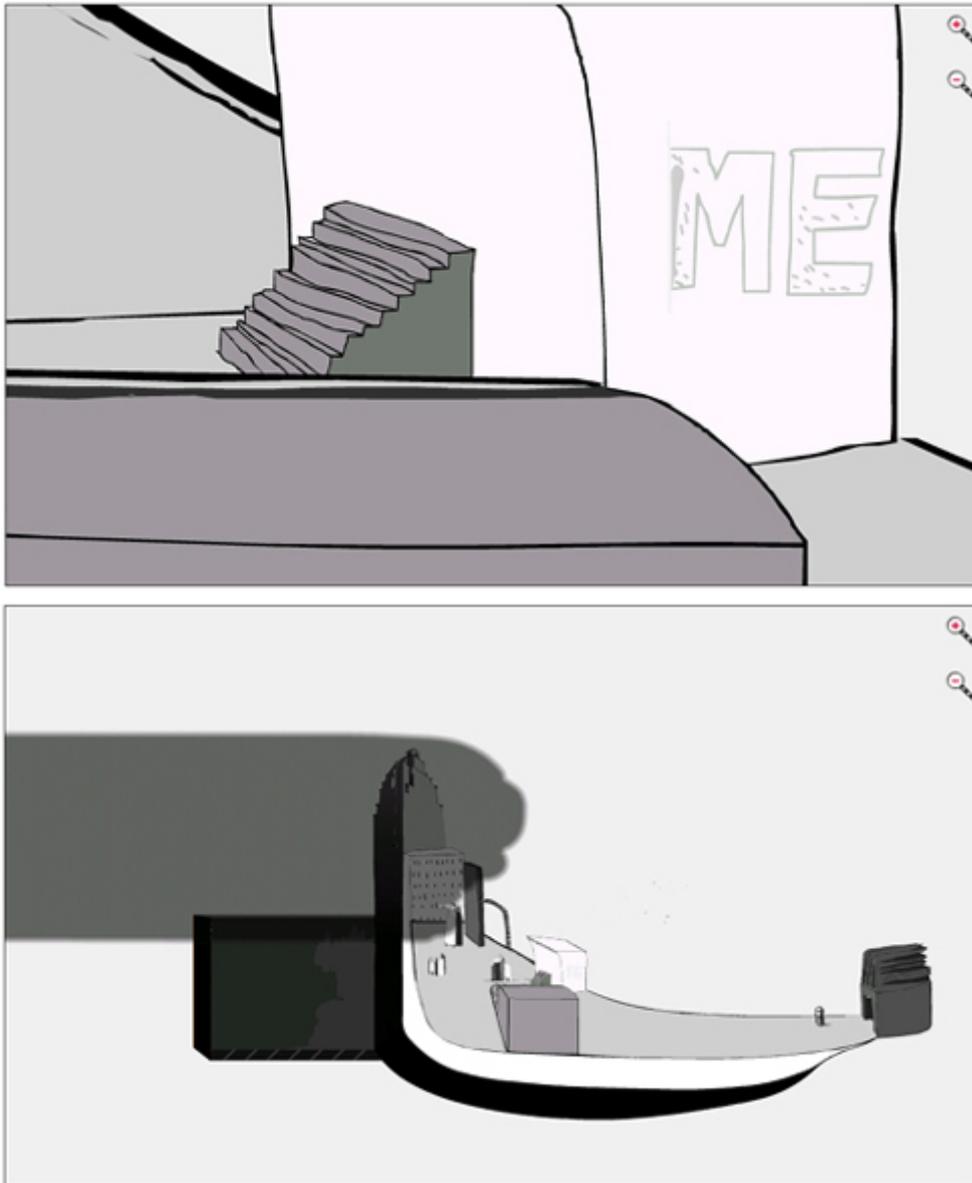
(fig3). Zooming In. (fig4). Zooming Out.

The navigation utilises a strong filmic tradition of "panning in" and out. This gives the viewer control over the narrative through directed enquiry. To emphasise this technique further and to remove the worldscape from "reality", the project does not use a traditional animation technique, thus the standard playing from left to right of animation is in the main replaced by the participant automated "Zoom" -- inwards and outwards.

The participant is given frequent opportunity to compose his or her own vantage points. To help reaffirm the importance of these perspectives and to highlight the feeling of intimacy, the participant must travel through compositional apertures to unravel and witness the narrative.

In tandem with this zooming feature, the navigation asks the participants to "drag" the image/world/scene into a position onscreen that enables them to read the picture. If they don't drag the scene, the picture plane is lost

when they have zoomed in. This requires a certain level of skill and patience from the participants, for randomly clicking and dragging will only lose the image. This considered proficiency asks the participant to interact in a more reflective and subtle manner than is commonly seen within many Internet based interactions. It also mirrors the intuitive press/hold/drag/click/zoom of how I would (as the artist) navigate around the drawings as I draw them within Macromedia Flash. A further parallel could also be drawn -- that this formal repositioning of the image refers to the narrative re-interpretation as found within the project.

However, another icon is offered further within the project. A red magnifying glass resets the picture composition back to its original opening position. This feature was built in, after I tested the project and gained an awareness of how much concentration was required to drag and reposition the image into sight. This high level of focus and physical mouse work, I believed, would cause the participants to become totally frustrated with the navigation.

Reinterpreting horror into beauty

As the traditional narrative is a morbid and murderous tale, I wanted to give an unconventional treatment to the imagery. I intentionally created the visuals to give off the feeling of beauty and a mildly unsettling atmosphere of loneliness rather than use the full language of horror. Realigning the tale to a more poetic and sensitive interpretation allows the participant to gain a new and possibly sympathetic view of the Bluebeard, who in this telling struggles with his dominance.

> "The husband appears to be melancholy and has no hair on his head or his face. He also has a red line at the corner of his eye that resembles a streak of blood; this remains throughout the entire narrative, which could be seen as representational of some kind of emotional wound derived from his sight." [Olshefski 2003]

The original story already has distinct sexual overtones, of power and subservience, of blood and murder, of beauty and beastliness. I wanted to readapt these elements to include some of our contemporary and modernist fears, whereby loneliness and a non-nurturing environment creates an individual with distorted sense of sexuality. Within this version, both of the protagonists are inherently alone. We see no family or friends but only them seeing one another. This is a reciprocal relationship between the objectifier and objectified.

Architectural re-imaginings

The majority of the subversion (in relation to the traditional telling) was done in the representation of the world's architecture -- and principally the Bluebeard's castle. The weight of line within the drawing is fragile and organic rather than solid and structured. Another subversion can be found in the refuting of the standard laws of physics firstly, we have a time distortion where things move at a slower, stiller pace (things drip and float in an unreal gravity); secondly, hulking objects are seen to be supported by pixel thin lines. This gives an often-unseen tactile and sensuous element to

the digital experience, as softness, and a fragility of line is harder to relay over a monitor screen than in other "physical" media such as paper or on canvas.

The colour red

As mentioned earlier, the use of the colour red in *The Bloody Chamber* continues to relate to its symbolist history. Since the earliest of times it has meant menstruating and fertility, pain and danger, e.g. "spilling blood", life and strength. Some believe red was the first colour Neolithic man perceived. Red roses came to symbolise love and fidelity. Within The Bloody Chamber this use of red is both functional as a prompt (it denotes areas of hidden interest) but it is also used to highlight the only two direct Bluebeard commands (note historically it is believed that writers of Egyptian papyri used a special red ink for evil words) (see Fig 5).
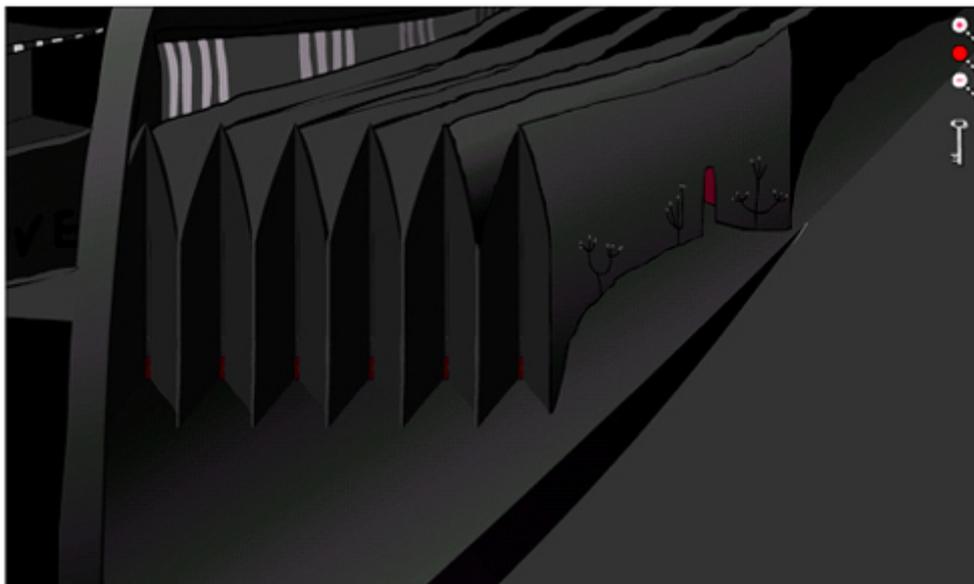
(fig5).The use of red. (fig6).The writing on the wall.

Bluebeard's command *"make her my wife"* is both violent and authoritative, recognisable as a sequential anchor relating to the traditional version. Those participants familiar with the original text will realise that next, the wife will be presented with keys to his castle, and then she will disobey his order and use them to enter a private room, whereby finally, her husband murders her for her this betrayal. In the original version, the use of red is especially important as when the wife finally enters the forbidden chamber she drops the keys in fright into a pool of blood from her mutilated predecessors -- his previous wives. This created a strong sense of history repeating itself, the sins of her sisters (sister in the feminist sense) is repeated once more by her inability to refuse this curiosity. The blood on the keys is the vehicle of her downfall, as, magically, it cannot be washed off. It is also the only significant magical event in the tale (otherwise the story could be a straight depiction of a serial killer).

The narrative conclusion

Within my conclusion sequences I do not place the wife in the vulnerable position of being a victim of such magic. Rather, I allow the participant to take her role on as an explorer of the castle and the opener of the chamber. Once within this forbidden space, I do not allow the wife/participant to drop their keys in a state of "fright". Unlike the original character, she is stronger.

> "…She is the hero. The protagonist determines her own destiny, through the interaction of the participant. Leishman, in effect, empowers both the female protagonist and the participant, by allowing them to act as the determining force behind their own destinies." [Olshefski 2003]

I make another significant narrative intervention at this point. By the time the participant enters the chamber, s/he may have identified the story and therefore have an expectation of the outcome. Whether this is so or not, there are two courses of action open. Perhaps fearing imminent death for the wife, the participant can click the decreasing blue window, which is the link to the outside world. This allows her to depart as Bluebeard's previous wives have done. Alternatively, remaining, either out of curiosity or sympathy for the Bluebeard, removes you from the wife's role back to being the voyeur. You then witness their union -- they take each other's hands and depart into the unknown -- narratively un-chartered future. These endings are more positive and empowered than the original -- in that you, as the wife, are given a choice, you are not a passive "lamb to the slaughter".

> "…Ambiguity is where the piece finds its power. The endings can either be read as two separate realities or as two parts of same reality…In either case she is a survivor. The husband and his former wives are locked in this bloody chamber, inanimate and it is the protagonist who has the power to save them from this state of being." [Olshefski 2003]

As well as offering a new interpretation of this story, I have utilised the possibilities that are on offer to the interactive participant. With *The Bloody Chamber* the participant is the enactor of the multi perspectives, at times becoming the Bluebeard, the wife, a vehicle and interpreter of the combined perspectives, and the narrator of the project. This last point is because they chose their sequential path and the final outcome. The variety of narrative perspectives gives a depth to the work; depth is also mirrored formally as the participant can choose to "Zoom" into or out of the story environment.

The practice of creating interactive experiences is sited in harnessing the participant's curiosity -- their interest in what lies beneath the initial static layer of a project. Curiosity can be turned into a desire to learn more and to reach a conclusion. An empowered curiosity mirrors the actions of the original protagonist and for which she met her death or near-death, hopefully this will make the interactive re-interpretation of this particular narrative even more poignant for the participant.

The Bloody Chamber has been shown at the *Glasgow Art Fair* -- represented by the Centre For Contemporary Arts, Glasgow (2002), the *Re-Animate* Web Festival, Rotterdam (2003). Online at the *Barcelona Online Flash Film* Festival: Interactive Section (2003). It also appeared as a linear edit at the *Boston Cybertarts Festival*: M.I.T Media wall (2003), and as a selected contribution at the *PlayEngines,* DAC exhibition, Melbourne, Australia (2003), where it won the streaming media section prize and was acquired by the Australian Centre for the Moving Image into the public programs permanent collection.

2.0.3 The preparatory practice -- synthesis

As detailed above, both the projects *The Bloody Chamber* 🔗 and to a lesser extent *Angel Interceptor* 🔗 were created as preparatory studies for *Deviant* 🔗, which in turn was specifically developed to answer the research question: "How does the artist develop an interactive style and visual vocabulary, which evokes rich responses from the participant whilst challenging them to counter conventional interaction tropes?" What follows is a synthesis of *Angel Interceptor's* and *The Bloody Chamber's* findings:

1. By using visual metaphors (e.g. windows and doors) that refer to spatial concerns such as inside / outside. Inside represents core, deep, personal and secret spaces, while outside equates with surface, appearances, shells and superficiality. This places participants in multifaceted locations that allow them to see the inner psychologies in relation to the externally perceptible characteristics of the dual protagonists (*The Bloody Chamber*) and the worldscape; this it seems can promote a sense of immersion.

2. By depicting a certain level of media self-awareness e.g. using CCTV screens and computer monitors as part of the fabric of Bluebeard's world. This emphasises that there may be unseen content, that is, the view and vantage points are chosen from several options. However, within *The Bloody Chamber*, the navigation system of the extreme zooming in and out method allows the participant to explore the scale of the isolation of the presented world in that there are no other geographies, there is nothing out of shot. This reinforces the melancholy tension of the piece.

3. Within the above projects, a new aspect of a visual vocabulary presented itself in the intentionally leaden nature of the animation and movement of the artwork. What was also forthcoming was the problematic nature of a clearly subjective gestural rendering style (more so *The Bloody Chamber* than *Angel Interceptor*). I felt that the drawing style in its idiosyncrasy blocked a reading of the landscape where the world could be seen as being in part universal or familiar. Instead, *The Bloody Chamber* gives almost complete emphasis to the foreign and alien. If the drawing style was more iconic, this would create a mix of the familiar and the foreign (as found in *RedRidingHood* 🔗), I propose this ideas-in-conflict quality helps generate an atmosphere of friction or disturbance, which is turn, promotes participant-led enquiries.

4. A manifest source narrative allows for narrative anchors to be devised. This can allow the participant to explore around these anchors and direct the sequence to reflect which aspects of the project they find more interesting, e.g. the inhabitants or the architecture of the buildings, whilst still retaining a feeling of being within an enfolding narrative. This method of self-direction is sustained throughout *The Bloody Chamber*. However, the drag-able aspect to the navigation did not fully achieve the effect that I wanted (i.e. participants interacting in a more reflective and subtle manner), as I felt it interrupted the perception of the visuals (as often the project could get literally lost off screen). This caused significant irritation.

5. The above projects also revealed to me that the participant experience is at least as important as the structural complexity or level of non-linearity.

Unlike *The Bloody Chamber*, *Deviant* (see below) will use a little known or unknown source text. This adds another layer of disorientation for the participant and as such *Deviant* will use another approach in igniting the participant' s interest. *Deviant* will further emphasize the participant's interpretation and relationship with the narrative protagonists, the usage of secret spaces; the development of detailed non-photographic ([Chapter 1 Hegemonies](#)) narrative environments; to give eminence to an emotional atmosphere and to use enmeshed narrative anchors.

2.1. Deviant: The Possession of Christian Shaw
(32 week project completed Jan 2004)

A clean slate

You, the participant, are advised to participate with the artwork *Deviant: The Possession of Christian Shaw* first, that is, before reading the following comments, notes on productions, artist own critique and interpretations from the invited expert participants. This, it is felt, will allow you to experience your self-led interpretations and emotional responses before reading how the others traversed and interpretated the project. Participating with the project from a position of unawareness is in keeping with the project' s inherent structural multiplicity and specific conceptual underpinning.

[Deviant: The Possession of Christian Shaw](#)
Please note: those using Mac, screen resolution 1024 x768 please make sure the new external browser window is fullscreen before you proceed with the project.

2.1.1 Introduction
Deviant: The Possession of Christian Shaw

As mentioned above ▣ the project *Deviant* was created to answer the research question "How does the artist develop an interactive style and visual vocabulary, which evokes rich responses from the participant whilst challenging them to counter conventional interaction tropes?" which was in turn devised from my investigation into the specific research context ▣. As mentioned earlier (Literature Review ▣) in the thesis the area of interactivity within narrative forms is the subject of many different domains, far more than I cover. Cybertext, hypermedia (hypertext fiction), new media art and Human Computer Interaction (HCI [1]) are the relevant theoretical fields which my practice is positioned between.

The most useful field from the practice led perspective is HCI. The others, in the main, discuss the theory, social (participant centric) potential of the artefacts, and the formal aspects such as structure and programmatics, whereas HCI sits in the opposite territory where the theoretical issues are required but HCI is mostly applied in the practice e.g. designing commercial graphical user interfaces for websites or computer applications.

Interestingly, and I propose this as an indication of the innovation of the presented practice, the practice led HCI field is something this research refutes and reacts against. This is not because I think the HCI is flawed. Far from it, HCI is essential in delivering coherent computer to human experiences, but art does not always follow the path of least resistance. Rather in this research, I am exploring and presenting emotional experiences that are intrinsically and importantly anti intuitive, that are "difficult". My methods ▣ of researching i.e. through practice, observation and reading, sits uncomfortably within each of the above domains, though

this is the very reason I believe my practice is relevant to all of them. This maker-led perspective adds a different practice led voice to the arguments.

This project follows on from *The Bloody Chamber* 🔗 (May 2002) and to a lesser extent *Angel Interceptor* 🔗 (March 2001) in terms of aesthetic language and structure. It is presented as the substantive portion of practice within this study. Unlike *The Bloody Chamber* and my Masters project *RedRidingHood* 🔗 (December 2000), it relies on a little known and historically rooted narrative 🔗. This is a departure from my practice in the sense that the participant is presented with a wholly unknown narrative environment. The title may suggest the thematic landscapes, but it is also a misnomer i.e. the name Christian implies a male character, while in fact the protagonist is a young girl. For those participants familiar with my work, this duality is a consistent quality of my practice.

The method 🔗 of creating the artwork and the way I obtained critical reactions was new. Firstly, I chose not to track my process via a daily or weekly logbook but rather opted to collate the technical and artistic notes combined with the equivalent sketchbook digital files 🔗 as they were created. These would be reviewed at the end of the project. Secondly, to help with the critique, I chose to set up a group of expert participants 🔗 for the project. These participants were asked to explore, reflect and review the completed practice; this high calibre feedback is used in collaboration with my own previously elucidated insights. This method will allow for three tracks of writing around the project: my own as the author "insider", those of the diverse external participants "outsiders", and the integrated interwoven comments, thus balancing the subjective and objective viewpoints.

2.1.2 Practice as preparatory sketches

The following pieces of practice were created both in the months leading up to the start of this project's production and as conscious line tests or visual maquettes for the final project.

Tekka Preview 🔗

Various Visual and Responsive Roughs 🔗

2.1.3 Onscreen aesthetics

In Chapter 1 ([My Aesthetic]) I defined the nature of my aesthetic in terms of being familiar, foreign or abstract. Such features are primary in setting up an responsive exchange with the participant. These visuals unlike found in print and filmic media, have behavioural characteristics. They have ways of responding to an interaction at what I like to describe as a micro, mid and macro levels. At the micro level, the minutiae of the interaction are important, the participant is focused on understanding the sole unit in question, e.g. understanding how a particular flower moves at a pixel level (the smallest unit of onscreen representation) in response to your onscreen touch. At the mid level, the assessing of the characteristic is in relation to the prior responses found within the specific project (this is especially important on any re-readings of a project). At the macro level, what is important is reviewing how the combined micro and mid responses sit within what has been experienced before in the previous artworks from both the practitioner and indeed other artists. This marco level is based within the larger media context.

What follows below is a list of specific notions or criteria that relate to the visual aspect of the project.

These ideas were developed at *Deviant's* inception.

1. *Deviant* was to be an animated drawing, as opposed to animation; this would give a sense of difference [2].

2. *Deviant* would follow on from my other practice by attempting to foster a sense of intimacy. The feeling is highlighted by the proposed viewing platform of the personal computer within the Internet. This works by an unusual oxymoronic sense of remoteness and connectivity, in that the participant has a sense of physical closeness to the artwork. For example, they can spend as little or as much time with it as they wish, they explore it in a welcoming environment -- at home or at work -- rather than say in an art gallery or museum. But in contrast, my authorial control is remote, because I do not conventionally re-interpret or clearly present the narrative -- the structural access to the project is not stable like that of a book or a film. In the latter aspect the participant may feel acutely individualized as they alone must explore, experience and attempt to create meaning from an artwork that is unconventional. I propose that this individualised autonomy creates an even further closeness

to the work.

This lone exploration from the participant has parallels with my characterisation of the protagonist: she is portrayed as being lonely and as a vacant shell, hollow as she is fictive, thus referring to the loneliness of the participant who explores the project.

3. *Deviant* would be rendered by detailed hand drawing and patterns. This would give a sense of both sensuousness and preciousness as experienced by the quality of the line combined with the movement, colour and sound. The resulting onscreen image is touchable, conveying an illusion of [tangibility](#) 🔽. This technique is employed rather than using the quicker intrinsic software line tools.

4. In the totality of the project, *Deviant* was devised as one picture, one prescribed landscape in which things appear, grow, retract, and evolve. Another way to describe it is as a series of tableaux -- frozen moments in which narrative events can be drawn out by coaxing interactions. Another notion is *Deviant* as a wind-up visual musical box, in which special precious things lie.

5. *Deviant* was to be an experiment in creating both narratively visual transformations (as a type of multiple state) and interpretative transformations, e.g. questioning of the "truth" of what is seen and understood after the [epilogue text](#) ↗.

6. *Deviant* would follow on from my other practice by continuing to show hybrid representations both familiar and unreal, setting an upfront malapropos relationship with the participant.

Onscreen participant position

In tandem with designing the visual character of the project, consideration must be given to the anticipated participant position -- what is asked of the participant when confronted by the visual media. What follows below is a list of specific design decisions that relate to the participant positions. These were devised at *Deviant' s* inception.

1. *Deviant* was designed to push both the interpretation of the visual space, and the role of the participant. Thus the physical fullscreen nature of the project was devised (rather than reducing -- suffusing memory load, see HCI golden rule 8 [[1](#)]). This large fullscreen format demands more memory and attention as the participant attempts to comprehend the picture plane and its meaning [[3](#)].

2. The project enables the receivers to become naïve participants in that it is set up to be different to what they have experienced before, thus eliciting a unique personal experience. This comes from the multiple differences, such as unique visual appearance; the nature of the structure designed into the artwork; movement style;

and the absence of back button or a help menu etc… The project's intention is to be dramatically surprising and provide initial and problematic differences in relation to what the participant will expect, this feeling of unexpectedness or mystery [4] is sustained throughout.

3. The feeling of "danger" is presented to the participant when exploring the project. This comes in main from the fact that there is no going back to previous tableaux (defying the HCI golden rule number 6: provide easy reversal of actions [1]). This back tracking or usage of a back button is often standard with hypertext fiction and games [*]. *Deviant* experimentally defies this convention to encourage a focused attention on the presented material. It is anticipated that this attention leads the participant to being sensitised to the slow moving non-cosseted pace of the unconventional animation [2], the project aims to promote contemplation, dreaming, wondering, and thinking non-hierarchically about the presented MSE .

4. The project is intentionally frustrating, reflecting the notion that the events are "trapped in history", trapped in historical texts. The character of Christian cannot be physically helped and I do not present other more positive outcomes. Instead I have designed the project to utilise the participant's frustration as a springboard in which they realise the horrors and travesty of the story.

5. The above features could be seen to be destructive for any authored intentions, suggesting that only participants who enjoy confusion or ambiguity should be the participants. These hardships are offset by the weight given to the participants' interactions. Once the participant has overcome the conditioned instincts that their actions should reveal narratively key reactions, and that they do not have the safety net of going back, they are free to touch, tickle, and play with the layered images. Within the project there are hundreds of tiny moveable parts that await such investigations.

6. Similarly, the participant has autonomy over much of the project's timing (see further below). In this sense the participant is more an explorer of detail where touching and gentle prodding is the method to progress instead of aggressive point and clicks. Without the participant, the project would lie dormant and frozen on the first tableau.

Narrative base

This historical but fictive depiction of the world is inspired by the idea that very little is known about Scottish society in 1696. Historians of the Early Modern Period are split over ideas of how rural communities would have worked because there is a lack of primary source materials. Some believe that the communities lived in enclosed socio-political bubbles, where they would not have heard much news of the larger social changes at hand,

others believe that the communities were in fact aware and furthermore influenced by the changing political and theological concerns, thus they would be a mixed belief community, combining pagan, beltane, catholic, protestant, and atheist communities [Cowan 2003]. Both of these ideas inspired the portrayal of the narrative world. *Deviant* is like the latter, a mixed visual code of different historical times and refers to mixed belief systems [5], but then contrastingly is enclosed and limited -- the participant never gets to explore anywhere past the set horizons. What follows below is a list of specific aspects of the design in relation to the founding and base narrative text.

1. I designed the title to read as: *Deviant: The Possession of Christian Shaw*. This was devised both as a thematic indictor and also to highlight the subject matter e.g. "Christian" as a man/boy, "Christian" as woman/girl, or possibly "Christian" as an adjective relating to Christianity. Another reading may link the church to the term "deviance". The term "possession" has connotations of mental illness and/or supernatural acts of foreign control.

2. History as fiction. The historical account was written by an anonymous author, thus arguably turning the narrative into a work of un-interpretable fiction as the historical author may or may not have been a first hand witness. The narrative turned fiction is in itself now deviant, allowing for creative closure and personal interpretations. This notion links to the larger argument of society's belief in history as irrefutable truth. Within this situation a historical distortion is also found within the contemporary "living memory" of Christian Shaw, who is mainly seen as a tainted and manipulative child and not as a heroine of the Church (the view presented at the time of the said events).

3. The project refers to applicable grand narratives such as the New England Salem witch trails; Arthur Miller's play *Crucible* [6], and the political association with the term "witch-hunt". It also has links to historical horror and pulp archetypes of malevolent or evil children e.g. Damien in the book /film *The Omen* (also a demoniac) [7]. Other associated narratives can also be found, such as the folklore surrounding the Scottish witch trials (especially the feminist discussions [8]), and my back catalogue of practice that speaks to female archetypes and hybrid meanings [9].

4. As the title suggests, the project alludes to larger social notions of deviance e.g. gender, behavioural stereotypes. It also attempts to elicit sympathy from the participant towards the character of Christian, by imaginatively but literally showing the events. The extra narratively digressive content is a symbiosis of how I as the author feel about the characters, together with my imagining of what kind of perspective of the world she would have taken.

5.	From the base narrative I found the notion of naïvety interesting, Christian only being a ten-year-old would be naïve to the larger world. We are naïve to the "truth" of the story. The participant is naïve in the exploratory sense. With naïvety I link the notion of innocence, and with innocence comes a dark undercurrent, the risk of a lost innocence. Within the project there is sense of something wrong, a melancholy. She, like many children, is insecure, fragile and curious, deserving of protection from the surrounding adults. This "wrong" trickles down from the deceptive anonymity of the tale.

Onscreen time

Time is treated in six different ways within *Deviant* [10].

1.	Historical time is present where older folklore imagery is mixed with the modern, or even with futuristic elements. For example, there are skyscrapers or tenement flats with the representation of the invisible devils (inspired from European 16th century woodcut illustrations [11]). Similarly the use of historical dates and events in the Reverend Brisbane's journal refer to a larger bank of media representations of the period e.g. The New England Salem Witch Trials or English Renaissance literature.

2.	Literal and present time occurs within the project. This type of time is entirely controlled by the participant. It is represented by the time taken to explore, the time taken to play. In the project there are no timeouts (i.e. when the artist programs events to occur even if the participant doesn't find and instigate them).

3.	There are elements of frozen time, as found represented in the alarm clocks. These clocks are used within the first tableau [12] as safety catches or visual prompts, as most people, if lost, will press the customary clock. Another form of frozen or suspended time occurs on any re-readings of the project, as re-readings will reveal perhaps different interpretations, but the artwork and events are the same. The result is a re-enforcing the notion that the events are "trapped in history."

4.	Narrative time is used within the project, for example the changing seasons are shown by the sensitively changing colour hues of the landscape. This ties both to the narrative source, and the feeling of other worldliness as the changing colours indicate that the months fly by.

5.	Embedded or nested time can be found in the form of looping animations [13]. These interaction-enabled events vary between looping a set number of times and stopping, or looping endlessly until the participant moves forward in the project. This type of time is an experiment in giving the participant a sense of the world coming anthropomorphically alive and active after their onscreen touch.

6. Least frequent of all the depictions of time is random time. There are programmed random objects within the pop-in ▣ framed narratives of Christian's possessions (in tableau two [14]). These are presented in a randomised manner, giving another sense of timing, a sense of being "other" in contrast to the set linear content of the buildings and Christian. The objects add to the supernatural quality of the sequences, as they refer to no natural sense of time or place within the rest of the project.

To summarise, the uniqueness of experiencing "time" in this artwork in terms of other mediums (films, novels, performances) supports the preposition that artwork exists in a hybrid position.

Onscreen structures

Another fundamental aspect of the visual telling of the project is the structuring of the content. Structure within responsive media in a sense acts as the method of delivery for sequence, even if it is set up as anti-sequential. What follows below is a list of specific notions that relate to the structuring of the images. These were devised at *Deviant's* inception.

1. The world is structured in layers or levels, which overlap on top of the first scene. This stacking is in opposition to the conventional animation or film that uses a time-based method where the narrative is played in frames, which are shown in succession (for further discussion see [15]). Instead, the world is presented as something different. This difference is again an attempt at placing the participant in another unconventional position. It also enforces again the picture opposed to animation analogy. The addition of layers adds and evolves the main composition. These layers are combined with bursts of traditional animated sections, to sustain the mixed up unpredictable nature of the project.

2. The project has an enmeshed but narratively linear path plotted to a narrative skeleton (see below). Outside of this skeleton the project contains many interactive digressions or interruptions to the story. Digressions are the spaces in which the extra emotion and sensual explorations exist. These areas are loosely narrative when associated with the base story. The skeleton or frame acts as a suture co-joining the various multi linear perspectives, conditional links and the participant's awareness that they are in a narrative environment. The skeleton protects against total disjuncture in the project.

The narrative skeleton

The digressive spaces and non-narrative experiences have been taken out the diagram below. What then is seen is the stripped down spine of the narrative which correlates to the source text's seasonal timeline and

dramatic events. For narrative purposes, tableau 5 and 5B function the same.
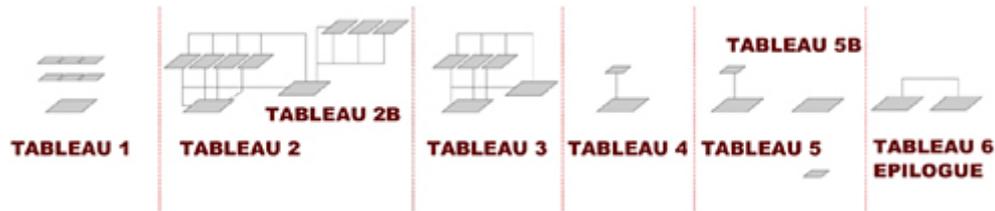
Tableau 1. Lays out the narrative environment e.g. Balgarran 1696. Establishes the key protagonists -- Reverend Brisbane, Laird Shaw and Christian Shaw -- also offers pre-history motivations for the Reverend and Christian.

Tableau 2. Depicts the initial acts of possession, which are ambiguous in that they could be disturbing but natural opposed to supernatural.

Tableau 2B. Is a key narrative junction. It is a transition signalled by Christian's visit to the doctor. This signifies the start of a downward spiral towards the fatal consequences.

Tableau 3. Depicts the second round of now obviously supernatural acts of possession.

Tableau 4. Depicts the arrival of the Glasgow court into the narrative and subsequent capturing of the community members, who are caught playing with the devil character in the grass.

Tableau 5/B. Depicts the execution of the community members by burning, and their reduction to ash.

Tableau 6. Depicts the intentionally ambiguous ending, as in "real life" the legal system departed from Balgarran and Christian remained. She subsequently suffered various historical and demonising judgments on her character, and aspersions over her complicity in the fatal events.

3. The participant's experience of the project does not initially reveal the plot [16]. First is an accumulative experience of atmosphere. Dissonance strikes, but after awhile, although coming from a position of ignorance, the participant absorbs the available narrative content and also actively explores the world. They continuously search for the hidden [17].

Secondly, and towards the end of their first reading, participants cognitively construct the information they have experienced in a process similar to Murray's understanding of "immersion" [18]; at this stage they may or may not begin to form an interpretation.

Thirdly, once they have reached the epilogue text, and if they re-enter the project, a further round of atmospheric accumulation occurs.

This is unlike experiencing other narrative forms. For example, structurally, the participant's experience of the project does not work like games, which often use the model of increasing the difficulty of the participants' tasks as they move through its structure. Nor does it use a cinematic three-act structure i.e. beginning, middle and end[16]. Instead in *Deviant* the participant is required to re-enter the project (preferably multiple times) to gain their own sense of conclusion.

To reiterate, *Deviant*, instead of offering a concluding elucidation at the end of a first reading, places the participant into an additional atmospheric and emotional accumulative experience. Thus *Deviant* works on:

1. Initial atmospheric accumulation (emotive).
2. Cognitive stitching of the available information gained along a personal path. By this I mean becoming less confused.
3. Re-reading, creating another more informed emotional accumulation (emotive).

1- 2- 3 is then repeated until the participant has perceived all the narrative information and is atmospherically replete. At this participant specific point they may achieve an awareness of the larger conceptual meaning of the project or not (they may formalize a different and as valid interpretation). Either way it is the participant who ends their involvement with the project.

To briefly summarise, the visual language of the presented world and the structuring of the participant's experience function as a re-interpretation and not the structuring of the narrative events. These are true to the historical narrative, as much as one can be true to a corrupt source. All my body of practice (*RedRidingHood* , *The Bloody Chamber*) shows a method of reinterpretation through the visual styling of narrative, leading the participant to become involved through comment or critique on the experience. This is especially intrinsic to *Deviant*.

2.1.4 Chronology of the production:

Tools used: drawing /reading /sketching /brainstorming/ notes / observation / digital maquettes/animation and sound editing.

Initial Research

I started by investigating possible subject areas that would compliment my notions of large pictorial interactive spaces. The subject area should conceptually mesh with the idea of MSEs ⊠, e.g. show dual or polycentric arguments or perspectives. From this point I chose to focus on the Scottish reformation period, and in specific, the witch-burning era. I felt that basing the project on historical facts or actual events combined with the gendered issues around witch trials would provide me with a new narrative format that still links to my larger interests in folklore, female archetypes and social hierarchies. It would also allow me to experiment with the emotional resonance of the participant's experience, who on finding out that the characters and events of the project are in some extent real and not entirely fiction, may possibly react with intensified emotion.

At this point I attended the Scottish History Conference: *The Survey of Scottish Witchcraft*, 1563-1736 [19], where I first heard the narrative ⊠ of Christian Shaw, the little girl from Renfrewshire, who was supposedly possessed by the devil. I proceeded to read material around the historical events of Christian Shaw's possession, discovering both weighty academic papers (which had uncovered that the source materials were authored anonymously) and spurious modern day Internet postings. This thin but rich vein of discourse convinced me that not only would the historical material provide me with a fertile narrative base which I could ethically semi-fictionalise, but also had a real-world pulse.

The Rough

Week 1-6

I decided to create a working "rough" of the project for *Tekka* ↗. Publishing a preview of the project would indicate to my peers the direction of my work, and also enable validation via early and informal feedback [20]. A working rough meant creating some layers of interaction and branching paths, but in the main the rough was designed to present the narrative environment. In keeping with my previous works, this environment should be largely pictorial, describing a place that is both familiar and unreal, setting an upfront dissonant relationship with the participant. The pictorial description should loosely allude to Scotland's landscapes, both contemporary and ancient, rural and city dwelling. This initial rough can be compared to a videogame's full motion video clip (FMV), as the rough is in some sense a concentrated depiction of the leading character Christian Shaw, her nonverbal attitude (alluring, lonely, troubled) and the supporting worldscape.

The outcome of this initial attempt was a feeling that I portrayed Christian as being too old, too sexualised -- she was said to be ten years old at the start of the narrative. I was relatively happy with the consolidation of the buildings with the fauna and the appropriateness to the narrative of developing secret spaces within the forests [17], but not the colour palette,

which I felt needed to be subtler, more sensitive, in keeping with the depiction of Christian. I also felt that the fragility of the drawn line was important, and needed to be developed further. This digital but hand drawn quality would hopefully add to notion of craft and preciousness in the space.

Week 7

As stated before, I proceeded to draw up a new graphic composition (working to the fullscreen format). This formed the basis of the opening scene. The composition offsets the safe feeling of green healthy pastures with the unfeasibly tall and thick lined skyscraper buildings. Similarly, the feminine feeling hill in the foreground is contrasted with the opposing blank screen like shape sitting in the right of the composition.

Week 8

The main goal was to design and plan the structure of the project. I decided on using a stacking layer system, which had already been used with some spatial success in *Vectorkpark* and *Requiemforadream* [21]. Using layers would work in an entirely different way to the time based sequences of film and animation. Depth as visual metaphor in combination with bursts of traditional animated sections place the project in a much less charted artistic territory. This difference is again an attempt at placing the participant in another position, which is removed from conventional.

Week 9

Having decided on the visual style and structural rationale, I plotted out a skeleton of narrative anchors. These key events are the essential backbone within which the narrative experience is contained. Without these the project would move into being narratively incomprehensive or much more difficult responsive visual artwork. Balancing these anchors with the more obscure content is the key to addressing the participant -- too many anchors and the project is prosaic and dull, too few either makes the work fully elitist or at best attractive looking nonsense.

Within this week I also decided to use the embedded "pop-in" window technique in the project (like a browser pop-up contained within the main project window) [22], thus giving the illusion of windows within a window. These extruding windows are designed to help frame and isolate the individual events of Christian's possession. I believe separating them out from each other will allow the participant to focus and realise the unique bizarreness of them.

At this point I started the work being semi blind, or perhaps better described as conscious of blind spots and blank spaces -- I am not able to fully comprehend the outcomes (aesthetic, structure nor emotional architectures) as they may change before the end. I worked towards becoming fully aware.

Week 10 - 18

Is spent designing and creating the blank spaces -- the content in-between the narrative anchors. I decided on six key tableaux that relate to the

anchors. These tableaux are subtle variations of the opening scene. I spread my time at this stage between working up the anchors and filling in the blanks. This is done using a revisionary method, updating and refreshing the look, animation, and sounds all in tandem. Working in tandem allows me to gain a better sense of the total project.

Occasionally (once a week on average) I stepped back (physically as well as mentally), and took screen grabs as required, printing them out to amend and rework onscreen compositions. I used extensive lists and notes whilst this tightening up occurs. At this point I had a heavy cognitive load, a high level of concentration is required as the project takes its fuller form. I am editing simultaneously:

- The expanded character details and imagined psychology e.g. pre-histories in journals.
- Coherency of the landscape details (degradation of the world, seasonal changes etc.).
- Consistency in the transitions of tableaux.
- Evolving the pop-up narrative animations, so that they are not too literal or passive.
- Audio management, decided on using loops for atmosphere and incidental effects as a tactile experience.

During this period, Dr. Hugh McLachlan, an expert on the historical narrative arranges an interview. I made an appointment and presented the "work-in-progress". We discussed informally amongst other things the notion of historical correctness as applied to this narrative and the idea of a "living memory" as it relates to ethics.

Week 19

At this three-quarter stage, I concentrated on the structural successes and failings. I devise the faded tableaux that occur when the extruding pop-in narrative windows are instigated. This was a solution to a looming technical problem, that the overlapping highly detailed visuals combined with movement and audio would not, I discover, stream smoothly over the Internet.

Week 20-23

During these weeks I worked on the invisible compositions e.g. the grotesque imaginations of the evil demons, the devil and the unreal plants. These were inspired from a bank of 16 -17th century woodcut illustrations [11]. The monstrous characters and the bespoke foliage (found in the pop-in narratives) are presented in a randomised manner, giving another sense of time, a sense of being alive, supernatural or "eternal" in contrast to the set linear actions of the buildings and Christian.

Week 23-26

Nearing the end of my project, I began to edit in a more technical sense. Most of the time was spent testing streaming over the Internet and the performance of the work over different browsers and platforms.

(Note: after the feedback from participants' it was apparent that the streaming capabilities of the Macromedia Flash Player combined with the interaction style is not wholly satisfactory. Their viewing problems varied but they averaged at least 2 "crashes" within their whole reading and re-reading experiences.)

Week 26-30

At these, the end weeks, the last refinements occurred; now that 98% of the project is complete I could get a sense of the whole composition. I tightened up some elements, retouched colour, and checked against the initial narrative for chronology. Most importantly at this stage I removed superfluous content. Consideration was given to the amount of verbal text located in the two journals (is it too much?). I deliberated redoing them with an entirely visual diary, no words only images. I decide to err on the side of caution, as I, as the creator, was entirely familiar with the work at this stage, whereas the participant will be in most cases entirely new to not only the narrative base but the structure, style and logic of the artwork.

The expert participants 🖼 were invited to begin exploring the project. I began a review of the notes and sketches in preparation for my write-up of the process and a critique.

2.1.5 Deviant conclusion

At the conclusion of the project I proposed that *Deviant* defies conventions and at times is unique for many reasons. What follows is a description of the outcomes that have emerged through my observation of the finished project and the assessment of the associated documentation that surrounded the production of the practice.

Layering Technique

Firstly, instead of being complexly non-linear (in the cybertextual sense), the project is a layered structure, which uses branching offshoots [23]. This structural layering works in "building up" compositions that can be regarded as a MSE 🖼. The different layers show the interrelationships between the narrative objects. This linking works in an unconventional manner -- layering as a storytelling technique is little used within digital media; it requires participants to make associations between objects using a spatial rather than time based metaphor, such as typically practiced by Owenns or Thomson & Craighead [15]. This sense of difference is compounded further when the depiction of the world and its inhabitants is

a mix of the believable, impossible, familiar and bizarre ([My aesthetic](#) 🖼). The total effect is that the work communicates to the participant in an unfamiliar, disturbing but imaginative manner.

Embedded Experiences

Within the various visual layers the participant can discover multiple embedded -- what I call -- animatics (animated effects). These animatics differ from one to another, but can be broadly described as being non-sequitur [24] visual objects, which contribute to the atmosphere by depicting the flora and fauna of the story world and sit beside the recognisable narrative events which work in a more traditional filmic manner.

The latter group form the narrative template for the project; they are structured in a linear sequence albeit spaced out within the project. The former and more abstract content distracts from this linearity, as these at best narrative-like types of objects are digressions that cannot be easily linked to the main narrative. They require imaginings by the participant.

Interaction with these embedded animatics is the primary type of experience within the project (as they are the most ubiquitous). Otherwise the presented world appears static, dormant and picture like. The opening and subsequent scenes await the participant to uncover and "touch" their inner awaiting life. This clear dependence on the participants' interaction makes the space more discursive and feels more non-linear that in the formal structural sense it is.

This ambiguity of structural form requires the participant to begin either self-motivated interpretations in search of some meaning (as *Deviant* has no clear precedents), or to submit to the unfamiliarity of the project. This could turn the previous feelings of non-linearity into a kind of anti-linearity. Whatever path the participant takes, the project sets up an upfront malapropos relationship.

Empathetic visual style. Evolving Tableau

As developed within my entire practice [25], these challenging participant roles are offset by a visual style that is assessable in that it utilises a pictorial language (this shift to the pictorial is supported by Ryan's recent thinking [26]). These assessable images are understood in a more universal way than a fully idiosyncratic visual language would allow. Within *Deviant*, the composition, as well as the visual style, was set up to cushion and soften these uncomfortable participant positions (for *Deviant* is my most closure-challenging project to date). The rendering of the world-scape is intentionally quiet, subtle, detailed and beguiling, all of which aims to encourage the participant to start exploring and thinking.

From the start of the project, *Deviant* communicates to the participant in a new way. It does not start "playing" like a traditional animation, nor does it behave like my previous projects. Rather, the participant must investigate

the composition. The initial scene lays out some of the project logic, or should I say mixed-logic, as the scene does not use clearly animated prompts, nor allows for a back button, or structural map to help if the participant gets lost. The links (which are activated by clicking) are integrated and thus in effect hidden within multiple rollover events that are insignificant in narrative terms. All these points should suggest to the participant that they are not in a classic game environment and in a new manner they need to carefully observe and touch the visuals to gain an insight into how to progress further.

If the participant succeeds and finds these links and progresses within the project, they are presented with a slightly different version of the opening scene. This may come as a surprise. As the project moves sequentially forwards, the participant may expect to move away from this initial scene (which I describe as a tableau -- a term from painting referring to a frozen moment), but rather they will find that the opening tableau is continually re-presented. This fixed participant perspective (e.g. s/he cannot zoom inwards / outwards or move left or right of the composition) develops a sense of familiarity and safeness, in that no significant re-appraisal of the location is needed; they are always in the same place. This repetition works in two ways, firstly, by freeing up the participant's attention to observe the layered new objects as they uncover them, and secondly the repetition allows the participant to notice the subtle conditional differences within the tableau (which happen after each narrative transition), for example the tableau changes colour with associated environmental seasons, the buildings gradually decay and new detailed objects appear (these are almost always links).

Another technique used to direct the participants' concentration and attention is in the sound design. The soundtrack is normally used as a cohesive force creating another and abridging layer of narrative suspense on top of the moving visuals. Within *Deviant*, sound is used simply but unconventionally, for the project uses sound both as a prompter tool (some of the harder links to uncover are located by a low scratching noise as you pass the mouse over), and in the opening of each new tableau where it is an atmosphere indicator. The type of music employed intentionally varies from acoustic guitars, old-fashioned tinkling music box, and electro sounds; these help associate the visual language with a sense of folksiness, modernity, childhood and dreams.

Ideas of intimacy and touch

The types of interactions offered by the visuals range from touching as a playful or sensual act, touching to open up a new space, touching and pressing to find a narrative link, all of which require a high level of observation. Through this careful and considered exploration (as the physical onscreen "hit" areas are intentionally small), you can get a feeling for the soft or deft movements required to interact with the project. These gentle and considered explorations sit in opposition to commercial point

and click choices, which are commanding, direct and to the point ([Chapter 1]).

Small repetitive rubbing motions are required to make the objects move and sometimes progress. This type of onscreen touch talks directly to real-world "physical" intimacies (especially if a computer tracking pad is used instead of a mouse) and as such given the remote human to computer viewing platform of the project, combined with the sensuality of the visuals. Touching may give a sense of overt sexuality. At least initially, the tactile experience may seem somewhat uncomfortable to the participant. It suggests the instigation of a new, possibly unverbalised experience. However, the discomfort is used to develop an engagement with the protagonist. It highlights my preposition that the participant is being intellectually pulled into the visual environment if their moral consciousness is ignited.

For some participants, these types of sensual associations will sit uncomfortably with the childlike and naïve imagery. The clash is deliberate, used to get the participants to think about the events within the world, the base narrative, and what they as participants are contributing. The participant's feelings may be compounded further once they reach the end of the project and investigate the historical platform.

Problematic gaming mindset -- repetition

As well as creating a system that defies standardized HCI rules, I also react against the fast moving, goal orientated, participant roles of gaming (more to follow below) as another conditioning in which to confront. Like HCI intuitions, gaming conventions are significant mass cultural skills; the gaming mindset and its interaction tastes are becoming even more ubiquitous amongst contemporary Internet participants. My practice works towards creating experiences that are unconventional, nettlesome, meditative communications. Perhaps the largest decision that illustrates this rationale is the lack of a "back" reading feature (see HCI golden rule 6 [1]).*Deviant* requires that the participant apply a different type of attention in exploring the visual spaces, one that is considered, slow and risky (you will most likely have to start over again).

An attempt at using a goal-based reading method will lead to frustration and confusion, since they will be "playing" a non-playable structure. The reason is that interactions don't create lasting outcomes and I do not offer a full conclusion. All participants must explore at least part of the un-narrative spaces to uncover the "important" links. At a conceptual level, the project was not conceived as game, rather it works as a responsive artwork /visual communication based on a narrative template, and as such has an unfamiliar agenda. I anticipate many of the participants' problems will come with not knowing how to approach the project, as from the outset no clues are given. Indeed I ask the participant to become a kind of remote collaborator who has to commit to their interpretation and reflective critique to gain any sense of the ultimate purpose of the project.

In Conclusion

Deviant is an responsive retelling as artwork. It is not a game in this sense. If it is a game, its an exploratory game, a game whose goals are to generate participant-centric interpretations and emotions. The project does not have a traditional dramatic ending, all is not revealed to the participant at the end of the structure.

My intent in creating *Deviant* is to communicate my position on the narrative by not offering new narrative outcomes, thus highlighting the historical basis of the founding text: the narrative is trapped in time. From a modern perspective it is un-interpretable (it challenges tropes of ethical interpretation -- by virtue of its anonymous author (s)).

Deviant does two things. Firstly the project causes disturbance via the participant's conditioned expectations for the project to be more non-linear and for them as participants to have more say in the events. It also challenges the notion that historical stories are in some way unmovable by visually representing the characters and the world within a rich, tactile and hybrid symbolic language. This element of the project could be described as the digressive spaces, since they are not essential to the narrative events and work within a different sense of time. They tamper with "history as truth" by using mixed and contemporary personal lexicons. These digressions are as important as the narrative sections, as they speak with their own voice. They speak for me. This contrast in purpose between the non-changing narrative events and the digressive spaces help build a sense of "wrong", of rupture, of hybridity within the project, referring in an oblique manner to the interpretation of this particular historical account as an injustice.

Secondly, it is a narrative treatment, a visual representation of demarcated historical events (the demonically possessed Christian Shaw between the ages of 10-11). I do not involve within the artwork Christian Shaw as an adult or as a successful businesswoman, as this is Christian Shaw depicted in another and healthier section of Scottish history. The project does not attempt an exegesis, as none can found within the founding texts from 1877 [27]. These are corrupted by the anonymity of the author.

The participants' interactions within the narrative sections of the project do not offer new understandings of the events. They only reveal one telling. The linearity and repetition of the narrative plot events -- revealed by any re-readings -- will perhaps elicit a sense of disappointment from the participant, as this appears to make the project simplistic. By doing this, I am asking the participant to imagine new narrative possibilities for themselves and to reconsider their position within the project -- which up to this point is ineffectual in terms of the physical outcome.
The expert participant group who yielded many new readings positively demonstrated such request. This is a repositioning of the participant role where the participant both a digital but a semi-passive interactor and interpreter.

To summarise, *Deviant* is an responsive system created to help instigate the participants' enquiry into the historical representation of Christian Shaw, to readdress the fact that she has been passed over. The story of Christian Shaw is a scantily known narrative and the little that people know about her is based on a malicious, possibly propagandic and anonymous text.

The project is unusual in at least two ways. It challenges the standardised HCI languages of interaction, some of the conventions of cybertext / hypertext fiction readings (back buttons and easy access re-readings), and the expected goal orientated "making a difference" tasks. It also offers a new and uncommon participant role -- a participant in a new kind of visual reflective tool. I believe that responsive systems should be diverse or even unique, and if appropriate as within *Deviant*, the author can still experiment with being narrative based whilst removing herself from traditionally controlling the participants' interpretations. Not all systems need be reducible and yield meaning.

2.2 The participants and the method

Part of my research [methodology](#) was to set up a group of expert participants to review the new project *Deviant: The Possession of Christian Shaw*. This group was invited on the basis of their interdisciplinary abilities, personal voice and commitment to my research area, and comprises a mix of digital artists (cybertext, hypertext / fiction / media), designers (website, applied computing and games), writers (academic and journalistic), a poet and a curator. It was also important to me that the group represent both female and male perspectives. The objective viewpoints of these participants will be used not only to aid further understanding of the perception of the project but also to help me as the artist to extract extra arguments, vocalise defences and gain additional contextual insights about my work.

They were invited to become "expert participants/readers" and then asked (via email [28]) that within two weeks of receiving the project they should set aside a period of time which would allow them to undertake a rich, in-depth reading of the work. The strategy that they should employ to achieve a reading was not prescribed. This, I felt, would allow for a naturalistic experience for both the participant and myself. The only specific outcome I required was a typed and emailed description of their journey.

The anticipated feedback was open in respect to the level of reflectivity: some participants would perhaps respond critically, and others, I

suspected, would focus on the functionality of the project. This open remit is again an attempt to generate rich and diverse responses.

The participants:

1. [Prof Mark Amerika] ⧉ is Professor of Digital Art at the University of Colorado in the US. His numerous books include the novels *The Kafka Chronicles* (1993) and *Sexual Blood* (1995). In 1993, he started The Alt-X Online Publishing Network, while in 1997 he launched the *GRAMMATRON* hypermedia narrative project, the first part of his net art trilogy, which also includes *PHON:E:ME* (1999) and *FILMTEXT* (2001) [29].

2. [George Fifield] ⧉ is a media arts curator, writer, teacher and artist. He is the founder and director of Boston Cyberarts Inc., a nonprofit arts organization which produces the Boston Cyberarts Festival. Fifield is curator of new media at the *DeCordova* Museum and Sculpture Park in Lincoln, MA. In addition, Fifield writes on a variety of media, technology and art topics for *Artbyte, Communication Arts* and *Digital Fine Arts*. [30]

3. [Gonzalo Frasca] ⧉ is a videogame researcher and developer, currently working at the Center for Computer Games Research at the IT University in Copenhagen. He's co-founder and senior producer of *Powerful Robot Games*, a videogame development studio. He has recently produced and co-designed the first official videogame ever commissioned for a U.S. Presidential Campaign. [31]

4. [Dr Raine Koskimaa] ⧉ has published four monographs and some forty articles, reviews, and essays dealing with digital literature, hypermedia, cyberpunk fiction, postmodernist fiction, narratology, and empirical participant-response studies. His doctoral thesis was titled *Digital Literature. From Text to Hypertext and Beyond* [32]

5. [Cynthia Lawson] ⧉ is an Educational Technologist at Columbia University. She is also the project manager on Salman Rushdie's *Midnight's Children* Multimedia Study Environment. Her research covers physical computing, interactive environments for children and sound installation. [33]

6. [Nick Montfort] ⧉ is co-editor of *The New Media Reader* (2003, MIT Press), author of *Twisty Little Passages: An Approach to Interactive Fiction* (2003, MIT Press), author and programmer of interactive fiction (*Ad Verbum, Winchester's Nightmare*) and co-author of several Internet based electronic literature projects ([Unready.net] ⧉ 2002: *A Palindrome Story, The Ed Report*). He is a PhD student in computer and information science at the University of Pennsylvania. [34]

7. [Dr Anja Rau] ⧉ studied literature in Mainz, Southampton (UK) and Middlebury (VT). Her PhD thesis *What You Click Is What You Get? Die Stellung von Autoren Lesern in interaktiver digitaler Literatur* was

published by dissertation.de 🔗, Berlin, in 2000. Her writings on the aesthetics of digital literature have appeared in the Proceedings of Hypertext '99, she is also a reviewer for GameStudies.org 🔗 and the editor of *Tekka* 🔗[35]

8. Dr Roberto Simanowski 🔗 is an assistant professor in the department of German Studies at Brown University. He is also the founder of Dichtung-Digital.de 🔗 an online journal on digital aesthetics. He is the author of *Interfictions. Writing in the Net*. [36]

9. Stephanie Strickland 🔗 is a poet, writer and academic. Strickland's essays about electronic literature appear online in *ebr* and in *American Letters & Commentary*. She is the author of the print books *True North, The Red Virgin: A Poem of Simone Weil,* and *Give the Body Back*. [37]

10. Dr Jill Walker 🔗 is an assistant professor of Humanistic Informatics at the University of Bergen in Norway. She's fascinated by networked writing, art and expression and expresses this both in her weblog, *jill/txt*, and in traditional research publications, such as her recently submitted PhD thesis on fiction and interaction. [38]

11. Noah Wardrip-Fruin 🔗 writes e-literature, and produces evaluative articles about it. His current nonfiction work includes being the lead editor of *The New Media Reader* (with Nick Montfort) and of *First Person: New Media as Story, Performance, and Game* (with Pat Harrigan), both of which are published by MIT Press (2002). [39]

2.2.1 The outcomes

As anticipated, I received variable amounts and styles of participant feedback, ranging from more informal comments, detailed walkthroughs of the participants' interactions to critical reflections. I have chosen to include all of the feedback to maintain the integrity and illustrate the variance of the participants' experiences.

I have previously 🖼 laid out in the conclusion of the artist's commentary section my thoughts on the completed project. What follows is a breakdown of the main participants' feedback points framed in relation to my artist-led insights and objectives.

As acknowledged, *Deviant* was set up to be more challenging than my other projects. It was created to explore and answer the research question B: "How does the artist develop an interactive style and visual vocabulary, which evokes rich responses from the participants whilst challenging them

to counter conventional interaction tropes?", and should also be seem in terms of a progression from *The Bloody Chamber* 🔗 project, both in its handling of aesthetics and structure.

2.2.2 Universal outcomes

1. The first unanimously held opinion about the project was that, in visual terms, the project is successfully compelling. [The design choices](#) 🖼 such as the depiction of the protagonist and the large level of detail within the drawings were unanimously valued. The latter was the most mentioned, not only in rendering terms but also in the way in which the project moved, a common analogy being that it was at "pixel" level detail. This resulted in a feeling of having to observe the project in a unique manner, looking at the unusual subtleties -- looking "very closely" at how it moved and how it visually changed.

2. Following on from the compelling nature of the visuals and in conjunction with the sound effects, the next successful and broadly revealed issue was the sense of a particular atmosphere within the project, namely a sense of "[disturbance](#) 🖼". *Deviant* follows on from my other projects by continuing to show hybrid representations that are simultaneously familiar, unreal and anachronistic, setting an upfront discordant relationship with the participant.

This feeling of disquiet, of narrative mystery, was seen to help encourage the participants' onscreen and mental enquiry. The feeling of unease suggests (and in this case misleads) that there is a hidden source of this disturbance that will be revealed by their enquiry. This atmosphere is built up from the main landscape composition, which offsets the safe feeling of green healthy pastures with the unfeasibly tall and thick lined skyscraper buildings. Similarly the feminine feeling hill in the foreground is contrasted with the opposing blank screen sitting in the right of the composition. This multiplicity of the visuals combined with the naïvety or innocence of the protagonist helps sustain the participants' interest. Commentators also noted that this atmosphere was seen to turn even darker once the narrative source became known and disclosed the fatal consequences of the previously surreal or even funny events.

2.2.3 Split outcomes

1. Whatever final understanding the participants found while engaged within the experience, quite a few of them associated the act of uncovering the disguised links as being game like. Following from this, the ambiguous nature of the project combined with the awareness of conditional links seemed to encourage their expectancy of a traditionally illuminating conclusion to the project.

2. Once again the project does the unexpected, the conclusion or epilogue offers only a partial elucidation. At the end of the project the narrative source is now available, a little is given about the context of the tale and I visually depict the different hypotheses on the protagonist. This new narrative enlightenment combined with participants' sense of the missed links was shown (as intended) to encourage at least one more new re-reading.

    The group is split on the issue of the success of this style of conclusion. For example, Noah Wardrip-Fruin after … reading the text about Christian I at first felt "Ah-ha, it comes together!" And then I thought, "Uh-oh, what is it I'm missing here?" whereas Mark Amerika responds to the epilogue in a entirely different manner "I'm not even sure how necessary it is for me to know about the actual mythology behind Christian Shaw. Sure, her story may have been made up to publicize a particular ideology that promotes patriarchy, and for those who want to dig in deeper, all the more to them. But I prefer to interstand the process of revealing lifestories as I play them, which this piece does regardless of its original source."

    This highlights the still enduring nature (for at least some) of the participants' desire for a conclusion, for clean closure and for direct communication of an idea at the end of an experience.

3. The re-reading shows up another diverse split in the participant group. As discussed previously, the project is visually multi-layered but for the main, is linear. This again confronts some more of the participants' expectancies, namely that the project should be narratively non-linear or dynamic like a game or perhaps a cybertext.

    As they come to realise the actual linearity of the key narrative sequences (especially given the heavy amount of interaction required to re-access them), this discovery returns some of the participants back to a feeling of frustration.

Re-reading gave a fuller or altered opinion to some as they found themselves becoming more involved cognitively with the protagonists' suffering. Others enjoyed using the branching offshoots [40], which offered them new character based perspectives (resulting in different narrative understanding(s)), and again others found some pleasure in discovering the randomly changing nature of the digressive spaces and/or the opportunity to realise some more of the visual details (note this is an interesting memory and attention issue as the detailing was always there to be seen).

4. The above responses to re-reading were in a sense repeated on any third or more re-readings and as they became more familiar with the project this resulted with the participants finally gaining the sense of the project's inherent linearity and the amount of repetition within their experiences. I propose that it is here, at this point of when many re-readings have passed, that the project does in-fact conclude or the "whole action" has been achieved [Laurel, 41]. The gamble is that some participants may not link any significance to the project's repetition and linearity. Indeed they may see this as an unsatisfactory element to an responsive project (such as Roberto Simanowski), or they may, like Anja Rau (and to an extent Jill Walker) succeed to link these aspects to the source narrative and gain some sense of an even larger meaning -- that being that from a modern perspective the source text is un-interpretable, thus I have chosen not to traditionally re-interpret, whereby keeping the project linear. This elicits a sense of wrong from the participant (given the structural possibilities and context of the practice). Ultimately, this is an attempt to get the participants to create their own thoughts and interpretations on the story.

    Through reading the feedback, I now have an insight into how hard it is for the participants to make a connection to this authorial intention, for it seems the difficult nature of finding the links and the very fact that there are so many requirements to bring your own interpretations, in turn makes it hard to associate with my particular reading. In defence, I do not believe that this detracts from the worth of the project, as this instance of my reading is only a smaller and less important part of its many agendas. The most important and successful of these was the ability to evoke rich sensuous responses from the participants, and their contrasting self-led interpretations of the project.

5. As well as the above points, another split was found in how the participants dealt with the initial confusion that *Deviant* sets up. The first group, Raine Koskimaa, Noah Wardrip-Fruin, Nick Montfort, Jill Walker and Roberto Simanowski, found this confusion problematic. This for the main was sited in the facts that at the beginning, the narrative source was unknown, my narrative voice is

unfamiliar, the visual telling is ambiguous, and most importantly the lack of a [conventional participant position](#) . This sense of confusion tended to either evolve into a sense of puzzlement or frustration, both of which lasted the entire duration of the project and resulted in a negative experience for Simanowski and to a lesser extent Wardrip-Fruin. The outcome of this state of confusion on the above group. Led me to some interesting insights about how each individual dealt with trying to reposition themselves into a state of clarity. It was seen that formal techniques such as thorough and systematic "clicking" of the visuals was the [preferred method](#) . Also of note was Raine's method of "[googling](#) " [42] in order to discover something of the narrative source.

The remaining participants, [Mark Amerika, Anja Rau, George Fifield, Gonzalo Frasca, Cynthia Lawson and Stephanie Strickland](#) , seemed to observe the difficult new nature of the work and absorb this into part of the project's atmosphere, and, with less trouble than the above group, then began to explore the project.

These two paths or differentiated frames of mind over the issue of confusion show the volatility of creating content that subverts or plays with conventions. For any subversion to work, the participant must be able (however loosely) to reference the systems that are being overturned. Experimenting in such a manner undoubtedly means "losing" some of your participants to perpetual and thus disruptive vertigo.

2.2.4 Unexpected outcomes

Perhaps the most unexpected finding from their feedback was the participants' reaction to being reverted back to a semi-passive interactor. This is a kind of de-powerment of the digital participant. Conventional non-linear and linked projects are normally valued for creating situations by which the participant can make onscreen choices and the responses from these choices significantly change perhaps the outcome, structure, or possibilities within the project. However, within *Deviant*, the participant cannot alter the narrative sequence though unusually or even misleadingly there is a high level of interaction with the environment. As questioned by Wardrip-Fruin "One thing I found myself wondering, as my mouseovers did things like make flowers bloom, is whether there was a consequence to these actions - was I altering the world model, or just creating an aesthetic

moment". Interaction with "simply" embellishing objects for some of the participants was unrewarding.

In section 2.13 🔼 I lay out my rationale for creating what I call the digressive spaces. On this issue I have once again found that creating uncommon communication exchanges are risks I take with the participant. Interestingly, the playful roll-overs / animatics which I would suggest are one of my signature marks and whose worth had never yet been challenged, have now become for some -- problems. Perhaps it is because this project is highly demanding that they become "red herrings" for the participant (given the frequent feeling of being lost -- every interactive object in turn becomes a possible link). Or perhaps it is because there are many more of such instances within this work that the participants, in turn, suspects they must have further significance.

I purpose that these contentious "aesthetic moments" function within *Deviant* as being alluring world objects that "simply" add to the notion of subtlety and function like toys. They are types of environmental assets made by me to depict the naïve possible worldview of Christian Shaw. They are not directly narrative, but they can also have cultural associations that help stimulate the participants' interpretations as well as their sense of touch and of atmosphere.

2.2.5 In summary

Unlike my previous projects (*RedRidingHood* ↗, *The Bloody Chamber* ↗) I do not comment or moralize with this narrative (as acknowledged by Walker ↗ and Rau ↗), this means any interpretation will always depend on what the participant brings to this story. I believe some people will be able to do this more easily than others, depending on personality, training or familiarity with my work. It is noteworthy that eight of eleven expert participants succeeded to gain some sense of resolution. Those participants who are driven by a "winning state" or clear conclusions will not fare so well. *Deviant*, unlike many other artworks within my field [43], appeals firstly to the eyes and ears and then to the mind, and in this case, then importantly refuses to yield easily graspable concepts and claims. This comes in part from its non-verbalised or photo-realistic rendering. This is

hard on participants who cannot or are unable to commit to their own interpretations. The largely varying nature of this group's response however proved that the project does succeed in instigating multiple readings.

For example some people found particular issue with the problematic non-traditional conclusion, the frequency of their frustration when "pixel hunting" for links, others the lack of extra narratives or classic re-interpretation, or the misnomer of the title not matching the protagonist's gender, others the static or dormant nature of the structure, preferring instead a more filmic and audio rich approach. Many of the participants' comments overlapped and touched on the same issues, whereas with some of the participants these issues didn't perplex them at all.

But what they did agree on were the:

Immersive achievements of the visual style:

> "The visuals are very impressive. The figures are sketched with only a few lines, which nevertheless give a good impression of the character behind the face. The girl and partly the other characters in the play always move slightly. Thus the girl's eyelid closes and opens and sometimes the pupil moves on mouseover to adjust the gaze to the user who is at the end of the mouse. These effects are very impressive" ([Simanowski](#)).

In particular the level of detailing:

> "I became almost hypnotized by the small details in which I found myself (rolling over every single petal, forming buildings out of flowers, making sure every dot is released to then form symmetric cross grids, etc, etc.) There was no frustration, because every time I went back to a different scene, it was just that: different" ([Lawson](#)).

> "Deviant is a work, which requires a close, very close look. There are minutest details to which you should pay attention to. Or, at least there are lots of small details you may pay attention to, but what is their significance is not really clear" ([Koskimaa](#)).

The subtlety of the movement within the piece:

> "It writhes and undulates under my caress, very sensuous. I feel like I'm making love to it. Actually I should note that I'm doing this on a laptop and using a mouse pad, not a desktop mouse" ([Fifield](#)).

> "I loved the slow nodding and slight opening of the fingers of the child in the tree-thicket. That uncanny feel I wish had been prolonged" ([Strickland](#)).

Their empathy with the protagonist's suffering:

"I feel complicitous. Its funny, but when the monsters are touching her I feel it must be painful but the old lady's touch seems that it might be therapeutic" (Fifield ⬈).

"The girl spits coals (actually until I read the final summary of the story I didn't realise they were coals and I thought the lines were of smell, not heat. I was disgusted anyway, so I don't think it mattered)…"(Walker ⬈).

The particular sense of disturbance:

"The images and the feeling of the interactivity work together well to create a sense of disturbance…" (Montfort ⬈).

"Don't look for the aesthetically pleasing here; rather, witness the anti-aesthetic leaking (of emotion, confusion, visual dyslexia, uncertainty)" (Amerika ⬈).

The readings were a particularly rich set of feedback data.

2.3 Answering the research question

How does *Deviant: The Possession of Christian Shaw* answer the research question -- How does the artist develop an interactive style and visual vocabulary, which evokes rich responses from the participant whilst challenging them to counter conventional interaction tropes?

A. By disturbance, subtlety [44] and difference.

I have found that the main method of generating emotionally engaging responses from the participants is from using subtlety. I propose that the within *Deviant* the evoking rather than commanding sensibility is an important feature. It is the gentle and delicate nature of the project's communication exchange that draws the participants' emotions in. What follows are the different manners in which *Deviant* can be seen to be subtle.

Imagery

It was found that using a visual language that deviates from the real, one that dips into mass culture and uses signifiers that are hollow enough vehicles for the participant to fill [McCloud 1993], creates the potential for cognitively active imagery.

The entire group noted the success of the subtleties in the visual details and the portrayal of character. They acknowledged feeling both positive

(compelling, evocative, intriguing) and at times negative (frustrated, irritated) involvement both with the world and the protagonist. This subtlety is in the main located within the drawing and the scale of the images. This hand drawn comic nature of the representation style created for some participants an association of a childlike worldview (Koskimaa , Fifield). Combined with the dark narrative background, this created a strong sense of dissonance.

Touching

As well as the physical pixel based detail of the imagery, subtlety is carried into the way the participants are asked to touch the onscreen material. The areas of "hotspots" are small and often disguised. Thus broad, frustrated or fast searches of the space will not reveal them. Similarly as discussed in the previous conclusion , the project does not animate or move like a conventional piece of motion graphics. Most of the animation (I've used the term animatics) are set up to respond to the mouse enquiry rather than being traditionally time-based. This aspect can also beguile, because it gives a participants' touch a new prominence. These types of touches -- making world objects come to life -- talks directly to real-world "physical" intimacies (especially if a computer tracking pad is used instead of a mouse). As such it emotionally charges the remote human to computer viewing platform of the project, since it is unexpected. A different type of concentrated observation seems a consequence of the interactive premise of subtle disguising and revealing, this seemed to generate for some feelings of hypnosis and/or meditation.

Movement

As mentioned above, the animation style is often set up to respond to the mouse. After such interactions, the project uses varied styles of movement as reactions. Some are realistic (such as the protagonist's journey to the Doctor), some alien (the way the flower heads spin and dilate), but in the main, most of the movement is slow or what I like to think as being "suspended" in some invisible emulsive gravity. This slower nature is often teamed up with a slightness of movement. "…The movement in several places is minimal, almost unnoticeable" (Koskimaa). This creates an unusual sense of stillness or quiet, which once actually moving, again requires a high level of observation. This technique was designed to help the participants become contemplative (as discussed in 2.13 , though not everyone enjoyed the amount of quiet "I liked, as I said, the overall disturbingness, but I wanted it to move fast, and or fluidly…" (Strickland).

This subtlety, in all its layered incarnations, is I propose uncommon within responsive artworks and as such helps create a sense of difference within the project, levelling all the participants to an even naïve explorative field whereby keen observation and thought are required. This I believe helps insight the participant curiosity.

2.3.1 What else was revealed?

Deviant, as well as answering the research question B, also brought fourth interesting information about the contextual perception of my practice. As mentioned above, though most participants associated this project as being some kind of game 🖼, they also had difficulty in specifically typecasting this piece as a "traditional game" or indeed directly linking it to my earlier works.

> "In "Deviant: The Possession of Christian Shaw", the artist defamiliarizes her previous attention to plot and linearity and focuses more on the unfolding of micro-scenes that never congeal into what we usually call story but operate more as an interactive experiment in moving visual art…" (Amerika 🔗).

> "In the case of Red Riding Hood, knowing the story ahead of time made the piece stronger as a commentary, but also without knowing the story (if that can be imagined), the online tale you tell "works." By contrast, knowing this story in advance, I would not have fully explored the possible places to go, because too many of them seemed not relevant to the story…" (Strickland 🔗)

Varying terms such as *exploratory narrative (*Fifield 🔗*)*, *visual narrative* (Walker 🔗), *interactive experiment in moving visual art* (Amerika 🔗), and *interface/game/interactive environment*(Lawson 🔗), are all used in an attempt to describe the new communicative exchange as offered by the visual language and the structural behaviour of *Deviant*.

It has reinforced my proposal that I am in a little traversed research space or artistic practice. I believe that interactive systems should be diverse or even unique, and if appropriate as within *Deviant*, the author can still experiment with being narrative based whilst removing herself from traditionally controlling the participants' interpretations. Not all systems should be reducible and yield meaning.

A surprising revelation was that micro level interactions generated participant suspicions of some larger significance. It also seemed unlikely to them that interactive objects could not be responsive "for the mouse's sake" (Lawson 🔗). This seems to indicate an empiristic, anti-post-modernist attitude.

Although suspected, it was also found that confusion as an experience is particularly hard to bear. The main method available to remove this sense of confusion (at least in discovering links to progress the project) is by acutely observing and memorizing, the main landscape and looking for changes. Perhaps this project requires a new type of onscreen observation, one that requires looking and seeing at the same time [45], a kind of half-dreaming. This need for simultaneous observation and interaction was problematic for the participants, perhaps because it is an unexpected request from a clearly responsive piece of work. With unconventional or inherently difficult works, it is anticipated that not all of the emotions would be easy to sustain -- confusion, frustration even irritation are expected. It was previously thought that the coaxing visual style and the "still" nature of the project would soften these negative participant emotions and the dormant state of the world meant that the participant would be wholly in control of her/his investigation. This, it was thought, would allow them to set their own pace. From the feedback it appears that the confusion over the location of the links, their unclear role as participant combined with the narrative ambiguity (on the first reading) creates for some too strong a sense of confusion, which is not conducive to exploring, observing and touching.

2.3.2 Insights and omissions

What could be/should be changed within *Deviant: The Possession of Christian Shaw*?

1. To alleviate some of the participants' confusion, and as suggested within some of the feedback, I intend to expand the role of abstract sound effects as hints or indicators. This use of audio would preserve the way the visuals function but clarify the participants' role, thus enabling them to observe the changes more easily.

2. I would look to develop the complicit engagements within the project whilst still preserving the literalness and linearity of the key narrative sequences. This could be further developed by creating a stronger sense of voyeurism (as better felt with *The Bloody Chamber*) of an invasion into the psyche of the protagonist. Similarly, the response from a given interaction (especially within the incarceration of the victims sequence) could be utilised further using more "surprise" [46], horror, or shock element. This would help make the exchanges more meaningful and promote a sense of sympathy and guilt from the participants.

Chapter 3 -- <u>Summary of what was revealed</u> ⬛

Expansion

1. HCI is an abbreviation of Human-Computer Interface [Shneiderman 1998; p. 638]

   Human-computer interaction is a discipline concerned with the design, evaluation and implementation of interactive computing systems for human use and with the study of major phenomena surrounding them.

   Human-computer interaction arose as a field in the early 1960s from intertwined roots in computer graphics, operating systems, human factors, ergonomics, industrial engineering, cognitive psychology, and the systems part of computer science. Alongside information visualization, another predominant area of study is the computer interface (GUI --Graphical User Interface) as experienced in commercial software packages, information driven websites, various computer operating systems, auto tellers, GUIs are present in any instance of interactive screen based communication with a human user.

   The ultimate goal of HCI is to enable fluid or intuitive interactions with the particular computer system in question. In this fluid state the participant would not have to think about what menu to choose, or which mouse button to click, but could naturally and fluently perform the necessary actions to achieve their goals -- the interface would then become transparent.

   This ultimate goal is broken down into eight golden rules of HCI:
   1. Strive for consistency.
   2. Provide shortcuts for experts.
   3. Offer informative feedback.
   4. Ensure closure of tasks.
   5. Avoid user errors.
   6. Provide easy reversal of actions.
   7. Support user control.
   8. Reduce memory load. ↱

2. **Not animation / but something else**

   The website vectorpark.com in relation to the fast action motion graphics as typified by Gmunk, <u>www.gmunk.com/2001_NYC_transit/FINN_QT.html</u> 🔗 or <u>www.weworkforthem.com</u>🔗, instils a sense of quiet or reflection. The vibrant and frenetic movement of MTV's television advertisements heavily inspired much of the flash animation circa 2001. I sought to utilise this sense of stillness (as seen in <u>vectorpark.com</u> 🔗) to create an upfront uncommon dialogue with the participant to indicate that this artwork requires reflection, exploration and committed engagement. ↱

3. **Fullscreen memory** [Huitt 2003]
   When humans are presented with new information, we tend to respond to material if it has an interesting feature or activates a known pattern (is familiar or calls to mind prior knowledge). This gets transferred into what is known as STM (short-term memory), which is what we are thinking at any given moment. The generally held principle is that most people can process 5+-2 new instances at any one point. The final transference into more long term memory depends on how we group, characterise, classify, or sequentially organise the information. This movement into long-term memory takes sufficient commitment to learning the information, whereas simply repeating or attempting to memorize the experience may not suffice. For details on Information Processing, see electronic text: http://chiron.valdosta.edu/whuitt/col/cogsys/infoproc.html

   Within *Deviant*, the use of visual perception and memory is key. The volume of pictorially important links to be found within the tableaux are highlighted either by a colour or the fact that they are new objects and similarly the non-important objects are repeatedly shown in the same position after each significant narrative intersection passes. This it was hoped would in effect neutralise these objects as they become familiar and memorized. The fullscreen scale of the presented interface is used to create enough visual resting spaces (locales that are empty or minimal) so as not to overload the participant's visual perception or inquisition but keep the intensity, e.g. detailing of the rendering, as high as possible.

4. "…interactivity conflicts with the creation of a sustained narrative development, and consequently with the experience of temporal immersion. Among the architectures described above, the only one that places interactivity in the service of narrative desire is the mystery story structure (no 6), because the reader's actions discover, rather than create the object of this desire, and because the story to be investigated is itself unilinear, determinate, and external to the interactive machinery." [Ryan 2001;p.259]

5. **Mixed belief systems**
   Towards the end of the artwork *Deviant* features a hidden subterranean world, which refers to the older Scottish folkloric belief in faeries. This faerie belief was made underground with the onslaught of Calvinistic rationality and the cold, hard light of Reason circa 1550 onwards [Henderson & Cowan 200].
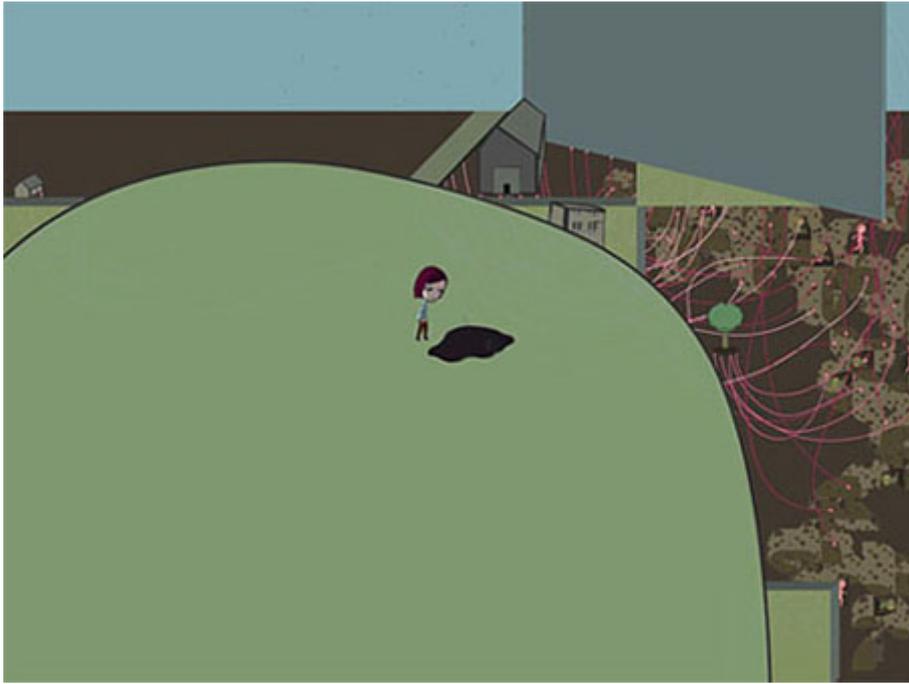
6. Arthur Miller's play, *Crucible (*1953), was based on the 1692 Salem witch trials. It was deeply influenced by the blacklisting of his left-wing friends and reflected the era of McCarthyism. ↴

7. *The Omen*, film directed by Richard Donner, (1976). ↴

8. Traditional accounts of witch-hunting paid little attention to gender, but it is now discussed intensely see:
   [Garrett 1977]
   [Barstow 1994]
   [Bruyn 1979]
   [Roper 1994] ↴

9. **The female archetypes**

   With *RedRidingHood,* the re-interpretation is rooted mostly in the visual; I transform her into a blonde, an initiated, sexual persona. Attitude wise she is depicted as being wily and as dangerous as the wolf character -- readdressing an imbalance that she is passive. Then contradicting this portrayal, if you explore her musings in the hidden diary, you discover that she was previously (before you encounter her in the narrative) a love struck romantic girl, full of ideals who was "used" by the wolf. This instigated her change of look and frivolous confident manner, but gravely she's directing these changes to attract the wolf, so in this sense she is both the traditionally naive victim *RedRidingHood* and dually and superficially sexually empowered *RedRidingHood*.
   [Leishman 2000]

   In the *Bloody Chamber* the female lead is shown as equally voyeuristic and psychologically demented as the Bluebeard. They are mutually obsessed with one another. In respects to the source text the major reinterpretations come in the form that the Bluebeard is depicted as a weaker more humanly flawed character and the wife figure is (via the participant and not the Bluebeard) in charge of her own destiny,

e.g. in the project she never dies, she can only leave or stay.
[Leishman 2002] ↩

10. **Temporality in responsive narratives**

The issue of the functionality of time in reponsive structures was notably discussed by Markku Eskelinen, in his paper at the DAC 98: *Omission impossible: the ergodics of time*. In his paper he states that the spatial emphasis nearly always supersedes analysis of the temporal. Using Stuart Moulthrop's *Hegirascope* as illustration, he goes on to describe how the text, with it's programmed "client pull" 30 sec decision limit in each node, presents the participant with a "double interface" e.g. where the text will sequence itself after 29 seconds pass or the participant if can control the sequence if they act quickly enough. *Hegirascope* also goes on to repeatedly allow access to its various nodes allowing re-readings ad infinitum.

The paper is available in electronic format, see [Eskelinen 1998 & Moulthrop, *Hegirascope*, 1995/7].
Also see: [Aarseth 1999] ↩

11. For an excellent online resource woodcuts from the 16th Century onwards, see electronic text: http://special.lib.gla.ac.uk/exhibns/damnedart/index.html ⬈
. Illustration dated 1544. ↩

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"Think loop. The basic building block of an electronic sound track, the loop also conquered surprisingly strong position in contemporary visual culture. Left to their own devices, Flash animations, QuickTime movies, the characters in computer games loop endlessly -- until the human user intervenes by clicking. As I have shown elsewhere, all nineteenth century pre-cinematic visual devices also relied on loops. Throughout the nineteenth century, these loops kept getting longer and longer -- eventually turning into a feature narrative…Today, we witness the opposite movement -- artist's sampling short segments of feature films or TV shows, arranging them as loops, and exhibiting these loops as "video installations." The loop thus becomes the new default method to "critique" media culture, replacing a still photograph of post-modern critique of the 1980s. At the same time, it also replaces the still photograph as the new index of the real: since everybody knows that a still photograph can be digitally manipulated, a short moving sequence arranged in a loop becomes a better way to represent reality -- for the time being. " [Manovich, *Generation Flash*, 2002] ↴

14
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Randomised time

Within the pop-in framed compositions that depict Christian's possessions, there are programmed random objects. These screengrabs depict the different and randomly sequenced flora. ↴

15
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Layering opposed to filmic

Filmic: relating to, or characteristic of movies; cinematic.

When we think of the visual languages used in films, much of what we perceive is bound up in the technologies used to produce the moving image, e.g. the capabilities of the camera (e.g. zooming, panning) and the possibilities in the editing / postproduction. The temporal nature of traditional filmic or cinematic experience works by depicting single images in succession, this allows for complex juxtaposition of the images to create narrative tension, often using tropes such as the close-up and flashback.

This time based approach naturally filtered into the production of Internet artworks, however even then is was used differently. There was a return to using short looping sequences (think QuickTime clips, defaulted Flash art) in lieu of epic narratives with a dramatic ending. This return to the looping trope (early films were loops) was heavily influenced by the limitations of new media technology and the bandwidth available to the majority of the Internet's audience.

Though still a significant aesthetic feature of Internet based moving image, filmic conventions have become more associations or reference points to subvert -- in that the artworks may use content from handheld digital cameras, web cameras -- using live streams as content [a], or surveillance cameras, thus are still formally directed and sequential in nature but are then often looped [b], miniaturised or montaged into split or multi-screen [c] screen compositions.

This last technique is the furthest departure from traditional cinematic experience, as instead of sequence and single images, the participants experience is of: co-existence, addition, simultaneity and multiplicity. As Manovich points out -- "In spatial montage, nothing is potentially forgotten, nothing is erased" [d; p.71]. This is a significant paradigm change in how the participant reads the communication.

Layering as a technique is much like multiple montaging. Instead of having clearly demarcated screens [c], panels or windows, layering creates dual or multiple images as elements are overlapped, obscured, or extended. This creates an additional level of spatial relationships, since layers create depth hierarchies, in which society associates with being "on top" as being best or most relevant and being below or bottom as worse or insignificant.

Like multi-screen, layering as a technique has become more prominent as a mediation from the commercial tools that are used everyday by the artists -- layers and thinking pictorially in layers are an intrinsic interface feature in Photoshop, Illustrator, Aftereffects, Flash, and can also be programmed into HTML pages using CSS [e].

Conceptually, layering can be used as a mixed metaphor -- to reveal hidden or disguised articulations, to suggest complexity and impenetrability. For example layering when used in excess can also mean illegibility of the communication. Layering alongside the developments in spatial montage offers new ways to organize and present narrative experience.

(a) Thomson & Craighead (2004) *Template Cinema*, electronic text.
(b) Owenns, Jimmy (2001) *Peau Nue,* electronic text.
(c) Lialina, Olia (1996) *My boyfriend came back from the war!*, electronic text.
(d) [Manovich 2002]

(e) Cascading style sheets (CSS) address many of the problems of HTML. Some of the older tags, especially the notorious <FONT>, clutter Web page source code and make for inflexible sites. With CSS, style information can be centralized. This centralization leads to increased power and flexibility. ↰

16. Michael Nitsche argues that applying the cinematic three-act structure (from Aristotle) in new interactive mediums is excluding the inherent qualities of the medium, that it would imply "that interactive narrative is the product of gluing together a narrative structure with an interactive method" that essentially the user's ability to choose gets limited. Instead he proposes that the three-act or act structures can be projected onto the user's experience, that "his/her experience as the plot". [Nitsche 1998; p.69-73.] ↰

17. **Secret Spaces**

"With the theme of drawers, chests, locks and wardrobes, we shall resume contact with the unfathomable store of daydreams of intimacy. Wardrobes with their shelves, desks with their drawers, and chests with their false bottoms are veritable organs of the secret psychological life. Indeed, without these 'objects' and a few others in equally high favor, our intimate life would lack a model of intimacy. They are hybrid objects, subject objects. Like us, through us and for us, they have a quality of intimacy. Does there exist a single dreamer of words who does not respond to the word wardrobe?" [Bachelard 1969; p.78] ↰

18. Murray distinguished three main qualities of this new medium: immersion, agency, and transformation. By immersion, she means the power of the medium for helping the user to construct beliefs rather than suspending beliefs. [Murray 1997; p.181] ↰

19. Scottish History Conference: *The Survey of Scottish Witchcraft, 1563-1736*, University of Edinburgh, (January 2003). Available in electronic format:http://www.arts.ed.ac.uk/scothist/witchconf/index.html ⬀ ↰

20. **Copy of the original text by Diane Greco for Tekka.net ⬀**, Sept 2003.

The Possession of Christian Shaw
"In 1695, a little girl named Christian Shaw began to exhibit symptoms of what, at the time, was believed to be "demonic possession," causing seven of her neighbors to be tried as witches and burned at Gallow Green in Paisley, Scotland. As soon as we enter "The Possession of Christian Shaw," which takes this curious historical episode as its starting point, we are thrust into classic Donna Leishman territory -- spooky, dystopic, and strange. In Leishman's reinterpretation of 17th-century Paisley, crummy grey high-rises shoot up, in defiance of all known laws of perspective, from a deep green landscape of popsicle contours. The formerly-reliable cursor hops around and changes shape alarmingly. You click on a bush; a pair of reptilian eyes opens and does not close. And although you find, after a few tries, that it is possible to remove the heads from trees, this opportunity to violate the landscape does not advance your progress. There are, in fact, no buttons or other obvious wayfinding devices in Leishman's vision of Paisley -- that would be too easy.
No, you are here to watch and to listen, and to consider, in the long moments you have while watching the elusive and enigmatic Miss Shaw twitch in the grass or disappear behind a grove of trees, whether you're really getting intimate with Paisley, or if you're merely getting to know its tricks a little better." ↰

21. Smith, Patrick, electronic text, see: http://www.vectorkpark.com ⬈ (2000)
Schmitt, Florian & Jugovic, Alexandria, electronic text,
see: http://www.requiemforadream.com ⬈ (2002) ↴

22. The term "pop up" refers to the phenomena when an Internet browser is stimulated by the source-code to launch a new external browser window. This popup window can be given specific attributes such as size, position and can even be asked to animate. A recent trend has seen non-requested popups being spawned (opened) as soon as the participant opens an index browser page. This popup code repeatedly sends new windows every few seconds. The content in these spawning windows tends to be commercial adverts or pornography. To reverse this irritating trend, new programs such as *Popup Killer*, *Popup Blocker*, and *Ad Stopper* have been created to stop these automatic popups from occurring. See: http://www.panicware.com ⬈
For an example of spawning popups as Internet art, see the electronic text by: Joan Heemskerk and Dirk Paesmans' *OSS/***** on http://www.jodi.org ⬈ . ↴

23. Branching offshoots
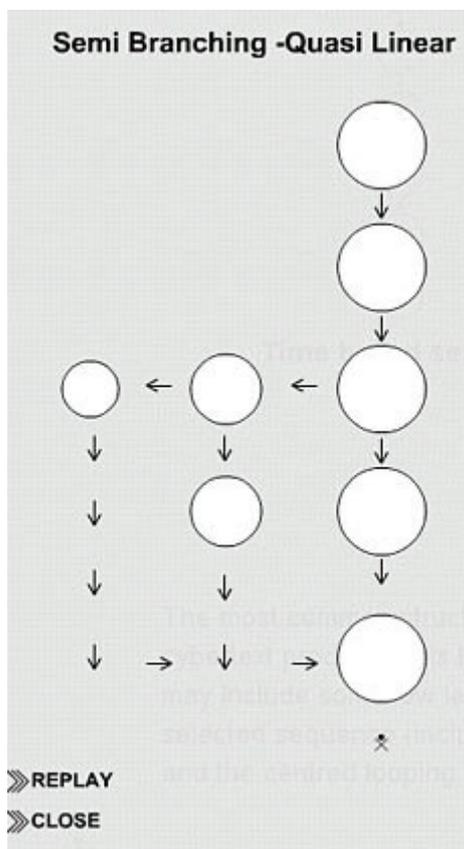
The nearest structure to be found in research question A ⬀ is in the "centered systems, arborescent structures (tree like and branching)" category. Also see reference 40 ⬀ . ↴

24. [McCloud 1993; p.71]
Scott McCloud discusses the different types of sequences that can be used in moving images and comics. These categories are broadly defined as:
1. Moment to Moment, panel to panel, requiring very little closure.
2. Action to Action, a single distinct progression.

3. Subject to Subject, participant participation is required to make 'meaningful' closure.
4. Scene to Scene, deductive reasoning is required, often showing transitions over significant distances of time and space.
5. Aspect to Aspect, the wandering eye technique setting the mood and tone.
6. Non-Sequitur, no logical relationship but related through perception of sequence.

The non-sequitur is the most experimental and demanding on the participant, as it creates no conventional meaning. I have discussed this area more in my Masters of Design thesis, *Does point and click interactivity destroy the story?* 🔗 [Leishman 2000]↷

25. [Leishman, D. (Dec 2000) *RedRidinghood*]
    [Leishman, D. (2001) *Angel Interceptor*]
    [Leishman, D. (May 2002) *The Bloody Chamber*]↷

26. Ryan is interested in the relinquishing of the model of the novel in favor for localized experience of narrative such as short episodic, provocative or poetic structures. Ryan also suggests that hypertexts depart from verbal textuality and should include images, spoken word, sounds and reach into the territories of conceptual visual art. This Ryan feels will enable a better sense of user immersiveness and generate more appropriate stories for digital media. [Ryan *Immersion and Interactivity in Hypertext* 2001, ch 8]↷

27. [Anon. 1877, p.123]
    [Sharpe 1884, p. 172]
    [Vediovis, 1982, p. 319]↷

28. Copy of original email sent out to the expert reader / participant group, (19/01/04):
    Subject: Invite to be an Expert Participant
    Dear _____,
    I am writing to ask whether you would be interested in becoming a 'participant/explorer' of my new artwork. This piece of work was devised and created within a practise based PhD framework. This work constitutes a significant portion of my final thesis. Practise based /practise integrated PhDs in Art and Design are relatively new here in the UK and as such I sit as the first candidate within Glasgow School of Art's Visual Communication department to submit for such a degree.

    I have selected you as a potential participant for your interdisciplinary abilities, personal voice and commitment to my research area; I respect you as being a valued expert.

    Your reading and feedback will be used in conjunction with my own self-reflection to critique the project. You would be cited and given credit for your comments in my thesis and in any subsequent papers generated from my research.

    My expectations from you would be simply that within 2 weeks of receiving the project you would spend a period of time to allow a rich, in-depth reading of the work. The strategy, which you employ to achieve a reading, is completely up to you. The only specific outcome that I would need is a typed and emailed description of your experience. Without spoiling the surprise of this project, I would like to say that it

covers narrative structure, visual interactive exploration, and onscreen aesthetics, and is my most complex project to date.

If you feel you would like more information before accepting or declining this position please do not hesitate to ask,

Yours,
Donna Leishman ↳

29. Amerika, Mark:
[*Grammatron*1997]
[*PHON:E:ME* 1999]
[*FILMTEXT* 2001/2]↳

30. George Fifield
Boston Cyberarts Inc, http://www.bostoncyberarts.org
DeCordova Museum and Sculpture Park,
see: http://www.decordova.org

31. Gonzalo Frasca
Powerful Robot Games, electronic text, see: http://www.powerfulrobot.com/
Electronic text, see: http://www.ludology.org

32. Dr Raine Koskimaa, works as a professor of digital culture at the University of Turku, Finland, where he teaches and conducts research especially in the field of digital textuality.
Thesis available in electronic format, see: http://www.cc.jyu.fi/~koskimaa/thesis/

33. Cynthia Lawson
Electronic text, see: http://www.cynthialawson.com/

34. Nick Montfort
Electronic text, see:http://nickm.com
[Wardrip-Fruin, & Montfort 2003]
[Montfort 2003]
[Montfort. N., (2000) *The Ed Report*, electronic text]↳

35. Dr Anja Rau
Electronic text, http://www.tekka.net
Electronic text, http://www.gamestudies.org/about_reviewers.html
Electronic text, see:http://www.flickwerk.wordwrap.de
Electronic text, see:http://www.wordwrap.de

36. Dr Roberto Simanowski
[*Interfictions* 2002]
Electronic text, see: http://www.simanowski.info
Electronic text, see: http://www.dichtung-digital.de

37. Stephanie Strickland
Electronic text, see: http://www.stephaniestrickland.com/

38. Dr Jill Walker
Electronic text, see: http://huminf.uib.no/~jill

39. Noah Wardrip-Fruin
[*Impermanence Agent* 1998+]↳

40 [Link to Large structural diagram of *Deviant*](#) ↗ ↴

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41 " A 'whole' human-computer activity can be described, using the broad definition of a

.   whole action, as having a beginning, middle, and end, and being composed of
    incidents (one or more) that are parts of that whole. Thus playing a computer game
    until it ends (or I end it) is a whole action, and a 'session' with my word processor is a
    whole action (even if I don't finish the chapter I'm writing)." [Laurel 1993; p.70] ↴

42 The Phenomena of "googling" as Koshimaa referred to it, is when the participant

.   enlists the help of google.com, one of the Internet's premier search engines (software
    set up to trawl through all documents on the Internet), to search out extra information
    on any given subject. Raine used the keywords "Christian Shaw" to search out extra
    information. ↴

43 **Literary hypertext fiction/ serious hypertexts & coded/kinetic poetry**

.   These art forms (generally) have low visual appearances, perhaps have minimal or no
    sound and instead use low grade (in a typographical sense) type to communicate with
    the participant. These choices are opposite to *Deviant*, which is almost exclusively
    pictorial, notably coloured, uses sound and then refuses to yield easy graspable
    narrative claims. Below is sample of such practices that either give primacy to
    verbalised communication, or embed deconstruction theories:
    [Andrews 2003]
    [Biggs 1996]
    [Fisher 2001]
    [Mez 2001]
    [McPhee 2003] ↴

44 The power of subtlety over literalness in the style of the visual language used within

.   the *Deviant* project

    I define subtlety as meaning: initially/on the first reading the full meaning is difficult to
    detect. This difficulty comes in understanding the visual signs either because of their
    scale or the fact that they are not fully representational. The participant must apply
    more observation and analysis than is commonly needed when the visual sign is
    clear/iconic and able to be interpreted with rapid certainty. ↴

45 **Confronting Change Blindness**

.   [Rensink 2000]

    There is a strain of cognitive psychology that specialises in investigating the
    phenomena that is called "looking without seeing" or change blindness. This occurs
    when the observer looks directly at an image yet fails to perceive a change in neither
    the Central Interests (Main theme e.g. location, colour) nor Marginal Interests
    (insignificant to the full meaning e.g. a specific shadows, angle of horizon). Hypotheses
    exist proposing that the act of blinking / non-fixed position of the eye may be a factor,
    or that "inattentional blindness" occurs: When observers are intently engaged in one
    visual task, they will often be unaware of what would normally be a perfectly visible
    simultaneously occurring event [Mack & Rock, 1998]. Then in addition and perhaps
    more key to *Deviant* -- Simons [1996] and Zelinsky [1997, 1998] have also found that in

scenes consisting of small collections of objects, changes made to directly attended objects can be missed. ↴

46. **Techno-suspense is also followed by techno-surprise**
    Janez Strehovec's techno surprise is connected with the expectations of what is going to open after the act of clicking and what kind of reality will the participant/ user enter. [Strehovec 1998 & Strehovec 2001] ↴

47. The use of artists/designers journals as a method with practice based PhDs is a developing trend in the UK. [Moon 1999] ↴

48. Interstitial paradigm
    Interstitial art exists in the interstices (spaces between), capable of binding two or more things together.
    [Moulthrop *Gamely Interstitial* 1999]
    [Moulthrop *Misadventure: Future Fiction and the New Networks* 1999] ↴

49. *The State of Play: Law, Games, and Virtual Worlds* Conference, New York Law School November 13-15, 2003. ↴

*. Such as deployed in: *Victory Garden* (1991) Moulthrop, S., the back track button takes you back to the previously read lexia (block of text). *Afternoon* (1987) Joyce, M, the first of its simple navigational buttons is an arrow pointing left: pressing it takes the reader back to the previously read lexias. *Patchwork Girl* (1995) Jackson, Shelly, the two way arrow takes the reader to the next lexia in the default line and with the alt-key pressed down, to the lexia previously read. ↴

Deviant Project Methodology

The below text is a extended commentary on the methods used to create and elucidate the *Deviant* project.

To discuss the project Deviant: *The Possession of Christian Shaw* I devised two new methods.

The first is the way in which I documented the creative journey of producing the project, namely I chose not to track my creative process via a daily nor weekly logbook [47], but decided to collate the technical / artistic notes, and the "sketchbook" digital files 🖼 as and when they were created. I only reviewed them after the project was completed. I have felt this method to be in keeping with what I have termed the fluid or emergent process.

At the start of the project, a considerable amount of preplanning and formal designing occurred, typically a lot of critical and creative exploration happens at this early stage. I find when creating responsive non-linear content that one must allow a significant space in which ideas and solutions emerge rather than being fully in place from the start. This emergent type of exploration is not the same as using one's artistic intuition. Rather, ideas

and solutions emerge from and through the overarching sketch of the project and the continual visual analysis of what has just been achieved. This could be described as a kind of seesaw effect. It occurs all the way up to the end of the project.

This non-intrusive collection of material seems logical given that the non-linear structure and the content are transformations of a traditional linear narrative. I describe the extraction and creation of the extra explorative content as being like spinning a web around the established inner core. This web can be: gossamer (delicate and decorative), leafy (giving clearly extra life to the core), robust (whereby the extra spaces are as important or more important and usurp the core material), or indeed a mix of all the previous. Whatever path is chosen, this process is always highly demanding. To document my creative process at each step, I feel, would insert unnatural pauses and stops, resulting in a lack of focus. This would lead to a more fragmented end product.

Once the project had been completed, I then immediately began the process of reviewing the collected materials. The immediacy was necessary to utilise the fresh memory of the production. The supplementary documentation was seen to serve as aids in recalling the multi-faceted experiences of the making.

The end product of this review of the documentation material was a written document (now this Chapter 2) detailing the larger context in which the project sits; what its objectives are and how they came to be formed; specific prepositional notions that were developed through the making (e.g. animatic rather than animation, narrative source as un-interpretable); and a breakdown chronologically of how long each facet of the project took to develop. The document ends with two conclusions. The first is a review after the fact of what the project achieves and has become. The second is a clarification and summary of how I propose the project functions.

This latter conclusion is intended to directly precede and be used in comparison with the empirical knowledge as gained from the expert participants' feedback (see below). This method allows for three tracks of writing around the project, my own as the author "insider", those of the diverse external participants "outsiders", and the integrated interwoven comments, thus utilising the subjective and objective viewpoints.

The second method was selecting and inviting a group of expert participants to explore this new practice.
These specific experts were asked to use and reflect on my new work. This group was invited on the basis of their standing within the research community and their interdisciplinary abilities (especially important given the findings that my practice sits in-between various contexts). They are a mix of digital artists, designers, writers, a poet and a curator. It was also of key importance to me that the group represent both female and male perspectives.

These participants were invited (via email [28]), and then asked that within 2 weeks of receiving the project, to set aside a period of time which would allow a rich, in-depth reading of the work (it actually took around 4 weeks). The write up (for those who asked) was recommended as being 1-2 pages long. The strategy that they employed to achieve a reading was non-prescribed. This I felt would befit their expert status and allow for a naturalistic experience for both participant and me. The only specific outcome I required was a typed and emailed description of their journey. The feedback was open in respect to

the level of reflectivity. This open remit was again an attempt to generate rich and diverse responses.

Fourteen participants were invited, twelve of whom accepted (this was a much higher percentage than was anticipated). In the end one of these twelve had to leave the group at the early stages due to health reasons. I had decided to invite fourteen, expecting about half to accept. Such a small number is appropriate since I am not using a surveying or sampling technique. Rather, the respondents are elite experts in relevant fields.

I feel it is worth noting that after the feedback was collated, this high number of acceptances was fortunate, as my open remit in the conduct of how the readings were achieved combined with their personal and professional workloads has significantly affected the length and calibre of the feedback.These empirical viewpoints from the participants were used not only to aid my further understanding of the perception of the project, formalise defences as a type of critique but also helped me to both reveal its "uniqueness" and [reposition the practice](#) 🔲. ↴

The Narrative source for
Deviant - The Possession of Christian Shaw

In the year 1696, the 11yr old daughter of John Shaw, the Laird of Balgarran, fell victim to one of the most well remembered cases of "demonic possession" in Scottish History. It resulted in a large number of locals being implicated as her tormentors, concluding with three men and three women being put to death on Paisley's Gallow Green on the 10th of June 1697.

The girl's name was Christian. At the time of the proceedings she would have been regarded as a living illustration of the mighty power of God. She, an 11yr child, was able to sustain herself against and repel the devil from her body.

Her concerned family, with the advice of the Church, took Christian to a famous medical authority, Dr. Brisbane, in Glasgow. Whilst in his surgery, she spat out a coal cinder, which was said to be as big as a chestnut, and almost too hot to handle. Dr Brisbane announced that her affliction was preternatural. What followed were a series of investigations into the community, witch trials and the subsequent execution of the six guilty people who were said to have cursed and thus invoked Christian's demonic possession. As grisly as the resolution of this case was, it seemed to bring to an end the hysteria in Renfrewshire concerning witches and witchcraft.

Through the passing years, and as society became more sceptical and atheist about the likes of witches and demons, the character of Christian has come under close scrutiny, in

particular the possible motivations that drove her actions and caused her "condition". In the early stages of her possession she was said to have suffered bizarre and gruesome seizures.

Below is a list of examples:

- Vomiting items such as straw, pins, eggshells, orange pills, hair, excrement, and bones.
- Presenting violent pinch marks all over her body and wounds caused by some unknown "invisible" person(s).
- Falling into a trance whereby she could at times seem deaf, dumb, blind or dead.
- Citing sophisticated theological points from the scriptures, concepts beyond her artifice.
- Successfully predicting the future.
- Her body contorting and bending almost double upon herself.
- Eyes sinking back into her head until they looked to disappear.
- Flying unaided across her classroom.
- Picking up her glove from the ground without the use of her hands.

The years passed but the case would not be forgotten.

The first new reading of the events proposed that the 11-year-old Christian was an impostor [27], a wicked trickster who faked her ailments and enacted hellish pranks on gullible audiences. She (perhaps aided by her father) managed to manipulate both the Church and the Law, causing the deaths of the local community members out of spite.

Another contemporaneous reading is that Christian was in fact suffering from a then undiagnosed mental illness resulting in her possible hysteria, her fits and the "strange" physical feats.

> "While the story is bizarre, modern psychiatry could certainly explain Christian Shaw's condition… she was suffering from dissociative disorder/conversion disorder, trance and possession disorder; pica of infancy and childhood; localisation-related (focal) (partial) idiopathic epilepsy…and acute and transient psychotic disorder." [McDonald & Thom & Thom 1996]

But most recently, using a feminist angle, scholars have investigated the first hand documentation of the case [McLachlan & Swales 2002.]. These quasi-legal/narrative documents detailed both the dramatic acts of Shaw's possession and the trial itself. They uncovered a decisive fact, that these original documents were written by an anonymous author. To cast further aspersions on the truth of these historical artefacts -- the documents contained many striking resemblances, in tone, and language, to the more famous Salem witchcraft outbreak in New England in 1692 (four years earlier [Rosenthal 1993.]). Is it possible that the anonymous author had access to and was inspired by the accounts of events in Salem?

These recent findings lead to many new questions: Was the narrative constructed to verify the existence of the Devil and thus of God? What could have been the motivation to leave the texts anonymous? Did anyone gain from this?

Whatever the modus operandi of the author, the narrative has created a legacy (albeit unknown outside Paisley and select Historians) whereby the prevailing belief still remains that Christian was a bad, or even evil, manipulative child, an embarrassment to Paisley history. The fact that as a woman Christian became one of the earliest recorded Scottish female entrepreneurs (she was responsible for establishing the Paisley fine thread industry), is little remembered. What actually happened to the young Christian Shaw and why six community members were put to death, is unfortunately anyone's guess. The anonymity of the author has turned the narrative into a fictional space, into which prevailing social imaginings can exist; the idea of a young educated evil girl is certainly a seductive archetype...

My personal response on hearing this tale was one of curiosity. Something rang untrue about this 11yr old, daughter of a Laird, who mischievously conned all these erudite adults. Then the visual aspects of the story -- the eyes retracting into her head, her body bending double… seemed horrifically ridiculous and impossible, but my overall intuition led me to feel that our memory of Christian had been unjustly distorted. *Deviant: The Possession of Christian Shaw* is my reconstruction to who I think Christian might have been, a re-imagining of her world.

Further Reading on the wider context, available in electronic format:
http://www.arts.ed.ac.uk/witches/reading.html

What follows are links to the traces of Christian Shaw's legacy as can be found today: Available in electronic format:

http://www.magictorch.net/witchcraft.htm (expanded context and detailed descriptions of the events)
http://www.firstfoot.com/Great%20Scot/christianshaw.htm (focusing on her professional live)
http://www.oakleafcircle.org/Renfrew.htm (lengthy description)
http://fp.ayrshireroots.plus.com/Genealogy/Historical/Bargarrans%20Daughter.htm (local run website)
http://www.geocities.com/mjjodoin/paisley.htm (perspective from a possible relative)

Confusion

The below text is a further extended commentary on the generalised outcomes and issues as revealed by an analysis of the external participants responses to the *Deviant* project.

Confusion naturally inspires a need for clarity, for an analysis of why one is confused, to understand what lies beneath. As each of the participants in this confused group attempted to clarify their understanding of the project, an interesting situation was revealed in that they were seen to use quite different resolution strategies.

1. "I simply could make no sense of the work. That was frustrating in two ways: I could not fathom what was the work all about (what was the story, or was there a story at all), and I could not make sense how did it all function." Koskimaa "googled" (used the common search engine google.com) using the keywords "Christian Shaw" from the project title. From the search engine results, he managed to attain some extra information on the subject resulting in a better narrative clarity. "What I got then, was a perspective on the case of Christian Shaw, which was somehow filtered through a child's mind, and (visually) set in contemporary era."

2. Wardrip-Fruin chose to observe the onscreen reactions to his interactions in an orderly way.
    "I moused over every element on the screen without finding an active one".
    He goes on to question whether the interactive objects (such as the flora and the fauna) have any structural functionality e.g. does his interaction with them change anything within the project or whether he was "…altering the world model, or just creating an aesthetic moment?" This mechanical exploration did not make the project any clearer for Wardrip-Fruin. He remained confused for the duration of his readings.

3. Montfort seemed to focus on anachronism and his initial gender confusion based around the lead character. Montfort 's confusion seemed to be particularly focused on revealing a narrative understanding. He believes the lack of a clear participant position will result in a lack of participant motivation.
    "If my actions are supposed to have repercussions and be "right" or "wrong" (e.g., "don't touch the flowers and make them change" or "explore and manipulate everything") I don't know about it. This isn't a problem, but it makes me less likely to try to get to the bottom of the mysteries of this piece, and less likely to think that there is a bottom."

4. Walker's confusion (in the same manner but more so than Montfort's) was caused by the gender misnomer of the name Christian. This created a tainted reading of the narrative up to the

point of accessing the epilogue text.

"I was confused though, when the main character of the story was a little girl - knowing only men named Christian I assumed that the Christian who was possessed was a man. So I kept wondering which of the male characters was Christian Shaw. The priest? The fatherly man who takes the little girl to the doctor's office? I wondered whether the little girl was somehow causing a Possession of someone else, and as that became less and less likely, I became more confused."

5. Simanowski 🔗 was doubly confused with the lack of conventional links, notably in comparison to my earlier *RedRidingHood* 🔗 project (the window links in question are both functional and decorative in my previous work and within *Deviant* they are fully decorative) and by the "vague" visuals in relation to a narrative meaning. Unlike others in this group Simanowski failed to make any rewarding (for him) conceptual sense of the presented material. He could not understand the material in a meaningful way. However I would like to note that he did only traverse less than half of the linked content.

"…on some windows of the houses makes those turning red and invites to click but there is no link (!?). This is surprising and suggests coming back…The click on one of these copies evokes a surface again filled with the girl, which provides additional rather vague, unclear information about the girl."

To generalise, everyone in this group apart from Koskimaa 🔗 continued to be confused up to and past the epilogue. Montfort 🔗 ran out of time within his exploration (he had other professional commitments) and Wardrip-Fruin 🔗 required some help to finish his. When he had a complete or "full" reading he believed that the project needed to articulate its stance on the narrative in a clearer manner. Simanowski 🔗 had the most extreme reaction to the project whereby he thought that it failed to convey any conceptual meaning. Koskimaa 🔗 however managed to formulate and vocalise some resolution: "So, maybe Deviant is a toy, with deadly serious meaning attached to it. The fun comes out of never-ending new details, the repetition with some surprising variations, but suddenly the play gives way to sinister consequences." ↩

The Others

The below text is a further extended commentary on the generalised outcomes and issues as revealed by an analysis of the external participants responses to the *Deviant* project.

Unlike the previous group Koskimaa, Wardrip-Fruin, Montfort, Walker and Simanowski the remaining participants Fifield, Amerika, Rau, Frasca, Strickland and Lawson seemed less resistant or less troubled by the difficult nature of this visual project.

Deviant refuses to yield to traditional meaningful exchanges but instead offers immersion through its unique atmosphere, narrative events and digressive spaces. A major feature of this group is that they seem to be able to free associate and vocalise their personally sourced questions. They also begin to acknowledge themselves within their interactions; this is highlighted by their comments of discomfort at feeling compromised as well as attraction toward the tactility of many exchanges.

Also interestingly, two of the participants in this group (Amerika and Frasca) go as far as not needing to reach any formal conclusion about the project. They state that they do not need to reach the end point, thus are happy to remain in the dark as to the narrative source. This apparently is because they enjoyed the project at their own interpretative level.

In contrast, Fifield, Strickland and Lawson find no clash with their experiences within the project in terms of understanding how the epilogue "fits in" with their actions. Indeed, Fifield goes on to forms many interesting departure questions.

Rau succeeds in unravelling herself from confusion by grasping my authorial intention. She understands the work "a face or an aspect and an atmosphere" and not a conventional moralising re-interpretation. And furthermore, she manages to link the project's linearity, repetition and non-yielding nature to the source text as appropriately being 'un-interpretable'.

Within this group (and including Koskimaa from the other grouping), it is clear that the participants experienced an emotional immersion and created some unique and unexpected interpretations.

Conventional participant position

The below text is a further extended commentary on the generalised outcomes and issues as revealed by an analysis of the external participants responses to the *Deviant* project.

Within *Deviant*, the participant is challenged by two main unconventional requests.
The **first** and more important is that they are asked to become a new type of onscreen explorer. They need to acutely observe and memorize the main tableau, for the 'differences' within this composition function both as links and suggestive narrative. This image as tableau is demanding as it is large (almost fullscreen) and unusual because visually it plays with rules of reality. This difficult appearance is compounded further by the possibility to interact.

Interactions within responsive visual media are most commonly associated with videogames, and as such tend to share some of the same conventions. These consist of clear game-play logic, rules, and quantifiable outcomes. Example of seeking a type of game logic:

> "One thing that did puzzle me badly, were the puzzle like animations encountered in several places. There seems to be some logic behind the procedure according to which these patterns reshaped, but it was just impossible to find out, what that logic might actually be. On certain places (like the 'snow flakes' on the wall in doctor's office') the reshaping turned out to be just a loop, where the pattern returned to the initial one after a while. And what are the empty screens, with just a link 'x' on them. Is there something supposed to appear on them at some point?" (Koskimaa 🔗)

This sense of making a physical difference ties into the larger convention of the empowered digital interactor. Because *Deviant* doesn't use a clear instructional interface or prompting convention, but rather uses an integrated interface (the links are characters within the landscape), the participants are left to their own devices, left to decide for themselves where to explore. This will feel like a type of abandonment. This combination of looking, exploring for yourself, taking risks as you try to make choices requires a skill of simultaneity, deciding how to manage and prioritise your cognitive load. Participants may decide that narrative is of most importance and disregard the non-narrative experiences. For others it might be the way you touch the world objects and how that creates movement thus giving up any attention to the story qualities, or others may

attempt to make some sense of everything and multitask attempting to analyse and be aware of the project in its totality.

The **second** challenge to convention comes in a sense after the first role has been experienced and after any re-readings of the project. This will highlight or affirm that your role is non-consequential, that you cannot alter the outcome of the project.

> "Possession does much the same thing in this sequence, never allowing the user any options other than to burn these people, though it is entirely unclear to the user - or at least to this user - why they must be burnt." ([Walker] 🔗)

This position radically refutes the acceptance that to be an interactor is to be empowered, however it ties in to the source narrative, which is un-interpretable. The second role may seem to invalidate the above position, but I propose can work in the same manner -- by asking the participant to feel this difference and vocalise for themselves what they would want to change within the project, what interventions they would emotionally like to make. Difference is used as a creative highlighting tool.

Another and perhaps even more interesting situation can occur from this lack of authored judgement, in that the participant may become more aware of her position as a participant and her actions i.e. have feelings of complicity as if she is in some way tormenting Christian. ↳

Design Choices

The below text is a further extended commentary on the generalised outcomes and issues as revealed by an analysis of the external participants responses to the *Deviant* project.

> "Some forms of experimental cinema have found a way to trigger otherworldliness - I am thinking of Until the End of the World, Blue Velvet, and the recent Lost In Translation - but the online art world has had less success creating experientially-disturbing environments that one can relate to "on another level". Leishman has taken this on as a central part of her artistic investigations and one can only

hope that she will continue developing new work in this area."
([Amerika] 🔗)

"Possession is of course not a conventional narrative where events are described or shown in a straightforward manner. Instead the story is told largely by suggestion, and through the unsettling atmosphere of the graphics. The cityscape is the backdrop for narrative fragments of many kinds. A skyscraper opens up to show strange creatures inside." ([Walker] 🔗)

The design choices within *Deviant* were set up to create a sense of interest and a feeling of difference: to be unlike what the participants expected or are familiar with. There are several mechanisms for achieving this: the level of detailing and subtlety; the mixing of hybrid representations both familiar and unreal, loosely alluding to Scotland's landscapes, both contemporary and ancient, rural and city dwelling. As previously detailed in [2.1.3 - 2.1.4] 🔽 , I also created a sense of stillness in terms of not using standard filmic animation techniques and in the way the sound is used within the project (scantly). Difference was also achieved by the way in which the main composition offers a fixed perspective onto which additional layers build up new compositions. As well as creating this sense of unease, the depiction of the protagonist was devised to elicit identification and sympathy. She is rendered simply, dressed in contemporary attire, her features relay subtle changes of emotion, and she gesticulates, in the main, with her body. This simplicity is made visceral as she enacts the various grotesque, funny and surreal acts of possession.

What follows below are examples of the feedback comments as pertinent to *Deviant*'s design choices and visual language:

Cultural associations/references

"The drawing is beautiful. It has many antecedents for me including American comic book artist Jim Woodring and French artist Mobius (Jean Giraud) in its fantastic elements. It is fragile (childlike) and frightening at the same time. The figures are preadolescent, with eyes like Margaret Keene paintings or many Japanese anime." ([Fifield] 🔗)

"This alien culture is loaded with constructed visual metaphors that portray ideas-in-conflict with each other…The fact that the work ends by explicitly referring to a story that took place in the late 1690s does not diminish the eerie post-contemporary feel that this digital source material resonates with our lives today. Think of Goth culture, of the Columbine high school massacre, or even of the strange sexual scandals surrounding the Catholic Church." ([Amerika] 🔗)

"The mix of pastoral and childish atmosphere in the main illustration got a more twisted feel to it. Still, it was far from the anxiety of witch-burning Salem familiar from various movies. The places where

it got darker were the scenes including industrial-like constructions, with flames burning on them when clicked on right spots - even though I can't work this into a coherent interpretation, I can't help but see a reference to the Holocaust in the flaming ovens." (Koskimaa 🔲)

Specific symbolism in the imagery

"I took a lot of the tree/apple stuff as having an Eden reference, with a naked woman at the "heart" of the tree of knowledge sort of aspect. I liked the woman-and-madness aspect." (Strickland 🔲)

"Four houses which activate sound on mouseover. Moving in a circle between the houses add up the soundfiles to a melody (as if the houses life together in harmony?)." (Simanowski 🔲)

"Then the cage falls down as if into the pond below. Since one realizes for a second the death's-head on the cage/box one assumes that the fours men haven been sentenced to death. The emerging salving-cheery piano music seems to underline this notion as a relief." (Simanowski 🔲)

"The next link evokes a burning house, probably the hell, with five window in which the four men and the girl can be seen, on mouse over displayed on an extra board as we know it from sport, cultural, and political events (the trial as a media event?)." (Simanowski 🔲)

Appreciation of how the imagery is composed

"The user always keeps the bird's eye view of the city, the surfaces pop up from this city to the foreground like hidden stories and display few figures and objects which appear more like revealed key'words' for a story nobody dares to tell." (Strickland 🔲)

"I did not at all object to the anachronisms, satellite dish etc. I liked the buildings and trees that grew, especially when their "insides" were revealed." (Strickland 🔲)

"I think the design, layout, characters, and clever windows within the frames (as opposed to pop-ups) are great. The angled aerial view is wonderful in giving the user a feeling of being able to see it all (but not really!)" (Lawson 🔲)

Revealing of the principal symbolism

"I liked the continuity of look and main character from the Red Riding piece. My initial impressions had to do with pilgrimage, surveillance, a disturbing atmosphere, a possibly abused child who may have been anorexic and was self-hurting. I tended to identify the authority figures with one another, father, priest, doctor. I liked the use of blemish and bug and bandage and so on." (Strickland 🔲)

"The principle of this piece is uncovering and hiding as well as repetition."
(Simanowski ↗)

"One dichotomy seems to be recurrent: blooming and falling down. You can make trees grow taller, or apples to fall down from the tree; you can make flower bloom, or flower petals fall down. (In somewhat similar sense, fire appears in two quite opposite roles, as the source of warmth, and as something (potentially) threatening.)" (Koskimaa ↗)

"As the title already suggests, the work is about Difference, about the Other. Christian sees these strange creatures. There is a striking discrepancy between the tragic background story, and the funny, even sympathetic 'monsters' met around the work, accompanied by the childish, nightmare visuals…" (Koskimaa ↗) ↱

Disturbance

The below text is a further extended commentary on the generalised outcomes and issues as revealed by an analysis of the external participants responses to the *Deviant* project.

"The images and the feeling of the interactivity work together well to create a sense of disturbance…" (Montfort ↗).

"Don't look for the aesthetically pleasing here; rather, witness the anti-aesthetic leaking (of emotion, confusion, visual dyslexia, uncertainty)" (Amerika ↗).

As previously laid out ↘, my practice sets out to offer a different type of experience than is commonly found within commercial easy to use interactive exchanges. This ideal can be seen to follow Stuart Moulthrop's Interstitial paradigm [48].

I am interested in creating artworks as opportunities by which the participant can explore and experience digital emotion. The main method by which I do this is by creating a sense of disturbance. This refers to an emotional unbalance. I believe that a participant will have an immediate automatic reaction to such a context, involving emotions such as excitement, fear, curiosity, and, most importantly, a need to seek out the root cause of the disturbance -- to either put a stop to the unease or simply

to understand why it exists. This belies the larger belief that a disturbed environment is negative and the order of things should be balanced.

The emotion of disturbance has long interested me.
Specifically within *Deviant,* this sense of disturbance is from the inherent difficulty of understanding the project, how it functions, what its narrative is and what your position as participant will be. It is also supported by the aesthetic choices such as the hand drawn line art nature of the representational style. The rendering created a sense of innocence for some participants as they linked this style with a childlike worldview (Koskimaa ⬈ , Fifield ⬈) and this combined with the dark narrative background (as offered by the sound effects on the first reading) and then by the narrative elucidation on any second or more readings, creates a strong sense of dissonance.

The desire to uncover the reasons why *Deviant* has an uncomfortable or sad atmosphere is a useful and compelling tool to drive the participants' commitment to reach the end of the project (traditionally when all is revealed). This as mentioned by some of the participants (Simanowski ⬈ and Walker ⬈) is akin to being exposed and an active participant in a mystery novel [4]. The need to know helped embolden some of the participants' resolve when faced with the inevitable frustration and confusion, driving them on to reach the end. ↱

Game like
The below text is a further extended commentary on the generalised outcomes and issues as revealed by an analysis of the external participants responses to the *Deviant* project.

Nearly all of the participants felt that *Deviant* was in some way game like, the 'like' suggesting that it was not completely akin to a game (e.g. Rau ⬈ cites a comparison to the adventure game genre but does not label *Deviant* an adventure game).

Most acknowledged that another description might be needed to fit the work.
Frasca ⬈ uses the phrase "lab for discovery", Amerika ⬈ "moving visual art", Koskimaa ⬈ speculates that the project could be a "toy" and Simanowski ⬈ uses the analogies of a "slideshow / detective story". Lawson ⬈ was the most explicit in acknowledging *Deviant* as a new

game format, seeing the gaming rationale as being where the "subtleties motivate one to continue without a clear goal, but knowing that there must be one".

This confusion over whether *Deviant* should be understood as a game or a narrative comes from the many levels in which it acts as a hybrid and refutes conventionality. Two main opposing characteristics are that firstly it works on a hiding / revealing and linked premise (a game quality), though suggests a narrative telling by the structuring of the islands of linear animation and by the thematically descriptive title. As well as these two points, the project can also be seen to use repetition as a possible metaphor e.g. the circular looping within the pop-in windows depicting Christian's acts of possession. This looping sensibility can be said to be a feature of Internet art [Manovich, 13]. The two main aspects share a similar drive towards an end, narratively -- a conclusion, gaming-ly -- achieving the goal. Interestingly, a discussion already exists as to whether quantifiable outcomes, achieving the goal or endings are a prerequisite of being understood as a game. Games designer Eric Zimmerman recently stated, "A game is a system in which players engage in an artificial conflict, defined by rules, that results in a quantifiable outcome." [49] In contrast, Greg Costikyan (also a games designer who believes in open-ended outcomes) defines a game as "a form of art in which participants, termed players, make decisions in order to manage resources through game tokens in the pursuit of a goal." [Costikyan 1984.] Sitting in the middle is Jesper Juul with his "Classic Game Model" (a model for games that were dominant from 3000 BC to approximately 1970 AD and during that historical period proposes Juul, nearly all "games" had outcomes), which states: "A game is a rule-based formal system with a variable and quantifiable outcome, where different outcomes are assigned different values, the player exerts effort in order to influence the outcome, the player feels attached to the outcome, and the consequences of the activity are optional and negotiable." Juul by using a demarcated timelines suggests that contemporary rule-based systems can be something "other" than the classic model [Juul 2003.].

Within *Deviant*, the endpoint serves to reposition the participant back towards confusion, as seen from a gaming viewpoint. The conclusion to the project does not offer participants an understanding of their role, of what the project's ultimate goals are. It does clarify its narrative source, explaining what has been visually experienced. It does something "other" than offer a narrative or gaming ending.

This newness or refusal to be categorised saw some of the participants attempt a general description of the project: *exploratory narrative* (Fifield 🔼), *visual narrative* (Walker 🔼), *interactive experiment in moving visual art* (Amerika 🔼), and *interface/game/interactive environment* (Lawson 🔼). ↱

Handling of a non-traditional conclusion

The below text is a further extended commentary on the generalised outcomes and issues as revealed by an analysis of the external participants responses to the *Deviant* project.

In relation to this project I prefer the term epilogue to conclusion, as epilogue suggests an after word, a comment after the main body of experience rather than a conclusion as a significant and final narrative event.

Climatic Event
Maximum confusion

Unravelling of Plot

Action/Tension Growth

resolution of confusion

START   **THE END**
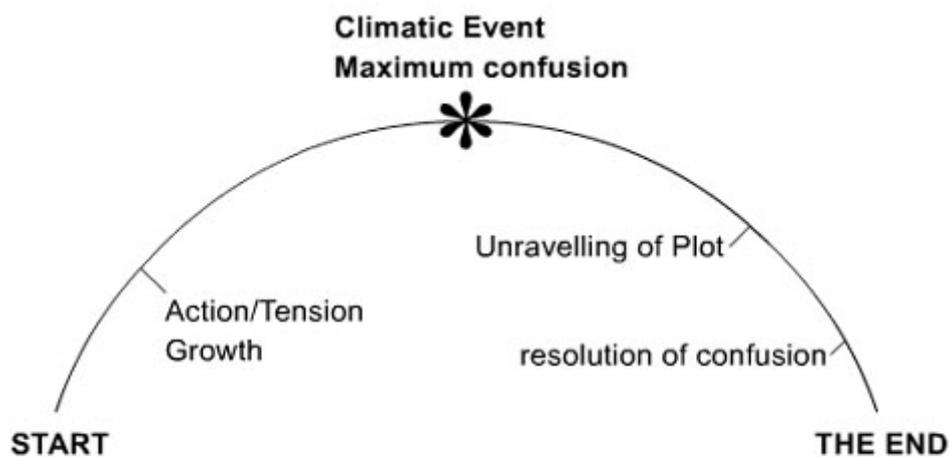
Aristotelian Dramatic Arc

The desire for conclusions in narrative media is well documented [Douglas 2000]. Traditional media utilises the dramatic arc whereby drama is built on conflict of some kind -- an opposition of forces or desires that must be resolved by the end of the story (see diagram above). Modernist forms offer new senses of cultural self awareness (typically using emotions of disorientation, alienation, disunity) and fragmented structures. Postmodernism similarly fragments and utilises multiple voices but in a more positive manner. The latter movement in particular significantly departs from clear or neat end points.

What has been revealed from the comments within some of the feedback is their desire for a conclusion that is wholly clarifying (Simanowski ⬀ , Wardrip-Fruin ⬀). This seems linked to the general feeling that they were

is a game-like puzzle system, whereby some of the participants could only handle their sense of confusion because they expected a release and clarification in the form of the conclusion.

But I do not untie their tension, nor offer any answers to their questions, nor explain the conceptual remit of the project. No criteria is given by which they can judge their interpretation as being "right or wrong". In this sense the conclusion does not function as a reward. They have not beaten the system.

I only offer an epilogue that identifies the narrative source, offers the text-based information about the protagonist. The text reduces some of the bizarreness of the project imagery and turns it into less idiosyncratic representations. I also state the historical premise and the fact that the project is founded on an anonymous un-interpretable text. I then go on to visually depict the various hypotheses of the truth of the events, again without commenting on which version I favour.

This comment-free revelation of source will come as a shock for those participants requiring an elucidation. My refusal to give value to the ending is an attempt to incite the participant into another re-reading. The re-reading could be seen in terms of continuing to a new level, whereby the epilogue expanded understanding will allow for different interpretations.

What follows below are examples of the feedback comments describing some of the participants' reactions to *Deviant's* conclusion.

Wardrip-Fruin 🔗 after:

> "… reading the text about Christian I at first felt "Ah-ha, it comes together!" And then I thought, "Uh-oh, what is it I'm missing here?"… the transition to the epilogue (the section with the text and the four versions of Christian's image) didn't seem distinct enough to me. Even with the fading out and music, I didn't realize that I wasn't looking for more of the same ".

Amerika 🔗:

> "I'm not even sure how necessary it is for me to know about the actual mythology behind Christian Shaw. Sure, her story may have been made up to publicize a particular ideology that promotes patriarchy, and for those who want to dig in deeper, all the more to them. But I prefer to interstand the process of revealing lifestories as I play them, which this piece does regardless of its original source".

Fifield 🔗:

> "What follows is a simple panel. Four petals hold four possible Christians. The text explains the historical context and an interesting set of hypotheses... The story is of great. We feel know the heroine and something about her hallucinations."

Simanowski 🔗:

"The explanation is clarifying and disappointing. Disappointing because Leishman's piece fails to convey a clear picture of her own approach to the Christian-Story. Neither does she convincingly or just noticeable question the traditional account nor does she make a point of Christian's life afterwards as a female entrepreneur except four portraits of Christian at the very end showing her dressed in modern style like an intellectual or a business person...That there is no way out of the story, no official end (one can only close the window) is interesting on the other hand as a hint on the unfinished business to read the Christian-story."

Frasca 🔗:

"I am quite positive that I did not reach the end of the story (even though, personally, I do not think that it was essential, since I enjoyed the piece as such). The first two times I did not see the introductory photo album, so my reading was quite different when I finally found it (again, this is not necessarily a problem)."

Lawson 🔗:

"Fascinating story, and in reading the text, I had a series of "ah ha!"s tying the text back to moments I had experienced in the interface. My inclination was to go back and start over (which is not always present in environments like this one), and was happy to discover there were places I had not visited before..." ↱

Chapter 3

3.0 Summary of what was revealed

The intentions of this thesis were to investigate the interplay between narrative, image and interaction, and ultimately develop new practice, which primarily within the experiencing of the artwork articulates a new contribution to the field of study. The dual literature and contemporary practice reviews highlighted this as desired output. The predominant research in the field was not focused on the production of new projects but used various forms of literary and critical theory to search out new interpretations and structural understanding of the artefacts in question. Similarly the reviews revealed a strong set of visual hegemonies in which my own practice sits in-between, and as such my work can be said to function with a uniqueness. The interstitial paradigm was then used to support the practice, as parallels were drawn not only in the aesthetics of the work but also the politic of the communication - that being, problematised, tricky and demanding.

The research questions were developed to reveal creative possibilities and explicate the often embedded or hidden insights into how responsive practice is developed from the practitioner's perspective. Research question A was focused on the structural possibilities available when the artist withdraws from using conventional interaction mechanisms learnt within the context of traditional and new media narrative forms. The outcomes of the question i.e. proposing that the visuality is equal to the formal structuring of the system, fed into the more practice integrated research question B. Question B reflects the ultimate goal of the thesis, that being how to create an emotionally rich visual immersive experience that still counters the standardized HCI intuitions of the participants and all the while generating multiple readings around the narrative content?

The combined and concluded outcomes of both research questions are situated in the new artwork *Deviant: The Possession of Christian Shaw*. What follows below is a summary of the findings from the project, which are supported by the external participants comments, analysis of what the thesis has achieved and possible vistas for the future.

Aesthetics Techniques

1. Difference and the digital surprise

I've shown a new model of responsive communication exchange, one that uses a combination of disturbance, subtlety and difference. This creates a particular atmosphere that is successful in immersing the participant in the artwork. The "difference" or unconventionality was by far the most controversial aspect as revealed by the expert participants 🔽. My practice over these last few years has been testing the limits and scope of difference -- in that difference in the correct dose and or context can be a positive factor, as it creates attention, feelings of surprise and pleasure [1]. However, in a dose that is overwhelming, it can create sustained confusion and/or irritation. This testing the limits of difference progressively culminated in the *Deviant* 🔼 project, which as detailed previously, is unconventional in multiple aspects 🔽.

2. Intimacy

"I personally felt, she being a child, that it was something that threatened her--and not that she might be a threat to others, though those are co-ordinate. I think the piece is extraordinary at building up the sense of secret bad stuff happening that 'the authorities' have no authority over. By contrast *Red Riding Hood* 🔼, though flipping that story, seems jocular, eye-winking. Of course, the fairy stories to begin with have done the job of 'normalizing' frightening content." [Strickland email correspondence 22.06.04]

One of *Deviant's* 🔼 predominant strengths is the intimate relationship formed between the participant and the artwork. This is located in the visual vocabulary 🔽, the types of interactions required 🔽 and the viewing platform. As discussed elsewhere 🔽, the last one is created by an unusual or oxymoronic sense of remoteness and connectivity, in that the participant has a sense of physical closeness to the online[2] artwork.

3. The Visual Vocabulary
3a. Layering

The presentation of the *Deviant* 🔼 project is primarily done pictorially using layers. These overlap on top of the main tableau composition. As mentioned previously 🔽, this stacking technique is in opposition to conventional filmic animation [3]. Instead, the world and its interrelationships are presented as something different, something "other". The spatial metaphors of inside and outside, secret and public spaces, as built upon from *The Bloody Chamber* 🔼 project, create a sense of exploring private spaces. This enables a more heightened emotional engagement [4].

3b. Pixel detail

A unanimously held opinion about the project was that, in visual terms, the project is successfully compelling 🔊. The design choices 🔊 such as the depiction of the protagonist and the large level of detail within the drawings were most valued. The latter was frequently mentioned, not only in rendering terms but also in the way in which the project moved. Several of the experts used the analogy that it was at "pixel" level detail. This resulted in a feeling of having to observe the project in a unique manner, looking at the unusual subtleties -- looking "very closely" at how it moved and how it visually changed. "Deviant is a work, which requires a close, very close look. There are minutest details to which you should pay attention to. Or, at least there are lots of small details you may pay attention to, but what is their significance is not really clear."
(Koskimaa 🔶)

I propose that within my practice, the non-photographic 🔊 rendering style helped to create an immersion into the artwork and in particular the protagonist, as Simanowski🔶 pointed out: "The visuals are very impressive. The figures are sketched with only a few lines, which nevertheless give a good impression of the character behind the face. The girl and partly the other characters in the play always move slightly. Thus the girl's eyelid closes and opens and sometimes the pupil moves on mouseover to adjust the gaze to the user who is at the end of the mouse. These effects are very impressive."

The simplicity in the drawing (sited in the contour and line) created the opportunity for a universal identification [5] with the character of Christian Shaw. This association can be mapped onto a generalised concept of pre-pubescent children - s/he could be someone we all know, s/he could even have been us. The duality of this comic sensibility and the at pixel level detailing created a sense of preciousness and authorial commitment to the project -- as revealed by a close inspection -- all the detailing was done, digitally stitched if you will -- by hand. This handcrafting adds a dichotic element to the visual vocabulary -- of being both digital and I propose somatic, i.e., corporeal.

4. Approach to narrative

Deviant manages to suture a total disjuncture between narrative immediacy and the fractures caused by no back buttons and multiple perspectives by utilising conflict resolution [6] and an enmeshed narrative skeleton 🔊.

By employing the former, I utilised the participant's predications that the artwork will reveal at its conclusion the key to the mystery. This drove the participants onwards with a sense of some safely - i.e. being

inside a mystery is a standard they recognise. This small feeling of safety (although misplaced) allowed some of them to mentally explore the environment.

By employing a narrative skeleton -- an essentially linear supportive base -- I can create a type of narrative coherency that still allows for multiplicity of sequence and ambiguity. I call the narrative skeleton enmeshed, as the structures and opportunities that surround this skeleton disturb or challenge the linear drive. Much of the participant's conflict came from this sense of confusion; as outside the narrative skeleton the narrative in the practice lost it's authority. Narrative flow became a narrative emulsion, a low-charged visual lyricism rather than a traditional narrative. This, combined with the sonorous elements, created an atmosphere of [dissonance](), which again misleadingly suggested that there is a hidden source to the disturbance. This motivated most of the participants to continue.

Further conflict also came to play as the participants became aware of the possibility of conditionally linked, i.e., limited or hidden areas within the artwork, especially when they moved forward and couldn't move back, in the [narrative skeleton](). This feeling of loss promoted an urge to retrace their steps and traverse the narrative again.

5. Memory -- Attention and Re-reading

   Within *Deviant* (more so than *[The Bloody Chamber]()*), the act of re-reading was conceptually important to the source narrative. Any re-readings would reveal perhaps different interpretations for the participant, but the artwork and events would be the same, reinforcing the notion that the events are "trapped in history". This repetition and continued exposure to all of the paths and imagery helped to accumulate emotionally towards a state of being fully aware, which was the nearest experience in *Deviant* to a traditional sense of closure.

   To reiterate, the participant's interactions within the narrative sections of the project did not offer new outcomes. They only revealed one telling. I asked the participant to imagine new narrative meaning and possibilities for themselves (as demonstrated by the expert participant group) and to reconsider their standing within the project. *Deviant* used ambiguous and false positions of complicity. This was a repositioning of the participant role where s/he is antithetically both an empowered explorer but de-powered in terms of altering the physical outcomes of the project.

Deviant was designed to push both the role of the participant and the interpretative level of the visual space. Thus, as mentioned [elsewhere](#) 🖼, the physical fullscreen nature of the project was devised. This large fullscreen format demands a high level of memory and attention [7]. Within the act of re-reading it was shown that the participants' sense of exploring and getting access to new parts of the project elicited a feeling of deeper understanding. Interestingly this "seeing more" is a misapprehension on the part of the participant, as in each tableau there existed an open access (no guard or conditional links) to all the areas. The only loss came when they move chronologically up the narrative skeleton. This leads me to believe that the visual communication in its fullscreen nature, subtlety and detail creates an inherent multiplicity and need for re-reading -- by virtue of its overloading of the participants' memory and attention. This is another argument [8] for utilising pictorial languages in responsive environments -- as re-reading is a generally held as a signifier of rich experiences and interestingly is an attributed feature of canonical literature.

3.1 Conclusion: the argument

To summarize, *Deviant* is an interactive system created to help instigate the participants' enquiry into the historical representation of Christian Shaw. Within the fabric of the project, I challenged:

- The standardised interaction of HCI languages.
- Some of the specific conventions of cybertext / hypertext fiction readings (back buttons / easy re-readings).
- The expected goal orientated "making a difference" tasks.
- And offered an uncommon participant role in a new narrative experience.
  I propose that this system utilises a conflict resolution tension combined with what I term digressive narrativity.

Together, *[Deviant](#)* 🔗 and *[The Bloody Chamber](#)* 🔗 showed how to create new types of pictorial participatory experiences that encouraged intimacy framed by the sense of disturbance. I retold ergodically narrative stories that emotionally involved the participant. This visual as opposed to verbal articulation creates another type of communication -- that of the [fragital](#) 🖼. As described [elsewhere](#) 🖼, this is an uncommon pairing of the digital experience, involving for example the individualized remote onscreen

touch, and the sense of a material and sensitive tangibility which is located in the drawing, movement, composition and the responsive actions of the visual practice.

This fragital together with disturbance acted as new immersive aesthetic. This I propose is the new knowledge revealed by the research as presented in this thesis.

3.2 Vistas for the future

What are the possible future applications for interstitial responsive multiple state systems?

A question of context

The expert reviews of my practice indicated a problematic context [9] for responsive environments that are not seen to be goal orientated [10] games (note an interstitial ideology needs some sense of context in which to sit between). This I propose suggests two things. First, the lack of a compiled culture of responsive visual literature or prominently visual hypertexts which sit outside of the cybertext or digital games domains [11] is a possible cause (Contemporary Artwork Review 🖼). As it stands, Internet based pictorial responsive environments span the full gamut of disciplines and due to this diffuseness are semi-visible to participants and theorists alike. I propose that work could be done to loosely collate these practices [12]; doing this would help unify and reveal the different models and treatments of narrative being used contemporaneously.

Second, the ascendancy and vibrancy of games studies is perhaps pervading the perception of all responsive practice. I propose that this, if true, would be a worrying instance of convergence. Convergence flies in the face of the inherent hybridity and emergent nature of Internet artworks. I suggest either a broadening of the meaning of "game" [13], or a more coherent culture of non-gaming responsive practices.

Deconstruction is a hard act to follow

As stated elsewhere 🖼, my practice argues for an anti-mass or put another way -- "cool" [McLuhan 1994] communication [14]. I argue for artworks that communicate emotionally individuals. Individualistic practices, I propose, can speak about specific locales and personal histories. My practice as submitted in this thesis reveals and unpicks standard reading and participant conventions; it is a counter and multi-vocal presence in

amongst the voluminous mass of transparent communication forms [14]. *Deviant* is an example of a visual deconstructive text.

It was not my aim to use the expert participants 🔽 as a quantitative survey or data pool by which to "grade" the practice, but their outcomes did reveal, rather surprisingly, that even expert[15] participants still have difficulties with artworks that function on a conceptual level of deconstruction (e.g. many of them desired a conclusion). This perhaps suggests that the specifics of participant-centric phenomena still require further investigation. As a research practise it is less common to document the participant's responses [16] than to critique the artworks.

This thesis contributes insights primarily into how such practices are developed from the artist's perspective and then secondly offers insights into how the artwork was received. I believe that knowing more about the participant's experiences can further inform the development of these types of practices by building on its strengths.

Developing further:

1. Spatial connections

    I propose that further development could be done in investigating the pictorial layering technique. Such depth hierarchies promote different kinds of relationships between the spatially laid out narrative objects. This type of communication potentially has links with the developing strains of comic theory i.e. with parallels in modular / global coherence and multidirectional reading patterns [3].

2. The fragital: digital but somatic

    The fragital aesthetic can be further developed. This aesthetic as located within *Deviant*🔳 is a hybrid of detailed line art, handcrafting and popular imagery with the post-modern approach to closure. As discussed previously 🔽 this created a sense of tangibility experienced in the drawing, movement, composition and the responsive actions of the visual practice.

3. Ethical complicity

    Deviant creates fraudulent but effective participant positions of complicity and feelings of responsibility over the protagonist Christian Shaw. This (as Frasca has been calling for [17]) brings fourth opportunities to develop socially, ethically and politically useful experiences as critical comments. I propose the complicit am-I-at-fault? role can be developed further. This could be an interesting and diametric move when compared to the "hero" roles offered by the majority of the mainstream game releases.

Recap

The project *Deviant* 🔗 has shown how to balance traditionally oxymoronic ideals -- creating an intrinsically [interstitial](#) 📷 experience with the emotionally immersive and someway narratively resolved experience for the participant. This was achieved by the development of the [fragital](#)📷 aesthetic.

Expansion

1. "All discourse of interactive artefacts, when first encountered, tends to the [entropic](#) 📷. While the viewer may bring expectations of the form, its content and sequence which they have derived from their previous experiences of similar pieces, from reviews and critiques from what they have been told by friends or colleagues, their own experience is of something new, novel, surprising." [Peacock 2000; p.24] ↱

2. I create my practice using a mouse (to draw, build, animate) observing it on the screen and present it to the wider audience over the Internet. I intentionally create ambiguities and mix anachronistic referents to allow indeterminacy to come to play in both the understanding of the imagery and in the structural access to the narrative. I cannot fully control what the participant will interpret the world and events *as*.

   The participant chooses to engage with my work through the Internet, observing the screen and using a mouse (or a tracking pad). Similar to my loosening of authorial control -- the participant will sense that there are significant amounts of self-led explorations and interpretations required within the project. This I propose reflects a more equal communication -- or sharing of ideas.

   -----------------------> Loosening (not full abandonment) of authorial control

   Participant more observably and self determinately explores/interprets <----- ↱

3. The spatiality of layering and the multiple framed "pop-in" [windows](#) 📷 as well as being non-filmic are also linked to certain practices associated with reading comics. They have parallels in how comic readers receive the imagery, which is at both modular (specific

panels) and global levels (the whole page). In comics, the mental act of decoding the graphic language often utilises multidirectional reading patterns. An important link, worth future investigation, can be seen between the comic's panel edge/border/ threshold and how framed windows, or in *Deviant* case, the different overlapping layers can be understood as individual but global compositions.
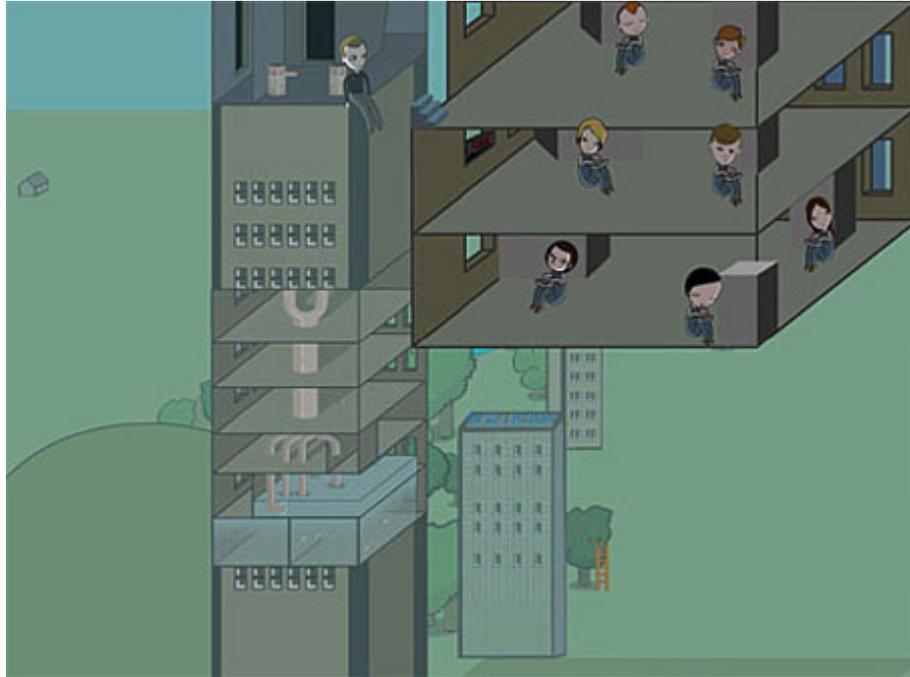
Screengrab of a layering combination from tableau 1. ↱

4. **Forbidden,** secret spaces exact a kind of excitement, as would any taboo situation. Secret places tempt the participant into them. Forests are the most common of the secret places (think fairytales). The forest is both the place of danger and abandonment but also of refuge and enchantment. The forest contains demarcated areas and non-paths. Forests, dense foliages and faunas refer to natural organic processes. ↱

5. **Universal Identification** [McCloud 1993; p.114]
In summary of McCloud, the more detail a picture provides, the more "realistic" we perceive it to be. However, the more detail a picture includes, the less universal an image is. The simpler an image, the more people it can be said to describe. Thus, for McCloud a cartoon achieves universality through abstraction of detail, letting the viewer focus on a few key elements. McCloud goes on to theorize that when interacting with another person, you see their exterior self in full detail. You also retain a "sketchy" awareness of your own self during that interaction -- what your eyes, mouth, and hands are doing. Thus a detailed, realistic photo represents the "other"; a simplified image (i.e. a cartoon) invites identification with the self.

Associated with the idea of universal identification is Marshal McLuhan's proposition that mediums can be divided into hot and cool categories [McLuhan 1994 p160]. A hot medium is high definition, low on interactivity, specialised, and usually limited to one sense. Examples of hot media he gives are radio, film, and books. Cool media -- such as television or comics, are on the other hand low in definition, interactive, generalized, and engage more senses.

A cool medium requires that the participant must fill in the blanks, or put another way, use considerable sense construction to complete the message. I propose that in responsive environments, this universal identification (although a cool trait in itself) may soothe the coolness or the shock of the artwork's inherent difficulty. ↴

6. "Among the architectures described … the only one that places interactivity in the service of narrative desire is the mystery-story structures (fig.10), because the reader's actions discover, rather than create, the object of this desire, and because the story to be investigated is itself unilinear, determinate, and external to the interactive machinery." [Ryan 2001 p259] ↴

7. Within *Deviant,* the use of visual perception and memory is key, the volume of pictorially important links to be found within the tableaux are highlighted either by being warm in hue or the fact that they are new objects. Similarly, the non-important objects are repeatedly shown in the same position after each significant narrative intersection passes. This it was hoped would in effect neutralise these objects as they become familiar and memorized. The fullscreen scale nature of the presented interface is used to create some visual resting spaces (locales that are empty or minimal) so as not to completely overload the participant's visual perception, all the while retaining the intensity of the detailing. ↴

8. "Of the three types of immersion [temporal, spatial, emotional], the spatial variety evidently has the most to gain from the built-in spatiality of pictures. It seems safe to predict that the interactive texts of the future will make much more extensive use of visual resources than the literary hypertexts of the present, and it would therefore be unfair to pass judgements of immersivity on purely verbal attempts to convey an experience of space". [Ryan 2001; p.236]

Ryan goes on to propose that practitioners:
"…give up on the idea of an autonomous "literary" genre and take greater advantage of the multimedia capability of the electronic environments. This approach would lead to a merger of hypertext with the burgeoning genre of CDROM interactive art, and could also take the form of a hybridization with computer games". [Ryan 2001; p.265] ↴

9. As I mention elsewhere ⬀ in the thesis, Internet practices are naturally /appropriately and notoriously unclassifiable [Paul 2003], but that is not to say critics or theorists cannot cite multiple contexts as a malleable type of classification. This would be a sufficient and a significant departure from traditional singular contexts. ↩

10. *Agon* [Caillois 1958]. Games based on competition; such as sports (soccer, tennis), board games (chess, Go) or TV quiz games (Jeopardy). ↩

11. The two domains (cybertext and games studies) are placed together as there exists a more than causal link between the two: Espen Aarseth. Aarseth is a central force in creating and spear heading the discipline of games studies -- he is Associate Professor / Principal Researcher of Copenhagen's Center for Computer Games Research (opened in 2003). However in his previous academic pursuits, he was acknowledged as the founder of cybertext studies [see Aarseth 1997], whereby his specialisations were located in text-based and ergodic literature.

    I propose the quality and visibility of Aarseth's work in games studies has brought a gaming mindset to the fore in the contemporary reading of responsive practice. This pervasive perspective is combined with the impact of a new generation of participants and theorists. This new generation has -- in ever increasing volumes -- had first hand experience of digital gaming and not perhaps Internet practices that are aligned to the fine arts. ↩

12. Such as Ubu.com ⬀ achieved for experimental poetry and Bornmag.com ⬀ achieved for the synthesis of illustrative image and literature. ↩

13. The game vs. play vs. play as-an-instrument.
    As the artist behind Deviant when I say I did not perceive or create the project as a game, it is because of my non expert definition of what a game is. My definition is much the same as Eric Zimmerman's:

    > "A game is a system in which players engage in an artificial conflict, defined by rules, that results in a quantifiable outcome"[a].

    Defining the required constituents of a game -- is like many other terms in this field of study --much debated. Game designer and researcher Greg Costikyan who believes in open-ended outcomes defines a game as:

"A form of art in which participants, termed players, make decisions in order to manage resources through game tokens in the pursuit of a goal" [b].

Whilst games studies researcher Jesper Juul posits:

"A game is a rule-based formal system with a variable and quantifiable outcome, where different outcomes are assigned different values, the player exerts effort in order to influence the outcome, the player feels attached to the outcome, and the consequences of the activity are optional and negotiable" [c].

Normative definitions of a game share an emphasis on both the rules and the outcomes of the process.

Playing within a rule-based system implies that interacting with the system can reveal the rules of behaviour. Within Deviant the rules are anti-rules or significantly gratuitous [d] [Laurel 1991] rules, which are set-up to confute conventional interaction tropes --Deviant's global rule is to defy expected rules.

The outcomes of the game -- as well as the rules -- are also important. Achieving (winning) or not achieving (losing) the pre-set goal (s) are the most common outcomes. More rare is the game that emphasises the procedural act of pursuing and not attaining a goal. Goals are conventionally mapped onto conclusions, as detailed [elsewhere](#) ,Deviant does not give a full elucidation as a conclusion or as a prize (to use a game analogy) for completing a reading. Instead it works to encourage re-readings and participant-centric reflections (there are no physical outcomes).

In this respect *Deviant* is in conflict with the two most commonly held aspects of what defines a game, "rules and goals". To take this idea further "Deviant is a game true or false?", I have analysed the project in respect to Juul's criteria for defining games [Juul 2003]. He established six qualities. What follows below are details of how Deviant sits within each category:

1. **Rules: Games are rule-based.** *Deviant* drives not towards an un-ambiguity of rules, but is significantly ambiguous (at least until many re-readings have passed).

2. **Variable, quantifiable outcome: Games have variable, quantifiable outcomes.***Deviant's* rules do not provide different possible outcomes, the physical outcome is always the same.

3. **Value assigned to possible outcomes: That the different potential outcomes of the game are assigned different values, some being positive, some being negative.** *Deviant* does not put a value on any particular outcomes -- none of the outcomes are "better" than others (only the participant's desire to re-read is a preferred outcome). In fact *Deviant* is set up to create unpredictable and multiple readings.

4. **Player effort: That the player invests effort in order to influence the outcome**. (I.e. games are challenging.) However, Deviant does require a significant level of invested energy in the participant's interactions.

5. **Player attached to outcome: That the players are attached to the outcomes of the game in the sense that a player will be the winner and "happy" if a positive outcome happens, and loser and "unhappy" if a negative outcome happens**. *Deviant* does desire a level of psychological attachment from the participant to the protagonist -- Christian Shaw, i.e. to feel bad if she is being hurt.

6. **Negotiable consequences: The same game [set of rules] can be played with or without real-life consequences.** *Deviant,* set ups negotiable consequences as "the operations and moves needed to play the game are predominantly harmless." ↴

Thus by Juul's criteria *Deviant* is not a game.

However, I do accept that Deviant does offer significant amounts of free-play, and could thus be analogous with a toy, especially in the digressive spaces and in the playful rollovers. Deviant also uses a sense of conflict (but has no traditional goal) to drive the participant [Zimmerman], these mixed qualities are in keeping with the hybrid nature of Deviant.

a. Zimmerman, E., (2003) The State of Play: Law, Games, and Virtual Worlds Conference, New York Law School November 13-15.

b. Costikyan, Greg, (1994) *I Have No Words & I Must Design*

c. Juul, J., (2003) *The Game, the Player, the World: Looking for a Heart of Gameness*, Published in Marinka Copier & Joost Raessens (eds.): Level Up: Digital Games Research Conference Proceedings. Utrecht: Universiteit Utrecht.

d. Gratuitous interactions: "have no causal relationships to the whole action…shed no light on what things have happened or why they happened as they did". [Laurel 1991; p.73-74] ↴

14. Communication is "transparent" to the participants when nothing is intended to distract from the sender's communicative goal. It is suggested that this model has an ability to manipulate the receiver, in that mass communication becomes a primary process of reality construction and maintenance. In such a situation, positions of inequality, dominance and subservience can be produced and reproduced in society whilst at the same time made to appear "natural". This acceptance and reproduction of the transmitted reading happens passively -- without the participant being consciously aware of the exchange. ↴

15. As a group (see below) apart from their individual specialisations, they are familiar with the general discourses in digital textuality, in which post-structuralism, de-construction and post-modernity are the key theoretical paradigms.

    The participants and the method 🖼.
    1. Prof Mark Amerika
    2. George Fifield
    3. Gonzalo Frasca
    4. Dr Raine Koskimaa
    5. Cynthia Lawson
    6. Nick Montfort
    7. Dr Anja Rau
    8. Dr Roberto Simanowski
    9. Stephanie Strickland
    10. Dr Jill Walker
    11. Noah Wardrip-Fruin. ↴

16. The strongest strains of Internet-based sociological and anthropologic study are within the areas of virtual identities [Turkle 1997], gender studies [Cassell & Jenkins 1998], or the pedagogic use of videogames.

    What I propose is for the collation of the experiences as felt by the participants. From my own experience, most Internet artists receive varying types of email feedback (some cursory, some highly insightful, some enquiring). An appeal could be put out for such artists to submit this feedback to sit alongside the artworks in question; this would provide a rich anthropological insight into the participant's relationship with the artwork. This type of data could be placed alongside and used in comparison to scholarly critiques and readings. ↴

17. Certainly since (if not before) his thesis *Videogames of the Oppressed -- Videogames as a means for critical thinking and debate* [Frasca 2001], Gonzalo Frasca has been advocating the development of videogames as critical tools for thinking. Given Frasca's commitment and standing in the field of ludology / games studies he can be regarded as a significant voice in this emergent field.

    To engage in both the discourse and practice of critical games Frasca (ludology.org (2000- pres)) has set up:

    A research weblog with fellow researcher Ian Bogost (Georgia Institute of Technology) called Water Cooler Games: "Water Cooler Games is a site about video games with an agenda. It is about games that go beyond entertainment. Water Cooler Games explores the emerging field of games want to do more than simply being fun: they want to make a point, share knowledge, change opinions. This includes new genres such as advergaming, newsgaming, political

games, simulations and edutainment. If you think that video games have a strong potential for communication, persuasion and education, come and join our discussion by the Water Cooler."
[From: watercoolergames.org/about.shtml 🔗]

Is a partner / producer in the following companies:
Newsgaming.com, which develops the emergent practice of videogames based on news events.
"Traditionally, videogames have focused on fantasy rather than reality, but we believe that they can be a great tool for better understanding our world. Since newsgaming is so new, it has to find a voice of its own. Therefore, most of our games will be in part experimental."[From: newsgaming.com/faq.htm 🔗]

Powerfulrobot.com, which develops more commercial (opposed to newgamings more experimental games): "Powerful Robot is a games company aimed at companies that need to go beyond entertainment…If your company has something important to say, say it with a game." [From: powerfulrobot.com 🔗]

And persuasivegames.com, (as the name suggests) this company specialises in the development of games that persuade the participants into action as a form of marketing. "Our games influence players to take action through gameplay. Games communicate differently than other media; they not only deliver messages, but also simulate experiences. While often thought to be just a leisure activity, games can also become rhetorical tools."
[From: persuasivegames.com/AboutUs.html 🔗] ↪

O. The term "Entropy…refers to experiences of sequences which are unpredictable, where options are open and remain open, possibly appearing to be discontinuous or disconnected, in which surprise, the new and the novel are commonplace. Convention is challenged or established locally or newly; things are, or seem, chaotic, even to the point of being, or appearing, gratuitous." [Peacock 2000; p.23] ↪

Emails

The emails cited in this thesis have been left untranscribed as a truthful representation of the conversations and the vernacular language used. Also please note that the Strickland email conversation follows on from prior emails, and as such has been reformatted slightly in the name of coherency.

[Stuart Moulthrop]() discussing the history of the intersitial paradigm.

[Stephanie Strickland]() follow on questions from her reading of *Deviant: The Possession of Christian Shaw.*

[Hugh McLachlan]() -- historical expert on Christian Shaw the protagonist in *Deviant: The Possession of Christian Shaw* -- responding to my questions on her possible character.

6amhoover.com

The website: http://www.6amhoover.com (2001+) served and continues to serve as a basis for contact and the dissemination of my practice into a broader context.

6amhoover has been an invaluable marker for my research enabling interested parties globally to have an insight into my practice and research interests. For the last 3+ years various correspondents have been in contact with me via girl@6amhoover.com, their comments have been insightful, supportive, inspiring, rewarding and most valuably instigated some lasting virtual collaborations and the development of a broader peer group. What follows below is a sample snap shot of the different interfaces 6amhoover has used over the years.

January 2001 * Inaugural interface, designed November 2000, launched January 2001.

December 2001 *Angel Interceptor* posted online.

February 2002 *The Bloody Chamber* version1 posted online.

May 2002 *The Bloody Chamber* posted online.

October 2003 *Deviant* Sketch posted online.

February 2004

March 2004 - present.

Details of peer-to-peer dialogue in the form of exhibitions, publications etc.

All exhibits, visits, published writing, lecturers given and media appearances relevant to the subject of the research are listed. Those, which exclusively concern the Ph.D research, are marked *.

Exhibitions of 6amhoover including Deviant: The Possession of Christian Shaw [Preview]

Oct - Nov 2004*	Installation / exhibition of online artworks at The Lighthouse, 70 Mitchell Street, Glasgow, UK.
Sept 2004	*The Scottish Show* supported by The Lighthouse & the Scottish Executive, DesignersBlock , New Oxford Street London.
Apr 2004	*The Scottish Show* supported by The Lighthouse & the Scottish Executive, Studio Zeta, Via Friuli, Milan.

Exhibitions of The Bloody Chamber

May 2003*	*PlayEngines: streaming worlds*, Digital Arts & Culture conference 2003, Melbourne, Australia.
May 2003	Finalist in the *Barcelona Online Flash Film Festival:* Interactive Section.
Apr - May 2003	Boston *Cybertarts* Festival: Video Edit of The Bloody Chamber, M.I.T Media wall, Boston MA, USA.
Sep 2002	*Re-Animate Web* Festival, Rotterdam, The Netherlands, EU.
Apr - May 2002*	Glasgow Art Fair - CCA: *Hypnogogia: Two Waking Dreams* Interactive Art by Crankbunny & 6amhoover. Music by Stuart Braithwaite and John Cummings of Mogwai, UK.

Exhibitions of Angel Interceptor

Oct 2001	*Meta Metier* - UKINNY, Parsons New School, New York, USA.
Apr - May 2001*	Boston *Cybertarts Low Bandwidth* Festival, Boston MA, USA.

Exhibitions of 6amhoover

Nov 2003	*Little Red Riding Hood* Exposition with musicians Funkstorung, by STOF, Deventer, Holland.
Jun - Sept 2002	*Web Racket,* DeCordova Museum Boston, USA.
Feb 2002	*TechnoPoetry* Festival - Georgia Tech, USA.

Nov 2001	Net.art exhibition, Irish Museum of Modern Art, by Arthur X. Doyle (spoof) http://www.irishmuseumofmodernart.com

General Research Visits / Conferences Attended etc.

Oct 2004*	*Deviant* preview and previous works featured in: *Textual Play: Women's Work in Literary Hypermedia*, presented by Stephanie Strickland, Cynthia Lawson and Margie Luesebrink, virtual collaboration by 6amhoover. Society for Literature & Science Annual Meeting, Duke University, NC, USA.
Aug 2003	Invited chair of the readings session at the ACM Hypertext 03 Conference, curated artists: Prof. Simon Biggs, Talan Memmott, John Cayley and Noah Wardrip-Fruin, Nottingham, UK.
Jan 2003*	The Scottish History Conference -- *The Survey of Scottish Witchcraft, 1563-1736,* University of Edinburgh, UK, Available in electronic format: http://www.arts.ed.ac.uk/scothist/witchconf/index.html
Nov 2002*	*RE: MOTE* Symposium, Fruitmarket Gallery, New Media Scotland, Edinburgh, UK.
Oct 2002	Madrettor.org (offline) Internet and digital art conference, Rotterdam, EU.
Dec 2001	*Network: New media* conference, CCA Gallery, Glasgow, UK.
Nov 2001*	The Flash Forward conference, available in electronic format see: http://www.flashforward2004.com Amsterdam, EU.
Apr 2001*	The *Digital Arts and Culture* Conference, Brown University, Rhode Island, USA.
Apr 2001*	Speaker at the: CADE Postgraduate forum. Glasgow School of Art, Glasgow, UK.
Jan 2001*	Speaker at the: *Hypertext, Narrative, Flash, Time,* seminar see: http://www.enarrative.org/3/ Boston MA, USA.

Awards

May 2003*	*The Bloody Chamber* (interactive) streaming media section winner of the Australian Centre for the Moving Image PlayEngines Exhibition Prize and acquisition to the public programs permanent collection. See http://www.acmi.net.au
2003*	Alt-W Production Grant, see http://www.alt-w.org
2002*	New Project Bursary - CCA for Hypnogogia, Scottish Arts Council.

Published Writing

May 2004   On The Horizon (International Journal) - ISSN: 1074-8121, available online and offline, see: http://www.emeraldinsight.com/oth.htm
Special Issue on *Games, Simulations and Interactive Media in Learning Contexts.*
Paper title: *Visual Literacy and Learning: Finding some online territories for the slow learner.*

Artworks featured in:

2001- pres   Design Week, The Herald, Create Online, Computer Arts, The Scotsman, The Guardian, Desktop Magazine (AUS).

Other

Sept 2003*   Featured artist on Tekka, see: http://www.tekka.net (Volume 1 no.3).

Mar 2001*   Interviewed for Histories of Internet Art: Fictions & Factions.
See: http://art.colorado.edu/hiaff/home.htm

2001   Online interview and showcase in www.freshfroot.com (now offline).

Return To Chapter 1

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List of artists featured in the contextual practice review

Art	Hybrid	Programmatic	Design
Amerika, Mark	Alt Sense	Brown, Daniel	Abnormal
Andrews, Jim	Bornmag	Deconcept	Behaviour Child
Antirom	Evil Pupil	Digit London	AllofUs
Biggs, Simon	Future Farmers	Flight 404	Codex Series
Blackeyed	Hi-Res!	Gratin	Chman
Bookchin, Natalie	Hoogerbrugge, Han	Jevbratt, Lisa	Choppingblock
Carnivore	Life of Pi	Levin, Golan	CubanCouncil
Cosic, Vuk	Mumbleboy	Levitated	Gmunk
Crankbunny	Nosepilot	Natzke	Goultralightsgo
Dane	Qrime	Pitaru	HungryForDesign
Desperate Optimists	Rolitoland	Praystation	Krening
Digital Sisters	Safeplaces	Presstube	Milky Elephant
Indeed	Samorost	SodaPlay	O-matic
Entropy8/Zuper!	The Killer	Soundofdesign	Prate
Fisher, Caitlin	Tomato	Stanza	Secondstory
Greyscale	Vectorpark	Tindall, James	The Rafters
Heavy Industries		The Third Place	Van Meter, Trevor
Highland, August		Unclickable	WeWorkForThem
Irational		Uncontrol	WireFrame
Jodi		Yugop	
Kilma, John			
Lia			

Lialina, Olia
Loyer, Eric
Mouchette
Ocultart
Potatoland
Slattery, Diana
Superbad
The Ed Report
The Remedi
Project
Thomson
Craighead
Tosic, Nikola
Zellen, Jody

Please note: the immediately above were "screen grabbed" during Spring/Summer 2002 and again in Summer 2004.

Original practice by the candidate:

Angel Interceptor *   8 week (part-time production) project completed March 2001.

The Bloody Chamber *   13 week project completed May 2002.

Deviant: The Possession of Christian Shaw   32 week project completed Jan 2004.

* Denotes artwork previously published on 6amhoover.com