



TOWARDS AN AESTHETICS OF INTERACTIVE FICTION CINEMA

Authoring Diegetic, Character-Based,
Communicative-Expressive Interaction

Student: Noam Knoller
Pathway: EMMA-IMM
Date: 26-08-2004

Thesis Supervisor: Jeroen van Mastrigt

FOREWORD

This thesis is about an aesthetics of interactive fiction cinema as an art form. The existence of this text implies the existence of a reader. Who can this reader be? The context in which this text is being written is academic. It is a dissertation written in partial fulfilment of the requirements for a Master's degree in interactive multimedia at the European Multimedia Masters of Arts program at the Utrecht School of the Arts. As such, some teachers at this school shall read it. Are they my reader? Perhaps, but I do not know who they will be, and unlike most cases of academic writing, I can not make any assumptions regarding their discipline, regarding what they know or do not know.

It is perhaps the nature of interactive multimedia, as a new discipline, that it still hasn't developed its own discourse. Therefore, the teachers who will read this text are not very specifically defined readers. I try to think: who, beside myself, would be interested in the aesthetics of interactive fiction cinema as an art form? Who should be part of this discourse? Perhaps I would reach a conclusion by explaining why I myself am interested in it.

I am interested in this question mainly because for the past few years I have been trying to make interactive fiction cinema. For about the same time, I have also been teaching Interactive Multimedia, first at undergraduate level and then at a graduate level. I found out that theoretical reflection on the aesthetics of these new artistic phenomena helped inform my own creative endeavours by making them more deliberate. I also felt that it helped me understand what it was that I appreciated (or didn't appreciate) about other people's works. And it was most essential when I was trying to explain it to my students.

I will therefore assume that the readers of this text are those who, like me, have some interest in interactive multimedia, and more specifically in interactive fiction cinema, whether as artists, designers, researchers, students, teachers or critics; and who, like me, feel that a theoretical discourse about this subject can inform their own work.

Assuming no special knowledge on the part of my imaginary readers, and aiming to secure enough of a public to make for a lively discourse, I hereby pledge to veer away as much as possible from any use of professional Jargon and special terms, and when I do, to define and contextualize them; and to make my assumptions as transparent as possible, or at least to point to other texts that have already discussed these assumptions where my space is limited.

CONTENTS

FOREWORD.....	1
CONTENTS.....	1
INTRODUCTION	4
THE RESEARCH QUESTION.....	4
BASIC ASSUMPTIONS.....	4
THE STRUCTURE OF THIS TEXT	4
DEFINITIONS.....	4
<i>What is Interactive Fiction Cinema?</i>	4
<i>What is fiction?</i>	5
<i>What is the sense in which something may or may not be an art form?</i>	5
<i>What is a medium?</i>	5
<i>What do I mean by “an art form”?</i>	6
<i>What is (and isn’t) art?</i>	6
<i>What is aesthetics?</i>	7
<i>How is aesthetics related to a specific medium?</i>	7
<i>What is interactive art?</i>	7
<i>How does interactivity figure into aesthetics?</i>	8
<i>Descriptive and Normative Aesthetics</i>	8
AN AESTHETIC HYPOTHESIS.....	9
A TEST CASE AND A CONCLUSION	9
CHAPTER I: THE MEDIUM OF INTERACTIVE FICTION CINEMA.....	10
I.1. WHAT IS INTERACTIVE FICTION CINEMA?.....	10
I.2. INTERACTIVE FICTION CINEMA AND VIDEO GAMES.....	11
<i>I.2.1. Art is born out of play</i>	14
<i>I.2.2. The child plays with things, the artist plays with forms</i>	15
<i>I.2.3. Play is rule-governed, art plays with its own rules</i>	16
<i>I.2.4. Interactivity in art and games</i>	16
CHAPTER II: A MORPHOLOGY OF INTERACTIVE FICTION CINEMA.....	18
II.1. REPRESENTATION IN INTERACTIVE FICTION CINEMA.....	18
<i>II.1.1. The problem of narrative representation and interaction</i>	18
<i>II.1.2. Attempts to solve the problems of narrative representation</i>	20
<i>II.1.3. Cinematic alternatives to narrative representation</i>	21
<i>II.1.4. Representational strategies of the diegesis in interactive fiction cinema</i>	22
II.2. STRUCTURE.....	23
<i>II.2.1. Material medium and Granularity</i>	23
<i>II.2.2. A Typology of Interaction Models</i>	24
<i>II.2.3. Structures of interactive fiction cinema</i>	28
CHAPTER III: AESTHETICS.....	30

III.1. GENERAL AESTHETICS.....	30
<i>III.1.1. The social status of taste judgments</i>	30
<i>III.1.2. The social significance of art</i>	33
<i>III.1.3. What is a good artwork?</i>	36
III.2. AN AESTHETICS OF INTERACTIVE FICTION CINEMA.....	37
<i>III.2.1. Good Interaction</i>	37
<i>III.2.2. Good Fiction</i>	41
<i>III.2.3. Good cinema</i>	42
CHAPTER IV: THE INTERFACE PORTRAITS STORYTELLER SYSTEM AS A TEST CASE	44
IV.1. DESCRIPTION.....	44
<i>IV.1.1. Installation Setup</i>	44
<i>IV.1.2. Interactive Experience</i>	45
<i>IV.1.3. Architecture</i>	45
IV.2. FORMAL ANALYSIS.....	48
<i>IV.2.1. Representation</i>	48
<i>IV.2.2. Material medium and syntactical units</i>	48
<i>IV.2.3. Interaction model</i>	48
IV.3. SIGNIFICANCE.....	49
<i>IV.3.1. Communicative-expressive Interaction</i>	49
<i>IV.3.2. Diegetic interaction and story representation</i>	50
CHAPTER V: CONCLUSION	52
BIBLIOGRAPHY	53
MULTIMEDIA SOURCES	57

INTRODUCTION

The research question

The main research question addressed in this thesis is that of the aesthetics of Interactive fiction cinema as an interactive art form, with a specific emphasis on interaction models.

Basic Assumptions

This short problem statement already entails a set of basic assumptions that need to be stated right at the outset, and defined shortly thereafter:

- That there is such a thing as Interactive Fiction Cinema;
- That there is a sense in which it may be an art form, and a sense in which it may not be;
- That there is such a thing as an art form;
- That an art form may or may not be interactive;
- That there may be an aesthetics for it;
- That we know what an aesthetics is;
- That whether an art form is interactive or not is somehow related to its aesthetics.

The structure of this text

In the remainder of this introduction, I will try to define and contextualize the basic assumptions stated above. The thesis itself will take these assumptions further and examine interactive fiction cinema as a specific medium, explore and classify its various forms, suggest aesthetic principles which can be of aid when creating and evaluating interactive fiction cinema works in an artistic context (with a specific emphasis on the aesthetics of interaction authoring as the artist's practice of creating such works), and conclude with a discussion of one of my own works as a test case.

Definitions

What is Interactive Fiction Cinema?

What is interactive fiction cinema? I take it to be any text that is:

- Audiovisual in its material form and in its conditions of perception.

- Understood to represent a fictional world.
- Malleable by the people interacting with it.

What is fiction?

In the context of this thesis, it is more important to state what fiction is not. I do not conflate Fiction with Narrative. Following Bordwell and Thompson¹ and others, I regard narrative as just one strategy of cinematic representation of the fictional. Although narrative representation is a culturally dominant form, in cinema as well as in other areas of culture (although perhaps not as dominant as some would claim²), other systems of organizing representations of fictional worlds (simulation, database, association) are possible and some of them are actually quite widely used. I will present these alternative systems in relation to both cinema and its interactive progeny.

What is the sense in which something may or may not be an art form?

My definition of Interactive fiction Cinema is wide enough to include more than the body of work that interests me directly, which is that of interactive fiction films in an artistic context. It also covers almost all genres of videogames, and interactive fiction cinema may also be used for other purposes, including education and training. Videogames especially are closely related to interactive fiction cinema, and in fact, it may not be so simple to explain how interactive fiction cinema could be anything other than a game. I will devote much of the first chapter to a comparison between interactive fiction cinema as art, and videogames.

Considered together, all applications of interactive fiction cinema may be considered to be part of the same medium, just like interactive hypertext literature belongs in the same medium as text adventure games. But now we need to explain what a medium is:

What is a medium?

According to the Oxford encyclopedia of aesthetics³, a medium is “the most general category of a means of communication”. In more specific terms, a medium is a specific kind

¹ Bordwell, D., & Thompson, K., *Film Art: An Introduction*, Fifth Edition, New York: McGraw-Hill, 1997

² For recent claims about the marginality of narrative in culture and even psychology see e.g. Cubit, Sean, Spreadsheets, Sitemaps, and Search Engines, *Why Narrative is Marginal to Multimedia and Network Communication, and Why Marginality is More Vital than Universality*. In Rieser, M., and Zapp, A., (Eds.) *New Screen Media - Cinema/Art/Narrative*, BFI, London, UK, 2002, 3-13, and Strawson, Galen, *Tales of the unexpected*, *The Guardian* January 10, 2004, (newspaper article) <http://books.guardian.co.uk/review/story/0,12084,1118942,00.htm>, accessed 11-01-2004

³ Kelly, M. (Ed.) *Encyclopaedia of Aesthetics*, Vol 1., New York: Oxford University Press, 1998, p. ix

of technique or means of expression as determined by the materials used or the creative methods involved. Typical examples of media include film, music, text or dance. I understand the concept of medium to be important in understanding the way an artwork is created and experienced – but this may be a controversial understanding at a historical moment when many artworks are considered to reside outside the definition of a specific medium – hence the term ‘multimedia’.

In chapter 2, I will examine some examples of works belonging to the medium of interactive fiction cinema. I propose classifying this body of work along five principles: interface, material medium, granularity, relation of the interaction model to the diegesis (the story world) and user agency (what the user can or cannot do). With those taxonomies, we can map out not only the different works that have been produced, but also the medium’s potential, and acquire a deeper understanding of its internal dynamics as a historically determined cultural phenomenon.

What do I mean by “an art form”?

An art form is the body of artistic works produced within a specific medium. Again, it must be reiterated that not all works produced within a specific medium are artworks, while certain artworks may transcend a specific medium.

What is (and isn’t) art?

The distinction between artworks and non-artworks is highly abstract and has proved to be a bone of contention throughout the history of theorizing about art, and most recently in the rift between essentialists (those who believe that all artworks share an essence which can be defined) and anti-essentialists (those who believe that no such essence exists, or that if it does exist, it cannot be defined). While I sympathize with the anti-essentialists spirit, I nonetheless believe that distinctions between what is or isn’t art are possible in most cases. For the purpose of this thesis, I consider art to be the field of culture concerned with aesthetic production. As a field of culture⁴ it is comparable to science, religion, mythology, language, history or technology – all of which are systems that have developed historically, which have their own institutions, values and intrinsic ways of producing meaning. The field of culture which we call art has evolved historically within western civilization since the mid-18th century, and has developed its intrinsic dynamics, values and institutions, which Arthur Danto called ‘The artworld’. Artworks may be produced within the artworld or outside it, but they always exist and are experienced in relation to it.

⁴ I am roughly following neo-Kantian philosopher Ernst Cassirer’s identification of the various fields, which he called “symbolic forms”.

A special problem of definition arises from the attempt to distinguish interactive video art from videogames, which are part of a common medium. I will develop a distinction between artworks and videogames in the first chapter. I believe art can be distinguished from videogames, and that this distinction is important to the understanding of the way art is created and experienced. I will therefore conclude the first chapter with a discussion of how art and play are related (following Johan Huizinga), but quite distinct (following Ernst Cassirer), and how interactivity functions differently in either of these contexts.

What is aesthetics?

The Oxford encyclopedia of aesthetics defines its subject as “critical reflection on art, culture and nature”. This is a very broad and prudent definition of aesthetics, befitting the synoptic regard expected from the nature of an encyclopaedia. But it doesn’t explain what specific sort of critical reflection is involved. Clearly, a critical reflection on culture or nature (or art) may not involve any aesthetics at all if we choose to reflect critically upon the political institutions of a certain culture, or the physical laws of nature. I will therefore use this term more narrowly, in two senses:

1. ‘Aesthetics’, is the branch of philosophy which deals with formal qualities of objects (whether artistic, cultural or natural), with our experience of these formal qualities, and with a special attention to the objects that most typically arouse our aesthetic interest, namely those of art.
2. ‘An/the aesthetics of’ [always with a definite or indefinite article] is the critical reflection upon the formal qualities of a subset of objects that have something in common, as in ‘the aesthetics of virtual reality’, or ‘the aesthetics of interactive fiction cinema in the artistic context’ – the subject of my 3rd chapter.

How is aesthetics related to a specific medium?

It is my belief that a critical reflection upon the formal qualities of artworks has to take into account the materials, techniques and means of expression that are afforded by the specific medium within which an artwork is created and experienced. Artists can be aware of the medium they are working in, or oblivious to it. They may place importance to their medium, ignore it or undermine it. Likewise, the public experiencing works of art may not be aware that they exist as part of the medium. Nonetheless, the relationships between the medium and the artists’ creative processes, the public’s experience and their (possibly tacit) expectations and appreciations – this relationship cannot be discounted.

What is interactive art?

The question here should be rephrased as follows: what is interactive art in the context of this thesis? While there may have always been an element of interactivity in art,

interactivity became a distinct component of artistic creation and of art theory only during the last few decades, and most notably with the advent of the personal computer in the 1980's. My personal understanding of the interactive artwork is that it is the sort of artwork which is constructed in a way that allows the person (variably called the 'user', 'interactor' or 'participant') to change his or her own experience of the artwork through manipulation.

How does interactivity figure into aesthetics?

I am not aware of any major work in aesthetics that examined interactivity. Nor will this dissertation attempt to provide such a general aesthetics of interactivity. However, since I am interested in the aesthetics of a group of works that are interactive, I will have to state some general principles. For example, I believe that such works only become interesting when the interactive relationship between the object and the user becomes the focus of the artistic experience. However, a cursory glance at exhibition catalogues reveals that my belief is not necessarily standard, as one often finds there works that are labelled 'interactive' despite the fact that their interactivity is incidental to their meaning. This, it will be noted, is a value judgement. Am I allowed to make value judgements? Surely not...

Descriptive and Normative Aesthetics

Discussions in aesthetics can be either descriptive or normative. Descriptive discussions deal with classifications, distinctions and, of course, descriptions of objects and their formal qualities. I will conduct such a discussion in chapter 2.

Normative discussions deal with values, criteria and tastes. My discussion in chapter 3 will be normative.

Normative discussions in aesthetics are highly contentious, as they are often misconstrued as purporting to assert an 'objective' authority whereas tastes are inherently 'subjective'. This has always been one of the main problems of Aesthetics, yet the intellectual climate of post-modernism has further intensified the perception that normative discussions of aesthetics are, to say the least, futile. I beg to differ, if only slightly.

Tastes are indeed subjective. Aesthetic values and judgment have a strong element of subjectivity too. There may never be universal agreement about them – nor do I believe that there should be. What I do strongly believe is, that while normative aesthetic discussion about art is not a substitute for direct experience in creating or evaluating artworks, it certainly intensifies this experience, and especially its social dimension. It may be said of taste that it is 'only' a way for people and groups of people to distinguish themselves from others. I couldn't agree more with the objective content of such a claim – this is indeed something that taste does – but I disagree with the implied tone that this social activity is meaningless. Art is the primary cultural sphere in which our aesthetic knowledge of the

world is being developed, just as science is the cultural sphere where empirical knowledge of the world is being developed, and both types of knowledge are important and essential to us if we want to fully participate in culture. And just as the lack of absolute truth in science does not stop us from evaluating scientific knowledge, the lack of objective values in art does not mean that we should shun away from discussing our tastes and values.

Therefore, in the 3rd chapter I will attempt to establish aesthetic criteria for a good interactive film within what I understand to be the current relevant cultural and social context as well as in relation to the intrinsic (medium-specific) development of interactive cinema itself as an artistic form.

An aesthetic hypothesis

In a nutshell, my claim is, that at the present state of the art, a good interactive fiction film should strive to be as engaging as a videogame, as immersive as a good film, and include a diegesis with significant complexity and psychological depth, as in any good work of fiction. But most importantly, it must have a continuous interaction model that is able to both promote the former requirements and to function as a significant layer of meaning in itself, even to the point of subverting the former requirements when that is appropriate.

Having presented my requirements, I will re-examine some existing interactive films (and some videogames), focusing on their interaction models in relation to these requirements, and suggest a character based, diegetic and communicative interaction model that may meet these requirements. In this model the person interacting with the work (the interactor) is immersed in a continuous communicative relationship with a character, which is part of the diegesis. The interactor does not have control neither over the presentation aspects of the work, such as point of view, nor does the interactor need to make any explicit decisions about courses of action that would break the continuous engagement of the interactive experience. Rather, the character with which one interacts is the one that tells the story, in response to the interactor's expressive behaviour.

A test Case and a conclusion

In chapter 4 I will describe and discuss an interactive fiction cinema installation that I designed as a test case for this model. Any cultural form is historically determined and therefore open to changes. In the concluding chapter, I will chart some of the possible future directions that seem to me worth further creative research and experimentation.

CHAPTER I: THE MEDIUM OF INTERACTIVE FICTION CINEMA

I.1. What is Interactive Fiction Cinema?

In the introduction, we defined Interactive Fiction Cinema as any text that is:

- Audiovisual in its material form and in its conditions of perception (this is a minimal requirement – different materials and conditions of perception may apply, depending on the interaction model);
- Understood to represent a fictional world; and
- Malleable by the people interacting with it.

We also saw that this is a definition of an entire medium. Within this medium, we may encounter objects that are either games (video games, such as Quake, Myst, Tomb Raider or Grand Theft Auto), or art (such as works by Lynn Hershman-Leeson, Chris Hales, Bill Seaman and others), or something else (edutainment, training, or advertising).

The specific focus of this thesis will be Interactive Fiction Cinema as art. However, the distinction between the art and games within this medium is not clear. People readily assume that everything that every interactive audiovisual text is necessarily a game. Others – especially game developers – claim that videogames are a form of art in and of themselves. This is not my view.

Certainly, there is convergence between videogames and art – and an even greater convergence between videogames and entertainment (as anyone who has seen Tomb Raider – the movie, or played Matrix – the videogame, knows). In the first part of this chapter, I will try to show that there is even a deeper affinity between videogames and the art of interactive fiction cinema, that goes back to the roots of art and play as human activities. Nevertheless, I will try to show that there is a special sense in which interactive art can be something different than a game, a sense that also makes it possible to distinguish between videogames that truly are art, and those that are mere entertainment.

The popularity of videogames has recently resulted in the emergence of academic research dedicated to their study. The main body of scholarly output is devoted to interactive fiction (whether in audiovisual or textual form), and there are valuable lessons to be learned from it about the complicated relationship between fiction and interaction. An important debate is that between narratologists, who claim that interactive fiction is best studied from a perspective that looks at it as a special case of narrative, and ludologists⁵, who believe that games require a separate perspective that discovers the intrinsic properties of

⁵ Although one of the protagonists of this debate has recently claimed that it never actually took place (Frasca, 2003)

interactive fiction. Many ludologists also claim that narrative and interactivity are inherently incompatible. In the second part of this chapter I will try to chart the outlines of this critique of narrative in interactive fiction, and suggest alternatives to the narrative mode of representation that may be more in line with the intrinsic qualities of interactive media.

I.2. Interactive Fiction Cinema and Video Games

An article⁶ published a few years ago in a popular Californian magazine asked the following question: Can video games also be considered a form of art?

The treatment of this question in the article illustrates the widespread confusion regarding the relationship between interactive art and video games. Atari founder Nolan Bushnell, who was interviewed for this article, was asked: “But what makes a good game, art or gameplay?”⁷ At first, his answer seems to the point:

Art and video games can have opposing goals, Bushnell said. While art, for the most part, makes people want to think or feel, video games make people want to act. "Many times, art is meant to push envelopes and force people to think, feel or emote certain things," Bushnell said. "The first rule of games is clarity.... In general, you want people not to have to struggle with the game."⁸

There seems to be hint here to the different functions of art (“pushing envelopes” - challenging) and games (“not to have to struggle” – non demanding entertainment). Yet the article continues in a confusing manner:

In fact, the visuals may not matter if the game has a good story. The industry is littered with games that have beautiful art with bad gameplay and have failed, Bushnell said. "Good gameplay can exist without art. Gameplay is necessary, whereas art is not," Bushnell said.⁹

In this quote, the word ‘art’ seems to assume two different senses. Bushnell appears to employ the word in the sense used in this thesis, but in the reporter’s narration we shift to a different sense of the word – ‘art’ as the visual component of a video game. Assuming the first sense, it would seem that Bushnell is addressing the different human experiences of art and play. Assuming the second sense, it would seem that Bushnell is merely noting that the

⁶ Mayfield, K., Once It Was Atari, Now It's Art, *Wired News* (July 19, 2001), <http://www.wired.com/news/print/0,1294,45146,00.html>, 21-07-2001.

⁷ Idem

⁸ Idem

⁹ Idem

visual aspect of the game is less important to it than the gameplay – the interactive experience aspect of the game.

The ambiguity continues in a quote attributed to Sim City creator Will Wright:

[...] [O]thers say that art may be vital in some games, such as an interactive game at a museum kiosk. "Art is more important than gameplay, depending on the purpose," Wright said.¹⁰

Here, the reporter again treats art as a department within games, and Will Wright appears to concur. Is this, then, the relationship between art and games? That, of course, depends on the context. For some people in the game industry, following the earlier example of the movie industry, 'art' indeed denotes the output of the 'art department', the production unit responsible for the visual aspect of an entertainment product. This is one source of the confusion between games and art.

Interest in the relationship between art and games has not limited to the Californian entertainment industry. The art establishment itself has noticed the videogame. Here's an example, still from the same article:

"There is a line between games and art," said Alex Lloyd, chairman of the SFMOMA Media Arts Council. "A game is a commercial endeavor. But I think people will appreciate the interactive nature and experience (of a videogame) and it will be considered its own art form."¹¹

We will return to the prospects and conditions for videogames to be considered an art form later in the thesis.

Meanwhile, on the farther end of a postulated cultural spectrum, art critics, curators, and artists themselves have been pondering the relationship between interactive art and games. Some of them are quite concerned that there is something wrong in the picture. In a 1997 catalogue of an interactive art exhibition at the Barbican art gallery in London, titled: "Serious Games – Art, Interaction, Technology" a worried Regina Cornwell refers back to an article she wrote in 1992:

I expressed my concern about how interactive works by artists seem to come closer and closer to video games, encouraged by our postmodern climate. Contemporary art had already begun to move toward fun and entertainment, with the tacit consent of the art community. The interactive computer work aspiring toward art, yet allied to computer games, was seeking respectability and a home, asking to be let in the doors of museums and galleries. Yet, even more than the rest of contemporary art, it

¹⁰ Idem

¹¹ Idem

seemed, a more obvious, even blatant gamester and funster, and often with fewer pretensions, whose very high tech paraphernalia could bewilder, overwhelm, and even alter the institutions it sought to woo and infiltrate¹².

Examining the situation four years later, Cornwell is even more worried by the infiltration by ‘fun’ and games of the art world and other spheres of serious culture:

I am suggesting that in the USA in the last four years, fun has enlarged its domain, even further stamping out seriousness where and when it can. Education is one place. Here ‘edutainment’ is produced in the form of computer software [...] The art world has largely acquiesced to the general postmodern cultural agreement that ‘lite and eze’ are preferred, when not best. [...] It is difficult not to see certain relatively recent museum and gallery activities as twisted forms of fun aimed to please – not disturb or bother or displease or cause a middle class audience to think [...] Does interactive work, enforced by the association with the computer game and because it requires some kind of rapport with audiences, fall into a trap and simply aid the cultural climate of fun, somehow automatically operating against seriousness?¹³

What are we to make of this? The videogames people covet the aura of respectability that art confers, even when they do not quite comprehend what art really is. The art people are trying to distance themselves from games, pitting their ‘seriousness’ against the ‘fun’ that they attribute to computer games (suggesting, derisively and unnecessarily that all games are mindless entertainment), while at the same time being “seduced by them”¹⁴.

Are the oppositions between, ‘respectability’ and ‘vulgarity’, ‘seriousness’ and ‘fun’ the true mark of the relationship between art and games? It isn’t necessarily so.

The video game certainly is the culturally dominant application of interactive fiction cinema, and as such, it at least serves as the backdrop of every other work in the medium, be it art, edutainment or military simulation. Interactive art has to engage the implications of its medium, just as fiction cinema has to engage TV viewing habits. It is also reasonable to say that typical video games tend to be vulgar and unchallenging entertainment – but so are typical movies and most of TV. Video games certainly can’t be singled out from other mass culture products for exceptional vulgarity and lack of seriousness. Sophisticated and challenging games can exist, or at least they can be conceived of¹⁵ - but will that make them art?

¹² Cornwell, R., Artists and Interactivity: Fun or Funambulist, in Brown, C., Barbican Art Gallery and Graham, B., (Eds.) Serious Games, London: Barbican Art Gallery in association with Tyne and Wear Museums, 1997, p. 10

¹³ Ibid, 10-12

¹⁴ Ibid., 14. I

¹⁵ See, e.g. Frasca, G., Rethinking Immersion and Agency: Videogames as a Means of Consciousness Raising, [SIGGRAPH 2001] www.siggraph.org/artdesign/gallery/S01/essays/0378.rtf, 15-02-2004

The relationship between art and games goes much deeper than what the current cultural context suggests. In the following sections we will see how intimate it is and has been since the dawn of history, and yet how art and games are distinct from one another, without insult or injury to either.

1.2.1. Art is born out of play

According to one hypothesis, art itself may have evolved from games. Culture theorist Johan Huizinga who, in the first half of the 20th century was amongst the first theoreticians to take games seriously, was the first to suggest this hypothesis¹⁶. In *Homo Ludens* he claimed that "poetry [...] is born in and as play - sacred play"¹⁷

Huizinga gives as an example the riddle-contests of the ancient Greeks and Scandinavians. Such is, perhaps, the Sphinx riddle in the Oedipus myth, although Huizinga does not specifically use it as an example.

Huizinga proceeds to claim that

"The affinity between poetry and play [...] is also apparent in the structure of creative imagination itself. In the turning of a poetic phrase, the development of a motif, the expression of a mood, there is always a play-element at work"¹⁸

Although Huizinga's discussion initially refers specifically to poetry, he later extends his discussion to all other forms of art¹⁹. In fact, Huizinga's theory is rooted in an understanding of play as a basic instinct common to all manifestations of early culture and civilization. It is only at a later stage of the development of civilizations that their play element is replaced by seriousness:

But as civilization increases in spiritual amplitude, the regions where the play-factor is weak or barely perceptible will develop at the cost of those where it has free play. Civilization as a whole becomes more serious – law and war, commerce, technics and science lose touch with play; and even ritual, once the field *par excellence* for its

¹⁶ Huizinga was by no means the last one to suggest it. Beryl Graham, curator of the Serious Games exhibition mentioned earlier, refers (in Brown et. al., op. cit. p. 9 note 8) to a 1974 article by Ellen Dissanayake suggesting a similar hypothesis, according to which what games have in common with art is that "both involve imagination, surprise, non-predictability and self-reward and are considered biologically non-functional" (Idem).

¹⁷ Huizinga, J., *Homo Ludens*, Boston: Beacon Press, 1955 (1938), p. 122

¹⁸ Ibid, p. 132

¹⁹ Ibid, pp. 158-172

expression, seems to share the process of dissociation. Finally only poetry remains as the stronghold of living and noble play²⁰.

Poetry, and by extension all art, is therefore by its very nature and origin within the realm of play, not necessarily within that of seriousness. Art is not a production element within games; it is itself a sort of game – a language game in the case of poetry, a visual game in the case of the visual arts, and so on throughout the different forms of art. But now we have to see *exactly* what sort of game art is, and how it is nevertheless distinct from what we would ordinarily mean by ‘a game’. Since Huizinga is concerned only with the origin of art, but not with its definition, we will leave him at this point.

1.2.2. The child plays with things, the artist plays with forms

Philosopher Ernst Cassirer gives a good definition of this distinction between art and play. In *An Essay on Man*²¹, Cassirer discusses various theories of art, amongst them theories that “hope to elucidate the nature of art by reducing it to the function of play.”²² He agrees with these theories that there is great affinity between art and play:

Play is an active function; it is not confined within the boundaries of empirically given. On the other hand the pleasure we find in play is completely disinterested. None of the specific qualities and conditions of the work of art seems, therefore, to be missing in play activity. [...] Psychologically speaking, play and art bear a close resemblance to each other. They are nonutilitarian and unrelated to any practical end²³. In play as in art we leave behind us our immediate practical needs in order to give our world a new shape. But this analogy is not sufficient to prove a real identity. Artistic imagination always remains sharply distinguished from that sort of imagination which characterized our play activity. In play we have to do with simulated images which may become so vivid and impressive as to be taken for realities. To define art as a mere sum of such simulated images would indicate a very meager conception of its character and task. [...] Play gives us illusive images; art gives us a new kind of truth—a truth not of empirical things but of pure forms.

The specific difference between art and play, according to Cassirer, lies in the different way in which they stimulate our imagination. Cassirer distinguishes between three forces of the imagination:

²⁰ Ibid, p. 134

²¹ Cassirer, E., *An Essay on Man*, New haven and London: Yale University Press, 1945

²² Ibid, p. 163. Cassirer does not mention Huizinga, although they were contemporaries, and he would probably not direct his criticism towards Huizinga, who does not reduce art to the function of play, but traces in it its origin. Cassirer is mute on the question of origin.

²³ I think the notion of the nonutilitarianism of both art and play is deficient. I propose a different view on art later in the thesis.

- 1. Invention;
- 2. Impersonation (imbuing everything with life);
- 3. Formation.

Art and play share the first two, but only art possesses the third - the ability to attend to the formal aspect of things, and not to things themselves. This Cassirer calls "aesthetic vision". In his own words: "The child plays with *things*, the artist plays with *forms*"²⁴.

1.2.3. Play is rule-governed, art plays with its own rules

This then is the true relationship between art and games – art is not in stark contrast to games but rather their unique extension, a special sort of game, in which we let our imagination produce pure sensuous forms.

Art is a special kind of game also in another important respect. Ordinary games are governed by rules. One can not play a game without adhering to those rules. In play, breaking the rules carries the implication of social sanction: "The player who trespasses against the rules or ignores them is a 'spoil-sport'"²⁵. This is not the case in art. Since artists play with forms, and since rules (of harmony, propriety or of any other kind) can be regarded as forms, artists can also play with those rules. This can perhaps be described as a special rule of the game of art – that in art, there are no immutable rules. In that sense, rules apply in art only on a temporary and implicit basis. The moment such rules are made explicit, they are exposed to artistic license; they can and they will be broken. No social sanction is imposed – quite the contrary. An artist who breaks the rules will not be considered a "spoil-sport", but rather a pioneer.

1.2.4. Interactivity in art and games

As art is born out play and as poetry is born out of the riddle-contest, so interactive fiction cinema is now being born out of the videogame. This accounts for the difficulty in distinguishing between them and guarantees that videogames will continue to serve as the backdrop for this new artistic form for a while.

Given the difference between art and games, we have to determine how interactivity functions differently in an artistic rather than a ludic context. Interactivity in videogames is constituted within the realm of the rules of play as a transparent function of the interface. In interactive art, interactivity itself becomes the object of aesthetic attention. In interactive art, artists can play with the forms of interaction itself, interaction considered as a distinct

²⁴ Ibid, p. 164

²⁵ Huizinga, op. cit., p. 11

layer of form and meaning. The aesthetic attention of both artist and audience turns to the rhythms of interaction, to its expressive qualities, and to all other aesthetic qualities, such as beauty or ugliness, harmony or disharmony, tension and release, unity and multiplicity, that might be perceived in the interactive experience. Through this attention, interaction can come of age as a meaning-producing form of art.

CHAPTER II: A MORPHOLOGY OF INTERACTIVE FICTION CINEMA

I use the term ‘fiction’ in Interactive Fiction Cinema to distinguish it not from interactive ‘Documentary’, but rather to emphasize the representational aspect of this type of interactive audiovisual text, as opposed to non-representational or abstract audiovisual texts (such as are produced, for instance, by systems like KeyWorx). Interactive Fiction Cinema should therefore be understood to somehow represent a *diegesis*—a story world. In this chapter we will examine how the diegesis can be represented, how it can be interacted with and how representation, interaction and material conditions determine the structure of the work.

II.1. Representation in interactive fiction cinema

How does one represent a diegesis? The standard answer for that question would normally be: by telling a story about it. This form of representation, in which stories are being told, is called a narrative, and whether and how it may be employed in interactive fiction is the subject of a heated and still open debate, which will not be solved here. Instead of solving the interactive/narrative problem, I propose to look at other, non-narrative forms of representation.

II.1.1. *The problem of narrative representation and interaction*

Many scholars, designers and artists who write about interactive fiction, in either a ludic (e.g. Mateas, 2001²⁶ and Montfort, 2003²⁷) or other (e.g. Brooks, 1997²⁸ and 1999²⁹) context, refer to it as a form of interactive narrative. Recently, however, the relevance of narrative representation to interactive fiction has been called into question. Some critiques have claimed that narratological approaches to interactive fiction, and specifically to games,

²⁶ Mateas, M., A Neo-Aristotelian Theory of Interactive Drama. In Proceedings of ACM SIGGRAPH 2001, Art Gallery, Art and Culture Papers (LA, CA, USA, August 12-17), 2001) New York, ACM Press, 2001, pp. 51-58

²⁷ Montfort, N., *Toward a Theory of Interactive Fiction*, 2003 (First published 8 January 2002) <http://nickm.com/if/toward.html>, accessed 29-04-2004, to appear in *IF Theory*, ed. Emily Short. St. Charles, Illinois: The Interactive Fiction Library, 2004

²⁸ Brooks, K. M., Do story agents use rocking chairs? The theory and implementation of one model for computational narrative. In *Proceedings of the fourth ACM international conference on Multimedia* (Boston, MA, USA, November 18-22, 1996). ACM Press, New York, NY, 1997, 317-328

²⁹ Brooks, K. M., *Metalinear Cinematic Narrative: Theory, Process, and Tool* (1999 MIT Media Lab PhD dissertation) <http://xenia.media.mit.edu/~brooks/dissertation.html> accessed: 15-04-2004

is insufficient³⁰. Others maintain the narrative and interactive fiction are wholly incommensurable³¹. In *Dissimulations*³², Cameron and Barbrook claim that “In its most fully realised form, that of the simulation, interactivity allows narrative situations to be described in potentia and then set into motion - a process whereby model building supercedes storytelling, and the what-if engine replaces narrative sequence.”³³

According to this view, in interactive fiction, a multilinear ‘what-if’ structure of potential narratives replaces the notion of the linear narrative and each user enacts one of those potential narratives. At first, this may seem like a way of saving the notion of narrative in interactive fiction. But, in practice, this model poses many problems. The first problem is that of exponential complexity:

Interactivity implies forking paths and each pathway must be written and fitted together. The greater the number of pathways, the greater the sense of textual play for the reader, and the greater the amount of work for the writer. The volume of story web increases exponentially with additional points of interaction.

Janet Murray even supplies a mathematical formula to describe this complexity:

Where K= the number of items chosen, and N = the number of items in the complete set, the number of possible choices is calculated like this: $N! / ((N-K)! (K!))$ ³⁴

Or, in other words, the amount of narrative possibilities increases exponentially relative to the number of narrative events and the maximal length of their non-repetitive combinations.

Barbrook and Cameron refer to an alternative to the multi-linear model, one that provides the maximal level of freedom for the user by dispensing with the network of narrative lines through spatio-temporal simulation, or VR. They maintain that despite the seamless temporal and spatial liberty that it affords, “the tradeoff between interactivity and richness of content holds true”.³⁵ Whatever may be attempted to solve the technical problem of complexity (see next section for examples), Cameron and Barbrook claim that there is a

³⁰ Frasca, G., *Ludologists Love Stories, Too: Notes from a Debate that Never Took Place* in Marinka Copier, M., and Raessens J., (Eds.), *Level Up Digital Games Research Conference*, 2003, Universiteit Utrecht, pp. 92-99.

³¹ See e.g.: Juul, J., *A Clash between Game and Narrative* [Master’s thesis, University of Copenhagen, Feb. 1999], <http://www.jesperjuul.dk/thesis/AClashBetweenGameAndNarrative.pdf> accessed: 28-04-2004

³² Cameron, A., & Barbrook, R., *Dissimulations*, 1998
<http://www.daimi.au.dk/~sbrand/mmp2/Dissimulations.html>, accessed 18-03-2004

³³ *Ibid.*, 3.

³⁴ Murray, J., *Combining Elements: How Many Variants?*, [1999 course website]
<http://web.mit.edu/21w765j/www/IN99/combo.htm>, accessed 08-08-2004

³⁵ Cameron and Barbrook, *op. cit.*, 5

deeper problem with narrative in interactive fiction: “The change from a linear model to a multi-linear or spatio-temporal(VR) model is more than just the change from a simple line to a more complex diagram or model; it involves moving from one kind of representation - and one form of spectatorship - to another.”

According to this view, narrative is just not the right strategy to represent the diegesis in interactive fiction, while the correct strategy of representation is in fact the *simulation*. This is how they explain the difference between the two:

If a story refers to a chain of events that have already taken place, that have been completed in some sense before the story begins (otherwise how could one tell a story about them?) what might an interactive story or simulation refer to? An interactive simulation appears to designate the conditions for events rather than the events themselves. The interactive simulation sketches a web of possibilities and constitutes a system for producing story events in time - a story engine. Closure - the cutting out and sequencing of events from the mass of possibilities - is effected by the spectator, albeit within a framework of conditions and possibilities designed by the author. [...] The moment the reader intervenes to change the story (at the nodes of multi-linear narrative or at every moment in a spatio-temporal simulator) is the moment when the story changes from being an account of events which have already taken place to the experience of events which are taking place in the present. Perfective becomes imperfective, story time becomes real time, an account becomes an experience, the spectator or reader becomes a participant or player, and the narrative begins to resemble a game.³⁶

The authors proceed to describe the opposing properties and connotations of narrative and simulation and chart the cultural implications of the shift in representation strategy. We will return to these later in the thesis. For now, it is enough to note the two problems of narrative representation in interactive fiction: the technical problem of complexity, and the categorical problem of representing past events through an experience occurring in the present.

II.1.2. Attempts to solve the problems of narrative representation

There are several ways to try to deal with this level of complexity. One approach is to use software tools, usually involving artificial intelligence, to manage either or both the planning or presentation of a multilinear narrative³⁷.

An interesting approach to salvage narrative structure in the spatio-temporal model³⁸ entailed structuring events in the environment in such a way that no matter what the user

³⁶ Cameron and Barbrook, op. cit., 9-10

³⁷ See e.g. Brooks (1999)

does, he or she will be encountering key events in a predefined sequence. This, in fact, creates a pseudo-interactive narrative, in which a sense of interaction is retained, but user choices do not affect the narrative structure in a meaningful way.

I agree with Cameron and Barbrook that the deeper problem of interactive fiction is the categorical error of trying to regard it as a form of narrative rather than as a form of simulation. However, there are two points that need to be made regarding the representation of the diegesis in interactive fiction cinema:

The first point has to do with what appears to be an omission not only of Cameron and Barbrook's but also – as far as I've read -- of Ludologists and Narratologists alike. All of them are overlooking the fact, that even in fiction cinema narrative is only one out of several possible way to represent a diegesis (see next section for a brief overview of some of the others).

The second point is about the deep problem of narrative representation. I believe that it is possible, at least in theory, to simulate the conditions for narrative representation itself (as well as all the other representational strategies) in a work of interactive fiction. This can perhaps be achieved by shifting user agency from *control* and *explicit choice* to *communication* with and *implicit influence* over a *storytelling character*, thereby (assuming the complexity problem has been managed), making the narrative a representation not of the diegesis but of what Montfort³⁹ calls a hypodiegesis – a nested diegesis within the main diegesis. A more detailed explanation of this idea appears in chapter IV.

II.1.3. Cinematic alternatives to narrative representation

The overall meaning in a work of fiction does not reside in the narrative representation of a diegesis but in the diegesis itself. The function of narrative representation is to use events and the spatial, temporal and causal relations between them to describe the workings of a fictional reality. However, narrative representation is only one way of representing a fictional reality. Films use other representational strategies as well. Bordwell and Thompson list among them the *rhetorical*, *categorical*, *associational* and *abstract* forms.⁴⁰

Rhetorical representation spells out an intended overall meaning for the diegesis as it sets out to present an argument and convince its audience.

³⁸ See e.g. Gaylean, T., *Narrative Guidance of Interactivity*, 1995 [MIT Media Lab, PhD thesis], <http://ic.www.media.mit.edu/Publications/Thesis/tagPHD/PDF/tagPHD.pdf> accessed 08-08-2004

³⁹ Montfort (2003), op. cit., section 8.

⁴⁰ Bordwell and Thompson (1997), 128.

Categorical representation treats a diegesis according to themes, subjects, categories and sub categories. In a non-interactive film, these can be organized alphabetically, hierarchically or in any other way.

Abstract representation treats diegesis elements according to their pictorial or acoustic qualities: colours and shapes, compositions, rhythms and so on.

Associational representation takes elements from the diegesis and juxtaposes them together to suggest an association.

II.1.4. Representational strategies of the diegesis in interactive fiction cinema

All five strategies—narrative, rhetorical, categorical, abstract and associative—can probably be employed also in interactive fiction cinema. In fact, except for the rhetorical form, which is probably the most sequentially oriented and authoritarian of all strategies of representation, it is quite easy to demonstrate how they can be coded in a database and decoded by algorithms. I will describe how I propose to do it in more detail in chapter IV. Interestingly, there have been attempts to describe the database itself as a representational strategy. Marsha Kinder⁴¹ attempted to analyze the films of Buñuel in this manner. Lev Manovich⁴² tried to oppose the database to narrative representation, claiming that database can be described as a symbolic form of the post-modern age in the same way that perspective (according to Panofsky) was the symbolic form of the modern age. I think both attempts are mistaken.

It is easy to see why Buñuel's films may be thought to support the notion of a database. They contain some odd phenomena such as the same character played by two different actors, collections of objects, characters or locations that seem not to belong to a film's diegesis and other such idiosyncrasies. However, all these irregularities can be accounted for by classifying them as combinations of the five representational strategies, especially the associational.

Manovich is mistaken in his understanding of what a symbolic form is. He seems to be unaware of the origin of the term. Panofsky did use it in "Perspective as Symbolic Form", but he took it from Ernst Cassirer⁴³. Cassirer's original term was systematically developed

⁴¹ Kinder, M., *Hot Spots, Avatars, and Narrative Fields Forever: Buñuel's Legacy for New Digital Media and Interactive Database Narrative*, *Film Quarterly* 55:4 (summer 2002), Berkley: University of California Press, 2002, pp 2-15

⁴² Manovich, L., *Database as a Symbolic Form*, 1998, <http://www.manovich.net/docs/database.rtf>, accessed: 28-04-2004

⁴³ Panofsky, E., *Perspective as Symbolic Form*, New York: Zone Books, 1991 (1927), p. 30.

in a 3-volume treatise⁴⁴. Cassirer does not supply a short definition of the term, but I will attempt to explain his concept. Symbolic forms are cultural systems of representation, developed concretely and historically. Such systems include language, myth, religion, history, mathematics, science and art. Each symbolic form constitutes its own categories of space, time, number, truth and value and confers upon them a coherent meaning. In short, for a cultural system to be called a symbolic form, it has to have both its own regime of representation of human experience, and its own procedure of producing meaning. Conversely, Manovich' idea of the database includes a regime of representation but not a procedure for producing meaning: "As a cultural form, database represents the world as a list of items and it refuses to order this list"⁴⁵. The database, in itself, does not confer meaning on the items that it codes. Unlike science, religion, art or perspective, it does not organize human experience in any meaningful way without the various interfaces and algorithms that are used to store and retrieve its data. It is, in fact, neither a cultural representation, nor a symbolic form.

But the idea of database is certainly relevant to our discussion of strategies of representation. By storing and indexing media elements in a database, it is possible to code elements of a diegesis in such a way that appropriate algorithms and interfaces will be able to retrieve them according to the various strategies of representation. But it is those strategies that structure the procedure by which we decode the information stored in the database and infer from it the diegesis and its meaning.

II.2. Structure

In the previous section of we encountered two structural models for interactive audiovisual fiction, as described by Cameron and Barbrook: the multilinear and the spatio-temporal models. There are more structural models than just those two, but before we can list them, I propose to look below the level of model, and examine the factors and building blocks with which both the text and the interactive experience of an interactive fiction film can be combined to form a model.

II.2.1. Material medium and Granularity

The most immediate factor in determining the structure of a text is the type and granularity of its basic elements – its minimal components of meaning. This in turn depends on the material conditions involved in the production of each work's images and sounds, whether synthesized, recorded, or a combination thereof.

⁴⁴ Cassirer, E., The Philosophy of Symbolic Forms, Volumes 1-3, New haven and London: Yale University Press, 1955 (1922-9)

⁴⁵ Manovich (1998), op. cit.

II.2.1.1. Material medium: Synthetic vs. recorded media

Interactive Fiction Cinema is a computer-based medium, and in that sense, all the information contained in it is digital, and thus potentially infinitely malleable. But, in practice, it matters whether the images and sounds are produced synthetically and are thus completely digital, or whether they are recorded and then digitized. In a possible future, image recognition technologies, which would enable for a semantic layer to be inserted automatically into a recorded image, may make this distinction obsolete, but for now it holds.

II.2.1.2. Types of syntactic units: shots vs. objects

Granularity, as defined by Brooks is “the chosen unit size for building story”⁴⁶ in interactive cinema. This is indeed the case when the material medium is recorded images. When recorded media is used, the minimal story unit would correspond (for the image track) to the cinematic unit of the “shot” - a section of recorded video, with a certain temporal length. This dictates the use of ‘analogue’ cinematic grammar, which takes a rather complex entity as its basic unit. In this case, the concept of granularity applies, and thus a story can be built either from minimal units or from even more coarse units: scenes, sequences or entire films. Granularity, in a text composed of recorded media, determines the level and grammar of a text’s malleability.

Conversely, when synthetic media is used, the minimal basic unit can potentially be anything that can be defined as an object (in the software sense), whether it is a character, a character’s left foot, an action, a shot size, a composition of various element or virtually anything else. The grammatical possibilities here are endless and largely unexplored, and the hierarchical concept of granularity doesn’t seem to apply.

II.2.2. A Typology of Interaction Models

I propose a typology of interaction models for interactive fiction video, in relation to the three components of its interaction cycle: Interfase, diegesis and the interactor.

II.2.2.1. Locus of Interaction

Interaction in interactive fiction cinema can occur at either of two loci – the diegesis or the presentation.

II.2.2.1.1. Presentational interaction

Non-diegetic interaction refers to any type of interaction that occurs at the level of presentation alone, without affecting the diegesis. Examples of this type of interaction

⁴⁶ Brooks, 1996, op. cit., p. 22

include zapping, navigation (whether spatio-temporal or through hyperlinks and hotspots), controlling , volume and other image or sound qualities in the presentation.

II.2.2.1.2. Diegetic interaction

Diegetic interaction would be interaction that affects elements in the diegesis, be they objects, characters or events.

A particular work may have a combination of both loci – it is possible to navigate through a spatio-temporal simulation as well as to engage elements within it.

II.2.2.2. Interface: Input devices

II.2.2.2.1. Active vs. Passive

Input devices can be either active or passive. Passive devices are only activated when a user manipulates them. Such devices are, for instance, the mouse, keyboard, joystick, or touch screen. Active input devices are such devices that receive continuous input whether the user is active or not. Such devices are, for instance, cameras, microphones, tracking devices or brain interfaces.

II.2.2.2.2. Dynamics: Discrete vs. continuous input

Discrete input is the result of user actions that are performed by clicking a button, a hyperlink or a hotspot, selecting an item from a menu, entering text or voice commands and so on.

Continuous input is the result of any user action that has a temporal and dynamic character - body gestures, dragging a mouse, pressing a dynamic midi keyboard, continuous voice input and so on.

II.2.2.3. Interface: Output devices

II.2.2.3.1. Active vs. Passive

A distinction between active and passive applies also to output devices. Passive output devices include displays and monitors, speakers, force feedback joysticks and any other device which essentially outputs only signals. Active output devices, on the other hand, are able to produce material changes in the physical world. Such devices include, for instance, printers, robotic arms and any other sort of machinery capable of acting upon the physical world.

II.2.2.3.2. Sensory modality

It is possible to further classify the multiplicity of passive output devices according to the sensory modality towards which it is geared. Speakers are geared towards our sense

hearing, displays towards our sense of seeing etc. Interactive Fiction Cinema relies on there being at least one visual and at least one auditory passive output devices.

II.2.2.4. Interface: Environment

The environment in which an interface is located is also a factor in the experience, as it frames the conditions of reception. Structurally, the main distinction should be between a controlled environment and a variable one. A controlled environment allows the author to eliminate noise from the structure of the work. In an uncontrolled environment, the author has to factor in all sorts of disturbances, such as interrupted sessions, incidental light and sound etc.⁴⁷

II.2.2.5. Interface: Connectivity⁴⁸

Connectivity refers to the ability to create network connections to other computers, and through them to other users, creating a shared diegesis or a shared interactive experience. Connectivity can be either present or absent.

II.2.2.6. Towards a Phenomenology of Agency

Mateas, following Murray, defines the interactor's sense of agency as "the feeling of empowerment that comes from being able to take actions in the world whose effects relate to the player's intention"⁴⁹. Mateas refers to agency as a quantity and claims that user agency is dependent on a successful accomplishment of intended results:

If, in manipulating the interface elements, the player does have an effect on the world, but they are not the effects that the player intended (perhaps the player was randomly trying things because they didn't know what to do, or perhaps the player thought that an action would have one effect, but it instead had another), then there is no agency.⁵⁰

This claim is perhaps not false, but it is problematic, because it doesn't legitimate the challenging and exploratory aspect of an interactive experience and the variety of possible relationships between actions and results. I would like to extend Mateas' definition by pointing at a few *qualities* of this sense, by looking at the person, mode of intention and style of an interactor's action in the diegesis.

⁴⁷ A full discussion of the implications of noise on the design of desktop hypertext will appear in Miles, A., *Softvideography: Digital Video as Postliterate Practice*, a draft of which can be found on this website: <http://hypertext.rmit.edu.au/essays/CybercultureSoftvideography.pdf>, accessed: 02-06-2004

⁴⁸ I'm not sure whether network connectivity is properly a part of the interface or a separate principle

⁴⁹ Mateas, 2001, op. cit., p. 51

⁵⁰ *Ibid.*, pp. 51-52

II.2.2.6.1. *Person: Mediated vs. Direct action*

Mediated agency occurs when user actions are effected via proxy. This is the case, for instance, in Tomb Raider, Doom, Quake and many other video games of the same genre in which the user controls an avatar. *Direct* agency occurs when no such proxy is present, for instance in Myst.

II.2.2.6.2. *Intention: Control vs. communication*

User agency can have either of two modes of intention: *control* or *communication*.

Control is by far the most common mode of agency in interactive experience (whether diegetic or not), apparent whenever a user enters a diegetic command or an extra-diegetic directive⁵¹, picks up an object to add to inventory or selects an item from a menu. In all these cases, user actions lead directly to their intended results. Control implies explicit choices made by the interactor.

Communication is still a rare modality to come upon. It occurs only when the user is able to use the interface to conduct a sustained dialogue with another agent, for instance with a character within the diegesis. Communication implies behaviour rather than explicit choice.

Usually, this mode would require the presence in the diegesis of an agent with some level of artificial intelligence. A minimal example of communicative mode that does not require any AI is Chris Hales' Interactive video CD-Rom work "Len's stories"⁵². In this simple work, the character, Len, tells anecdotes from his life. The user is required to touch the screen often, in order to persuade Len to continue. Otherwise, Len will stop and scratch his head, drink water or branch off to a new anecdote before he has finished the current one.

II.2.2.6.3. *Behavioural style: execution, performance, interpretation and expression*

Mateas writes that:

...in order for an interface to be said to afford a certain action, the interface must in some sense "cry out" for the action to be taken. There should be a naturalness to the afforded action that makes it the obvious thing to do. For example, the handle on a teapot affords picking up the teapot with your hand. The handle cries out to be grasped. In a similar manner, the material resources in an interactive drama afford action. Thus these resources not only limit what actions can be taken (the negative

⁵¹ Commands and directives are discussed in Montfort, 2003, op. cit. Section: Cycles, Exchanges and the IF world

⁵² Chris Hales, Len's Stories, 1999

form of constraint) but cry out to make certain actions obvious (the positive form of constraint).⁵³

I think the above is true only regarding a certain style of interaction, which is indeed the only style available through most game interfaces. But agency can further be qualified by the interactor's style of behaviour, when the interface enables that style to effect itself in the diegesis. I identify four possible styles of interaction behaviour, although there may be more: execution, performance, interpretation and expression.

Execution is the most straightforward style, or in fact it is what the interactor does as a *user*, when the interface does not “cry out” for an interactor's personal style to manifest itself. The interactor responds to an obvious intended result already implicit in the interface.

Performance is a more complicated style, apparent when a user interacts with a challenging interface, such as musical instruments. User actions require more effort and skill to achieve intended results.

Interpretation is a personal style choice in which, despite obvious intentions implicit in the interface, an interactor has some leeway to explore and subvert the possibilities, make up his own intentions and still follow the pattern of effects in the diegesis. Grand Theft Auto 3 is perhaps an example of a videogame that allows this to occur.

Expression is an advanced form of interpretation. It appears when an interactor has already internalized her mastery over a challenging interface that does not necessarily cry out for any specific action to be taken but is rather, like a musical instrument, a creative tool. The interactor's mastery of her skills makes her interaction seem effortless, and allows her to not only transcend and interpret intended results implicit in the interface, but to also convey through it her own personality. In this type of interaction, the interactor can perhaps be considered to be “playing with forms” rather than “playing with things” – to use Cassirer's distinction mentioned in I.2.3 above.

II.2.3. Structures of interactive fiction cinema

We've seen five principles with which to classify the structures of the body of works, past present and perhaps even future, of interactive fiction video. Table 1 sums these up.

A full description of a work's structural model would entail a full analysis of its interaction model as well as the grammar that arises from its type of minimal unit and level of granularity. In that respect, the two models suggested by Cameron and Barbrook (multi-linear and spatio-temporal) supply only a partial understanding. The same can be said

⁵³ Mateas, 2001, op. cit., p. 53

about the description of the seven models suggested by Daniels⁵⁴. Such general and partial models are useful in providing a framework for discussion, but they fail to provide all the categories necessary to understand the way each work or group of works produces its meaning and experience.

Syntactic Units		Shots	Synthetic vs. recorded
		Objects	Minimal vs. coarse level
Locus			Diegetic vs. presentational
I n t e r f a c e	Input devices		Active vs. passive
		Dynamics	Discrete vs. continuous
	Output devices	Active	
		Passive	Sensory modality
	Environment		Controlled vs. variable
	Connectivity		
User agency		Person	Mediated vs. direct action
		Mode	Control vs. communication
		Style	Execution, performance, interpretation, expression

Table 1. Structural elements of interactive fiction video

A full and systematic development of general structural models for interactive cinema is outside the scope of this thesis. In chapter IV I will, however, employ the principles and categories suggested here to analyze one of my own works as a test case.

⁵⁴ Daniels, D., *Strategies of Interactivity*, <http://www.medienkunstnetz.de/source-text/65/>, accessed: 08-07-2004, section 6. His list of models applies not only to interactive fiction cinema, but to all forms of media-assisted interaction. It includes:

- Interaction with a video story through multiple options
- Interaction with a closed data world through which the viewer can navigate
- Interaction through body interfaces
- Data structures subject to dynamic self-development and influenced by interaction
- Dialogue-based models
- The ‘exemplary viewer’
- Collective structures

CHAPTER III: AESTHETICS

The aim of this chapter is to formulate a normative aesthetics of interactive fiction cinema in the current artistic context. We will begin by defining the social and cultural context which is art and from which such an aesthetics can derive its meaning. From general aesthetics we will move to aesthetics as it is applied to art, to specific artistic forms, to interactive fiction cinema as such a specific form, and finally to interaction authoring as the artistic practice of that form.

III.1. General Aesthetics

III.1.1. The social status of taste judgments

In order to enter into a normative discussion about an aesthetics of any particular artistic form, we must first properly understand the social and cultural context within which such an aesthetics is possible. A likely place to start our quest to understand the cultural discourse of aesthetics would be a seminal book by a sociologist about taste judgments: “Distinction – A Social Critique of the Judgement of Taste”, by Pierre Bourdieu⁵⁵.

Some people may believe that Bourdieu claims that taste judgments (and by extension all normative discussions in aesthetics) are, in principle, objectionable, since they are in fact merely social distinctions, made by people of one social group or class to distinguish themselves from others whom they regard as their subordinates. My claim would be, that if that is the case, and since a society in which people do not make taste judgments is unthinkable, it is important to discuss taste judgments, justify or refute them, openly. Moreover, there may be grounds to think that this is what Bourdieu himself, or at any rate his text, actually means. My further claim would be that social distinction is indeed one of a few social functions of taste judgments, but not necessarily an objectionable one; nor are taste judgments reducible to it.

Let us examine the text. The following passage concludes the introduction:

The denial of lower, coarse, vulgar, venal, servile—in a word, natural—enjoyment, which constitutes the sacred sphere of culture, implies an affirmation of the superiority of those who can be satisfied with the sublimated, refined, disinterested, gratuitous, distinguished pleasures forever closed to the profane, That is why art and

⁵⁵ Bourdieu, P., *Distinction – A Social Critique of the Judgement of Taste*, London, Routledge, 1984 (1979)

cultural consumption are predisposed, consciously and deliberately or not, to fulfil a social function of legitimating social differences.⁵⁶

A cursory reading of this strategically placed passage, one that concludes the programmatic introduction to a seminal book (and thus the last passage many readers will have actually read), might direct our attention to the conclusion: that taste, applied to art and (conversely to) cultural consumption, has the social function of legitimating social differences. An even more cursory reading would perhaps suggest that Bourdieu claims that the only function of taste (since different classes tend to have different preference-patterns) is to legitimate (otherwise illegitimate) social differences. An obvious implication of such reading would be, that taste judgments are not worth much, that they are nothing but control mechanisms used by the powerful to subordinate others, and that they certainly can't have any legitimate normative authority. I do not think this fully captures what Bourdieu's text actually means.

Bourdieu certainly does state that the legitimating of social differences is (or tends to be) a social function of aesthetic distinctions. However, is it the only social function of taste? Bourdieu specifically mentions another function, by referring to 'those who can be satisfied' with a certain, specific, type of pleasure. This "ability to be satisfied", this special skill which is 'forever closed to the profane' is in itself another social function of taste, this time understood not as an arbitrarily deployed, socially-stratifying preference. Properly understood, taste is a socially significant skill, a conduit to a certain type of knowledge, and thus a conduit to power.

This interpretation of the last passage of the introduction is vindicated already in the first passage of the first chapter of the book, in which Bourdieu poignantly states that "...the judgement of taste is the supreme manifestation of the discernment which, by reconciling reason and sensibility...defines the accomplished individual"⁵⁷. It also helps elucidate a previous passage from the introduction, in which Bourdieu refers to the "reintegration of aesthetic consumption into the world of ordinary consumption"⁵⁸ as being barbarous. Bourdieu seems to believe that the judgement of taste is an important – although socially abused - human faculty, a vital social skill distorted by a barbarous misappropriation, and that in a civilized social reality aesthetic experience (as a civilizing force against nature), should be dissociated from (and contrasted with) ordinary consumption. There is more than a hint here that Bourdieu himself has his own normative views on aesthetics.

⁵⁶ Ibid. p. 7

⁵⁷ Ibid. p. 11.

⁵⁸ Ibid. p. 6.

By using terms such as ‘disinterested’ and ‘reconciling sensibility and reason’ – as well as by the very title of his book and even by a direct reference⁵⁹ - Bourdieu is clearly alluding here to the Kantian tradition of high aesthetics, inaugurated in 1790 with Kant’s *Critique of Judgement*⁶⁰. This philosophical tradition regards as favourable the sort of pleasure (aesthetic pleasure, disinterested interest), which is the result of attention to form, rather than to content. Bourdieu’s claim, substantiated by empirical research, is that this taste for aesthetic pleasure is (has become) characteristic of a specific social class but not of other classes, and that this social distribution of the skill for aesthetic pleasure, and the power politics which are a result of this inequality, are denied. Bourdieu points out, that in order to be able to appreciate things aesthetically, in order to enjoy the forms of things without regard to their usefulness, one has to have enough cultural capital. That, in turn, is a result not only of formal education given at a state school, but also more significantly of informal education which is given within the family and thus dependent⁶¹ on social origin.

There is nothing wrong with this claim factually. As long as cultural capital is distributed unequally along class lines, it is very likely that people will abuse this (as well as all other forms of) capital and the skills that it affords them to assert their social status. However, there is something missing in Bourdieu’s thesis.

Bourdieu’s social critique of the judgement of taste accounts for the differences in taste between people of different professions and social origin. It does not, however, account for the very interesting differences in taste between people of similar profession or social origin. As Bourdieu’s own empirical data illustrate, there is no consensus within any social group or class over matters of taste. This alone shows that taste is irreducible to social positions.

To those who at this stage still maintain that Bourdieu is somehow trying to undermine the Kantian tradition in high aesthetics – although I believe I was able to demonstrate that he does not – it must be said that correlating a philosophical theory with a certain social class cannot seriously be taken as a logical refutation of that theory. In fact, one could equally claim that Bourdieu’s analysis reinforces the status of the Kantian tradition by pointing out the correlation between those who subscribe to it and those who hold cultural capital. This correlation may, just as likely, suggest that upholding a Kantian view of aesthetics – being able to experience aesthetic pleasure - increases one’s cultural capital. If that is so, surely it would be advisable to introduce into the school system such policies as would be required to distribute enough cultural capital to every pupil, so that everyone would have enough of it – regardless of social origin - to develop the skills required to articulate their aesthetic

⁵⁹ Op cit.

⁶⁰ Kant (1987).

⁶¹ Bourdieu, op. cit. p.13.

preferences. If that becomes the case, the ability to participate in a developed discourse about taste will no longer be the property of a class but a public asset.

What Bourdieu clearly does not do, is claim that the judgement of taste is insignificant. Quite the contrary – he dedicates a book to it, which, if read properly, reaffirms and relegitimizes taste judgements. Bourdieu does not trivialise the judgement of taste, but, very importantly, elucidates its social nature, social pervasiveness and social importance.

What should be the consequence of this conclusion? What are the implications of realizing the importance of this social phenomenon? One such implication is the ensuing realization that taste judgments accompany and influence every decision we make, from the most banal to the most venerated. Since that is the case, then it would be preferable if everybody were skilled in making such judgments. Surely, there would have to be some sort of social activity through which people, from an early age, would be able to exercise and develop their taste-formation skills, their aesthetic sense of distinction. Arenas for this activity must be cultivated and rendered accessible to every individual of every social class or group.

III.1.2. The social significance of art

If we are seeking a social arena for the collaborative cultivation of our aesthetic faculty, we need look no further than art. Art is precisely that – the cultural field dedicated to the aesthetic. Like science, art has constituted itself, ever since the renaissance and increasingly in the 20th century, as a discourse. This is a crucial property of art as a cultural field: being a discourse, it has developed the ability to reflect upon its own forms, methods and institutions. Thus, art has become the primary cultural field in which we develop our aesthetic knowledge of the world, just as science is the primary cultural field in which we develop our empirical knowledge of the world. In fact, both types of knowledge are important and essential to us, if we want to fully participate in culture. Likewise, just as the lack of absolute truth in science does not stop us from evaluating scientific knowledge, the lack of agreement on objective and universal values in art should not preclude us from discussing our tastes, our aesthetic values.

What do we mean by aesthetic knowledge? It is the knowledge we gain about things through deliberate attention to their forms. This form of knowledge is different from scientific knowledge in its nature, values and therefore in some of the procedures we use to gain it or evaluate it. We may even hold scientific knowledge in higher esteem, but aesthetic knowledge is perhaps of no lesser importance. To an extent, aesthetic knowledge even lies at the basis of scientific knowledge itself.

Scientific thought makes use of certain methodological procedures. One such principle is that of Ockham's razor, or the principle of parsimony: "a bias towards simplicity in

theory construction, where the parameters of simplicity vary from kinds of entity to the number of presupposed axioms".⁶² Thus, although we could consistently explain or describe our physical reality using the assumption that there are 23 dimensions rather than 4, we prefer the theory that there are four dimensions, not because we have acquired empirical evidence to that effect, but (merely) because it is simpler, and by virtue of being simpler, preferable⁶³. However, there is nothing logically necessary about the principle of Ockham's razor. Upon careful examination, we will readily conclude that, from a logical perspective, such a principle seems arbitrary. In fact, it is essentially a formal principle. As such, it is an aesthetic principle – we prefer theories whose form is somehow perceived to be simpler. Thus, scientific theories are (at least sometimes) selected according to a fundamentally aesthetic principle.

This reliance on aesthetic knowledge in rational decision-making is by no means unique to science. Research in empirical aesthetics⁶⁴ has shown that aesthetic distinction plays an important part in human experience. A keen sense for tastes, smells and other appearances and forms has always been essential to human experience and sometimes even to survival⁶⁵. It still plays a part – sometimes explicitly but always implicitly - in every form of decision-making, and is especially important in circumstances that require an immediate judgement and do not allow for a calculated one. In such circumstances, having the right set of preferences, having the good taste to make the appropriate judgement, can make a difference.

Aesthetic knowledge, it has to be emphasized, is not arbitrary, even if it may appear so from a logical perspective. Rather, it is intuitive knowledge, in the sense that it does not present itself as the result of an explicit thought process but rather as direct and immediate observation, as perception. However, as cognitive psychologists have shown us⁶⁶,

⁶² Honderich T., (Ed.), *The Oxford Companion to Philosophy*, Oxford, Oxford University Press, 1995, p. 633

⁶³ This preference for simplicity in explaining complexity is of course not limited to science, where it has reached its zenith with Albert Einstein's theory of general relativity. It is also an aesthetic principle, first formulated by Aristotle as the unity of multiplicities. It can also be seen in the development of religions from polytheism through monotheism to atheism. We may be currently be undergoing a radical reversing of this preference. Since the end of the 19th century, reverse trends have begun to appear in all areas of culture: in physics with quantum theory and the current interest in the multiplicity of elementary particles or chaos theory; in mathematics with the introduction of non-Eucledian geometries; in biology with the Gaya hypothesis and the study of ecosystems; in humanities with relativism and anti-narrative; in political thinking with the new emphases on diversity and 'multiplicities' (Negri and Hardt); in religion with the renewed interest in the west in paganism, eastern religions and spirituality; and in the arts with the dissolution of perspective in the visual arts, tonality in music and linear narrative in the dramatic arts, as well as with collaborative, participatory and interactive practices.

⁶⁴ For example: Berlyne (1974), and the entire tradition emanating from it and centred around the International Association of Empirical Aesthetics (<http://www.ume.maine.edu/~iaea/>).

⁶⁵ For example, Appleton, J., *Prospect and Refuge*, in Nasar (1992), pp. 27-44.

⁶⁶ For example: Gibson (1968). This approach is also reflected in a rich tradition of cognitive analysis of the cinematic experience, especially of (but not limited to) narration – e.g. Bordwell (1988), especially his

perception is highly dependent not only on our senses, but also on previous experience: babies perceive the world differently than children, children differently than adults, people from one culture differently than people from another and so on. Perception is thus a reflection of acquired skill, a skill that we can develop into aesthetic knowledge. Aesthetic knowledge, therefore, is the internalised, coded and compressed knowledge that is the result of the sum of our previous experiences, and which manifests itself as intuitive perception⁶⁷.

Here also lies the main difference between aesthetic knowledge and scientific knowledge. Aesthetic knowledge, being the result of direct observation and experience, is inductive. Scientific knowledge, being the result of experimental observations and verified methodologies, is deductive. Inductive knowledge, as Hume was the first to point out, is not verifiable. The fact that the Sun has always risen is not a guarantee that it would rise tomorrow. Inductive knowledge is probabilistic at best. We can rely on it only to say that the Sun will probably rise tomorrow. Deductive knowledge, on the other hand, is verifiable – if we know the physical laws governing the movements of celestial bodies, as well as the current situation of all those bodies, we will know whether the Sun should rise tomorrow.

These differences between the two types of knowledge also have implications on the status of scientific and taste judgments. Scientific judgments are objectively true or false. If we have a dispute about them, we also have an agreed upon procedure to solve that dispute, one way or the other. Aesthetic judgments are different: being grounded in intuitive perceptions, that are in turn the result of inductive processes which may vary greatly between individuals, they are inherently subjective. Does this not lead us again to a dead end? Does it not again preclude us from having a meaningful discourse about our tastes and preferences?

Taste judgments are indeed subjective – but not irredeemably so. After all, people often do agree with each other in matters of aesthetic taste. How is it possible? For two people to reach a similar taste judgement about a certain object, they first have to perceive it in the same way. While perception is also a result of experience, it is at the same time a matter of our common sensory mechanism. This puts a limit on the diversity of our perceptions and makes agreement on perception possible and negotiable. Furthermore, inasmuch as perception is the result of experience, a similarity in taste may be a reflection of similarity of experience. This is corroborated by Bourdieu's data, according to which people from similar backgrounds share similar – although clearly not identical tastes. We thus come to a

discussion of perceptual schemata (pp.). See also Berleant, A., *Aesthetic Perception in Environmental Design*, in Nasar (1992), pp. 84-99.

⁶⁷ This view of aesthetic judgement parts with Kant, who claimed that aesthetic knowledge is “disinterested attention” – a pure interest in forms, disconnected with their function. I agree with Kant that during a concentrated aesthetic experience (such as we may have with art) this is essentially the case. However, I believe that our aesthetic faculty is part all of our experiences and that knowledge of forms, outside art, is not free from interest.

deeper understanding of the social function of taste judgements: through taste judgements, we learn about other people's experiences. When they have similar tastes to ours, we feel they have undergone similar experiences to ours, and vice versa. Finally, when disagreement about taste occurs, we can try to influence each other's attention in a way that alters our perception and consequently our aesthetic judgement. This is what good critics or teachers do.

Our aesthetic knowledge is therefore of paramount importance. The need to have a keen sense for forms is essential to every human being, as essential as the need to have a sharp logical mind, a capacity for rational thought, emotional sensitivity or moral sensitivity. This is the social importance of taste judgements.

III.1.3. What is a good artwork?

To determine what a good artwork is, we need to look into the cultural function of art. A good work of art would be one that fulfils that function well. So we now have to split the question in two: What is the cultural function of art? How does an artwork fulfil this function well?

Art is the cultural field on which we can collaboratively engage in the development of our aesthetic faculty.* Being a shared social project, art is always historically and culturally determined. Art changes its particular forms, subjects and function from one social context to another, from one period to another. Yet, across time and context, the basic cultural function of art remains the same: the development of our aesthetic sensibility.

One general criterion for good art, therefore, is that it heightens our experience of the world, makes us reflect upon it, and leaves a trace on our decisions and courses of action. In that, good art is the opposite not only of bad art (which shares with good art its intentions, but fails), but also of entertainment. Entertainment diverts us from reflection, thereby diluting our experience of the world and making us numb, passive and predictable.

A second general criterion for good art derives from its historical, cultural and social context. An artwork does not exist unto itself, and its value is not inherent to itself. Every specific work of art has to be understood and evaluated (even retrospectively), according to its contribution within the specific context in which it is created – and this context is never the same. To be considered good, a specific work of art has to make an original contribution within its context.

* As noted in the previous passage, it is lamentably true that this field is typically (and hopefully temporarily) not equally accessible to everyone, since one does indeed need sufficient cultural capital to play on the field. This problem however, is true of every field and the solution to it is political and outside the scope of this work.

Another, particular criterion for good art is specificity of medium. The different media and their combinations, through their specific forms, each have a particular function, the fulfilment of which may be considered good. Each specific medium engages a different aspect of our experience. Theatre engages (primarily) our interest in human behaviour, music engages our hearing and painting engages our seeing. Thus, good theatre may be evaluated, primarily, on how it heightens our sensibility towards the dynamic forms of human behaviour in all of their dimensions, and painting will be judged primarily on how it heightens our sensibility towards the experience of seeing, in all of its dimensions.

Artistic disciplines that combine media, such as cinema and even more so interactive cinema, are required to strike a balance, in their requirements from our constrained attention to form, between their constituent media.

The fourth and last criterion is formal. A good work of art should be deliberate in every detail. This is, I think, the meaning of performing a function well. Every detail in the work has to be justified in its contribution towards the whole of the work.

To sum up, a good work of art will be one that makes original contribution to our aesthetic experience of the world, within the context of its medium, culture, society and time, and formally justified.

III.2. An Aesthetics of Interactive Fiction Cinema

Interactive Fiction Cinema is a combined medium. Therefore, to establish its aesthetics, we need to understand the function and context of its constituent media—Interaction, fiction and cinema—and the balance between them.

III.2.1. Good Interaction

Following the general criteria for good art, there emerges an overall criterion for good interactive art, where interactive art is taken to be a specific medium with a specific context. The function of interactive art is to develop our aesthetic understanding of interaction: with the world, with other people, and with technology. The function of an interactive artwork is to direct our aesthetic attention to the way we interact. By directing our attention to the specific forms of our interactions, good interactive art should make us more aware of our experience(s) of interaction, and make us reflect upon all the dimension of meaning which interactive experience entails. Good interactive art should leave a trace on our real interactions, outside the protected aesthetic realm of art, and perhaps even move us to real action,

Interactive entertainment, on the other hand, distracts its consumer away from reflexive aesthetic attention. It masks its own determinacy, and is thus experienced as a facile substitute for real action.

Good interactive art should also be understood within its specific historic and cultural context, especially in relation to its own history as an artistic context and to the general context of interactive technology, of practices ensuing from these technologies and their implications on culture, society and individuals.

III.2.1.1. The current artistic context of interactivity

A full account of the current artistic context of interactivity is beyond the scope of this thesis. However, to illustrate the importance of such a context, let's have a look at two examples of the use of zapping in interactive art.

In his historical account of artistic interactivity, Dieter Daniels⁶⁸ writes about 'Imaginary landscape No. 4' a musical composition written by John Cage in 1951. The instructions for the performance of the piece included using 12 radio sets as musical instruments according to the composer's specifications. Since this was done at a time when the remote control had not yet been invented, and the ensuing practice of zapping (with all its implications) had not yet evolved, Cage's piece was a truly original contribution, pointing to and even prefiguring the potential of new technologies. On the other hand, on January 1st 2000, Thomas Vinterberg, Lars von Trier, Søren Kragh-Jacobsen and Kristian Levrin created 'D-dag'⁶⁹, a TV production in which four different points of view were broadcast simultaneously on four TV channels in Denmark, and viewers were invited to zap between them. By then, almost 50 years after Cage's pioneering piece, the creators of D-Dag were falling behind contemporary developments, using a very expensive broadcast technology to create yet another hypervideo piece with no diegetic agency.

And indeed, hypervideo works without diegetic agency seem to be the dominant non-videogame form of interactive fiction video – whether they are produced for desktop, web or location-based settings.

As stated above in III.1.3, an original contribution is an important criterion for the evaluation of a work. This contribution is always context and time dependent, and thus not a function of the work in itself. But it is part of the considerations that an artist would be wise to take. A good interactive fiction video will thus be one that, for instance, raises an original contribution in its interaction model, especially if that model either reinforces and preferably problematises the interactor's diegetic agency.

III.2.1.2. The current cultural context of interactivity

A full account of the current cultural significance of interactivity is beyond the scope of this thesis. But since good art has to engage this context, as it guides the interactors'

⁶⁸ Daniels, 2004, op. cit.

⁶⁹ D-Dag, http://www.geocities.com/lars_von_trier2000/d-dag.htm, accessed: 08-08-2004

expectations and perceptions, I will provide a few pointers to current discussions of this context. Broadly speaking (very broadly), there are two polarized approaches to interactive technologies – utopian and dystopian. The utopian approach has been referred to, perhaps metonymically, by Cameron and Barbrook as “The Californian Ideology”⁷⁰, the name of their dystopian critique of the utopian approach. Jean Baudrillard⁷¹ can also be regarded a proponent of a dystopian approach. Daniels⁷² contains a historical review of the subject.

Whether we regard interactive technologies with admiration or derision, whether we expect them to bring salvation or armageddon, freedom or enslavement, is a matter of personal opinion. What matters is, that interactive technologies occupy an expanding space in the daily experience of people, certainly in the northern hemisphere (and their relative)

III.2.1.3. Aesthetic values and criteria for interactivity

I am not familiar with any work in philosophical aesthetics that takes interactivity as its topic and tries to identify its aesthetic values.

Aesthetic criteria become particularly important (even critically so) when they are used to determine awards. In such a context, in the guidelines for the ACM interactions design awards (for interactive products design) Laurelee Alben suggests asking about the aesthetic experience (of an interactive product):

Is using the product an aesthetically pleasing and sensually satisfying one? Is the product cohesively designed, exhibiting continuity and excellence across graphic, interaction, information and industrial design? Is there a consistency of spirit and style?⁷³

Excellence is of course an obvious and self-referential criterion, in need of further analysis, but the rest of it is not much better. It isn't very clear what is meant here by cohesion and continuity – whether it refers to interaction itself, or to the entire gestalt of graphic, interactive and informational qualities. There is an emphasis on ‘pleasing’, ‘satisfying’, ‘cohesion’, ‘consistency’ – positive aesthetic terms indeed, but not very well specified.

Gloriana Davenport, who heads the Interactive Cinema group at the MIT medialab, seems to support a similar positive criterion, which she calls fluidity: “Perhaps the most

⁷⁰ Cameron, A., and Barbrook, R., *The Californian Ideology*, August 1995, <http://www.hrc.wmin.ac.uk/theory-californianideology-main.html>, accessed 20.7.2004. See also a response by Wired magazine editor Louis Rossetto - Rossetto, L., *Rebuttal of the Californian Ideology*, October 1998, http://www.alamut.com/subj/ideologies/pessimism/califIdeo_II.html, accessed: 20.7.2004

⁷¹ Baudrillard (1995)

⁷² Daniels, 2004, op. cit.

⁷³ Alben, Laurelee, *Quality of experience: defining the criteria for effective interaction design*, in *Interactions*, Vol. 3, issue 3 (May/June 1996), p.11-15, New York, ACM Press, 1996, p. 13

important aesthetic of a computational content environment is fluidity - fluidity of expression and fluidity of manipulation devices.”⁷⁴ Again, not much is offered to specify what it is that flows, and what affects this flow.

Mateas, in an attempt to create a theory of drama in the context of game design (a synthesis between Aristotle and Brenda Laurel does offer a more specified and contextualized formulation of what seems to be a similar positive criterion:

We are now ready to propose a prescriptive, structural model for agency. *A player will experience agency when there is a balance between the material and formal constraints.* When the actions motivated by the formal constraints (affordances) via dramatic probability in the plot are commensurate with the material constraints (affordances) made available from the levels of spectacle, pattern, language and thought, then the player will experience agency. An imbalance results in a decrease in agency.⁷⁵

In paraphrase, a good design for a videogame will maintain a *balance* between the pattern of available and unavailable user actions in the interface (material constraints and affordances) and the corresponding pattern of effects these may have on the diegesis (formal constraints and affordances).

The descriptive content of Mateas’ description of the aesthetic experience of diegetic interaction is convincing and well articulated. The prescriptive claim—which he shares with Alben and Davenport—may indeed be valid for effective, pleasing, coherent, flowing, well balanced, entertaining and commercially successful videogames or other interactive consumer products. It reads like an adaptation of Aristotle’s definition of beauty as ‘unity in multiplicity’. But is it suitable as a criterion for good interactivity in the artistic context?

In an amendment to the ACM interactions award guidelines, Andruid Kerne challenges the notions of ‘aesthetic pleasure’ and ‘continuity’, which he admonishes as culturally specific. He offers an alternative, multicultural approach and suggests asking:

Early 20th-century art works, such as the assemblages of Marcel Duchamp, long ago broke our notion of the privileged masterpiece. Discord and disjunction may be just as valid as cohesion and unity. What is critical for work in all media is attention to the whole across diverse dimensions. The Chinese painter and calligrapher Kwo Da-Wei writes, “Natural ugliness can be artistically beautiful. The scope of subject matter is unlimited. The Ya [elegant, refined] flavor [sic.] lies in the quality of the brushwork, not in subject matter.” [8, p. 81]⁷⁶ The qualities “aesthetically pleasing and sensually satisfying,” as well as “exhibiting continuity,” reflect a culturally

⁷⁴ Davenport, G. *Bridging Across Content and Tools*, *Computer Graphics*, 28:1, 1994, p. 31

⁷⁵ Mateas (2001), op. cit., p. 54

⁷⁶ The reference is to Kwo Da-Wei. *Chinese Brushwork*. Allandheld and Schram, Montclair, NJ, 1981.

specific approach, which can function as a kind of subject matter, like natural beauty, and restrict our avenues for appreciating interactions. We can broaden these culturally specific criteria to represent a more diverse constituency. I turn again to humanity's cultural heritage in performance as a source of forms for developing interaction. So, when we evaluate an interactive environment, in addition to asking about quality of experience, I want to include African-American culture, I ask: "Is it funky? Does it get down?" Does it embody the Asian notion of open-ended possibility, or *sats*—"the impulse to wards an action ...which can go in any direction"[2, p.6]⁷⁷ or is it restrictively predictable? Embodiment of *sats* takes digital interactions toward their potential to deliver mysteries beyond the user's expectations.⁷⁸

One does not have to subscribe to Kerne's multicultural sensitivities (his examples from various examples would rather suggest an underlying universally occurring principle). But I agree, that in the context of art (which the ACM interactions design awards now seemed to want to embrace), 'easy pleasure' or 'sensual satisfaction', or any other value that has been suggested such as balance or fluidity, is not an independently positive value. This follows neatly from the criteria we defined in III.1.3 for the evaluation of art.

When it comes to interaction, a "correct" balance between interface affordances and their diegetic consequences is not necessarily the only desirable aesthetic strategy. Interaction models may be expected to sometimes frustrate or bore the interactor, or just be surprising and unexpected, not only exciting and pleasing. But surprise, irregularity, frustration and boredom (as well as balance, fluidity and the rest of the local aesthetic givens) have to be there for a reason. They have to signify, they have to be deliberate, contribute to the overall meaning of the work, and function well within the work's context and the wider artistic, cultural and historic contexts that determine the way in which interactors perceive the work aesthetically and infer its meaning. An unrewarding experience is only worth as much as it means.

I am not sure I would want interactive consumer products that I use to surprise or frustrate me deliberately (although it sometimes feels like they do so all the same)--but we're discussing art, not product design.

III.2.2. Good Fiction

⁷⁷ The reference is to Barba, E. *The Paper Canoe: A Guide to Theatre Anthropology*. Routledge, New York, 1995

⁷⁸ Kerne, A., *Cultural representation in interface ecosystems: amendments to the ACM/interactions design awards criteria*, in *Interactions*, Vol. 5, issue 1 (Jan./Feb. 1998), p.37-43, New York, ACM Press, 1998, p., 40

Criteria for what is good fiction – understood as the sum of all the representations of the diegesis in the work – are not different in interactive fiction cinema than in fiction cinema or fiction literature. In interactive fiction cinema, as in the other forms, it is the diegesis that interactors will attempt to understand and infer most of the meaning from.

III.2.2.1. Immersion, willing suspension of disbelief and estrangement

Often in discussions of fiction, especially of the popular kind, people assume that good fiction works when you are “immersed” in it, “identify” with the protagonist and other such like sympathetic expressions. These ideas are imprecise. Identification and immersion are not necessarily a desired goal of good fiction.

What makes good fiction really good is that all the elements in the diegesis are there for a reason. Every event, character and object have to contribute to the overall meaning of the work. Immersion may be an effect of good fiction, but can often be just an effect of an overwhelming presentation. It is perfectly possible to be immersed in a videogame only because it offers an exciting gameplay and stunningly detailed graphics, even though nothing really significant ever happens and none of the characters mean anything. Conversely, in Bertold Brecht’s theatre, it is often estrangement – an effect that is a result of a deliberate breakdown of the representation - that prompts the audience to ponder the meaning of the diegesis. The effect of estrangement would not have been possible if a willing suspension of disbelief hadn’t been established in the first place in order to be broken. Willing suspension of disbelief can only occur when all the elements in the diegesis are justified and make sense together, but this will amount to nothing if the interactor is so engaged and immersed that he doesn’t reflect on the overall meaning of the diegesis.

III.2.2.2. Psychological depth and complexity of characters

The same principles apply to characters in an interactive fiction film. A good character is a complex enough character that means something within the context of the diegesis. Every element in the character’s psychology likewise has to be significant and justified.

III.2.3. Good cinema

People interacting with interactive fiction cinema will bring with them their vast, if mostly tacit, knowledge of cinema. They will have expectations regarding visual grammar, composition, rhythm and other visual qualities, regarding generic conventions, regarding the different qualities of film, video, analogue or digital images. To create a good work, the author of an interactive fiction cinema piece must continue to consider this body of viewer expectations. A complete lack of attention to the cinematic qualities would likely detract from the coherence of the artistic experience. On the other hand, since the overall consideration in the authoring process requires that the interactive aspect of the experience should be the focus of the work, it is probably better if the author does not make the cinematic qualities stand out to an extent that they become the focus of the interactor’s

attention. This would be akin to a filmmaker trying, to express meaning by crowding a mise-en-scene with ingeniously elaborate sets, richly detailed costumes and highly nuanced acting, but framing them in a long, static shot from a distance, in which all those details are lost and all the dramatic action is neutralized.

CHAPTER IV: THE INTERFACE PORTRAITS STORYTELLER SYSTEM AS A TEST CASE

IV.1. Description

The InterFace Portrait storyteller system is a work-in-progress system in which participants use familiar gestures performed on a touch screen to explore a simulated character's mind, which is constructed as a hypodiegetic space. "Have I Lost My Plot?" is an installation I'm building as a realization and demonstration the current version of the system.

This project is a spin-off from "One Measure of Happiness", created in 2002-3 at Tel Aviv University, in collaboration with Udi Ben Arie, Amnon Dekel and many others⁷⁹.

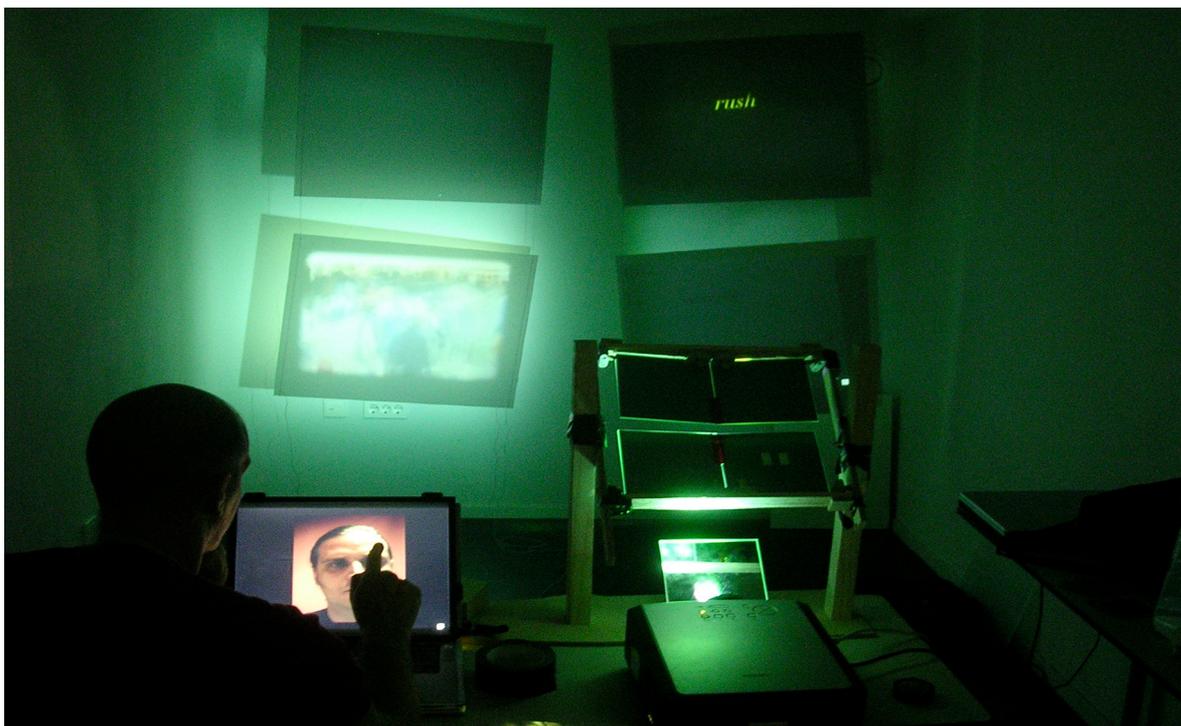


Image 1: A view of the installation space

IV.1.1. Installation Setup

The interactor enters a small, blacked-out space (see Image 1). A touch screen located on a pedestal about 1.3 meters tall displays a face. A projector throws its beam on refracting mirrors, which redirect the beam onto 4 plexiglass surfaces hanging from the ceiling. At each

⁷⁹ See Dekel et al. (2003)

moment, only one of the surfaces displays a video stream, composed of either moving or still images containing the character's memories, while another displays a succession of words or short sentences. Sound, including whispered thoughts, emanates from speakers on both sides of the room.

IV.1.2. Interactive Experience

Upon entering the space, the interactor will only see the touch screen, with a video loop of a face. This will only change when the interactor touches the screen.

The interactors can touch the character's face, using familiar gestures such as poking and scratching, touching and stroking. The character's expression, determined by its mood and emotional attitude towards that participant as well as by instinctive physical reactions, provides intuitive feedback to the interactor.

After a while, images projected on the plexiglass surfaces begin to appear, interspersed at first, more continuously as the interaction gathers momentum, but only so long as the interactor continues to be active. If the interactor stops interacting, the images on the touch screen begin to repeat themselves as the character displays his boredom, and the projected images begin to subside.

Within a couple of minutes of exploring the possibilities of this interface, some interactors may begin developing a relationship with this character. Hopefully, they will figure out that the projected images also respond to the rhythm and emotional content of their interactive relationship with the character. At this stage, their experience should enter a new level of exploration, as they begin to interact not just with the character's face, but also, through it, with the projected memories. They should discover that they could influence – although not control – the character's thoughts. And indeed, as the relationship between interactor and character develops, the memories reveal more personal and intimate memories.

IV.1.3. Architecture

InterFace Portrait is implemented using Macromedia Director's Lingo scripting language. Major portions of the code are adapted from the code written for "One Measure of Happiness", by Mirit Tal, Udi Ben Arie, Maya Lotan, Gal Tushia and myself. The overall architecture is comprised of several components: (1) a protagonist model; (2) an interaction manager; (3) a story manager, and (4) a presentation manager.

IV.1.3.1. The Protagonist Model

The simulated protagonist has interdependent sensation, perception, emotion, cognition and memory modules.

The *sensation* module registers the participant's touch data. The *perception* module interprets these as meaningful touch-events such as poking, stroking, touching and scratching. The perception module also detects where the touch-event had occurred on 21 distinct areas of the protagonist's face. The *emotion* module maintains the protagonist's mood, which can change as a result of the participant's actions or by memories invoked by the story manager. Mood swings decay over time towards equilibrium. The emotion module also maintains the protagonist's attitude towards the participant as it evolves throughout the interaction process, based on the accumulation and frequency of the participant's actions and their appropriateness relative to the protagonist's mood. The protagonist's *cognition* module evaluates the participant's actions and decides how to react. Reactions are determined within the context of the protagonist's mood and attitude and are manifest in the clips selected to express the protagonist's reactions. Reaction also cause changes to her mood and attitude and spark connotations elicited by the touch events and conveyed to the story manager, which incorporates them into the selection processes for memory scenes – a responsibility of the *story manager*.

IV.1.3.2. The Interaction Manager

The interaction manager is intended to establish an intuitive grammar for the dialogue between the participant and the protagonist and to encourage the participant to influence the story continuously. The interaction manager keeps track of the frequency of the participant's activity and, based on the intensity levels of the attitude component of the protagonist's emotion module, determines the current level of intimacy between the participant and the protagonist. An appropriate frequency, in tune with the protagonist's mood, encourages the protagonist to share more significant memories. A low level of frequency causes the protagonist to withdraw. The intimacy level factors into the retrieval processes for memories, divulging to the participant memories that contain deeper knowledge of the protagonist as the intimacy level increases.

IV.1.3.3. The Story Manager

The story manager is in charge of ordering the memories of the protagonist and shaping them into one of many possible stories. The story manager selects the memories from a database according to various strategies, depending on the accumulated nature of the interactive process.

The database contains a list of scenes, each of them containing usually one but sometimes several video or still images, one or more audio files, and several groups of keywords: keywords for content, keywords for emotions, keywords for form (such as close up, medium shot, slow or fast panning, tilting movement etc.), keywords for function (establishing shot, reaction shot etc.), and keywords for location and time. Content keywords are also weighted, to indicate what each scene is chiefly about. For every scene, there is also indication about the overall mood at the beginning and end of each scene, as

well as for psychological depth. Another set of meta-data establishes ordinal relations between scenes, by indicating which scenes need be preceded by earlier scenes.

Progression from one scene to the next may depend on the level of intimacy the participant has established with the protagonist and on reaching a threshold of story knowledge presented in previous scenes. The more intimacy reached in the relationship, the more intimate knowledge of the protagonist is shown.

Depending on either emotional intensity within the protagonist or aesthetic preferences, different representational strategies are selected. When the protagonist's mood is in equilibrium, scenes may be selected according a causal-formal strategy, approximating that of narrative cinema. Information is presented gradually, scenes are grouped into plotlines and spatial and temporal relations are maintained. Another possible strategy of representation is more associational and emotion-driven. This strategy is selected when the protagonist's mood is intensified. Optionally, a formal strategy is selected when the interactor performs stylized gestures that the protagonist prefers.

IV.1.3.4. The Presentation Manager

The presentation manager is responsible for the spatial distribution of memory clips. Memories can be displayed by projection on one of four plexiglass surfaces. At each moment in time, there is no more than one image and one succession of text elements (selected from the scene's content and emotion keywords). This approach is meant to spatialize the memories without creating too much cognitive load⁸⁰.

Each scene is projected on a different combination of surfaces. This clarifies the cinematic grammar, by distinguishing between alterations of shots within scenes, and cuts between scenes.

⁸⁰According to Ben Shaul (2003), cognitive load is an unwanted effect of distracted attention, resulting from of excessive visual information and occurring in many audiovisual texts.

IV.2. Formal analysis

IV.2.1. Representation

The diegesis is represented as a spatial simulation of a character's face and thoughts, the latter structured as a hypodiegetic space.

The hypodiegesis is represented by a variable combination of associative, categorical, abstract and narrative strategies.

IV.2.2. Material medium and syntactical units

Recorded video and audio are used in both the representation of the diegesis and that of the hypodiegesis. In addition, an invisible image map overlaid on top of the video images of the simulated character adds a spatial semantic layer.

The database organization of video works at a level of shot sequences or scenes, thereby taking the shot as its potential minimal level but allowing the author more control over granularity during production.

The image map on top of the simulated character converts the video into a sensitive spatial interface, in which every part of the face is a discrete object, making it possible to relate gestures with those areas.

IV.2.3. Interaction model

IV.2.3.1. Interface

A touch screen, which is a passive input device, is used. Input is continuous.

The touch screen also doubles as a visual display. In addition, video materials are beamed on four screens suspended in mid air. Speakers are used to produce audio output. All output devices are passive.

The interface is located in a closed dark room, blocking out incidental light. Occasional noise from outside the room may penetrate.

The interface does not possess connectivity.

IV.2.3.2. Locus

Interaction occurs on a diegetic level. User actions have direct effect on the diegesis through interaction with a character.

IV.2.3.3. User agency

User agency is direct in its person. The interface affords both control and communicative modes of agency and all styles of interaction, including expressive.

IV.3. Significance

IV.3.1. *Communicative-expressive Interaction*

The main contribution of the InterFace Portraits storytelling system is that, as far I know, it is the first interactive storytelling system to use a communicative-expressive interaction model, and the first such system to relate expressive interaction to storytelling. If executed well, it has the potential to solve two of the main aesthetic problems that preclude interactive fiction cinema, in its most common incarnation as click-and-wait desktop hypervideo (e.g. Hypercafe), as well as in other manifestations, from becoming a meaningful form of art.

The first problem is that the click-and-wait model relies on discrete interaction, not only at the input level, but also on the experiential level. This discrete experience is unable to produce agency, because the interactor's experience oscillates between sparse bouts of minimal control-mode interactivity and long periods of abject passivity. Discrete input, even if it were able to create a continuous experience (think "Space invaders" without being able to move the cannon) also does not supply the material conditions for expressive agency, because of the lack of dynamic from which it would be possible for an artificial emotion system to calculate affective data.⁸¹

The second problem is that interactive fiction video works, whether they use an explicit click-and-wait hypervideo model or a more implicit model⁸² still confine user agency to control mode, rather than encourage communication mode. It is extremely rare to encounter communicative interaction,⁸³ because of the need to use AI to create characters with their own agency, and because people tend to emphasize verbal communication, which is notoriously difficult to simulate convincingly. The InterFace portrait storyteller system tackles this problem by establishing an alternative language of communication, that of

⁸¹ A good, not too technical, source on affective computing is Picard, R., *Affective Computing*, Cambridge: MIT Press, 1997

⁸² I'm thinking for instance, about an "Optional time", an interactive fiction video installation I saw in April 2004 at the Nemo Museum in Amsterdam, in which the interactor's movement in space was tracked by a camera (active and continuous input device) and used to control three layers of video playback – the interactor as a human VCR panel. Another example is Oren Zuckerman's interactive dancer (2002), in which continuous voice input translates into a character's dancing or resting

⁸³ Toni Dove, an American interactive video installation artist, may be on track, but I was unable to understand her interaction models from written documentation that I found.

familiar gestures. This language does not trigger unrealistic expectations on part of the interactor, but offers a strangely new yet intimately familiar idiom.

The simulated character contains a detailed high-level AI representation of its psychology, enabling it to react and respond to the interactor's behaviour through both facial expressions and limited speech on the diegetic level, and through divulging hypodiegetic story information. This allows the character to demonstrate its own, reasonably complex agency (an aesthetic requirement from good fiction), on a few levels: it is able, to a reasonable extent, to respond appropriately to an interactor's gestures depending on both the location and affective content of the gesture; and it alters its pattern of responses over time to account for the growth of "intimacy" between interactor and simulation. The use of video footage and a touch screen probably contribute to the immediacy of the experience.

All that said, a user who decides to exercise control over the character will also get an appropriate response from the system.

IV.3.2. Diegetic interaction and story representation

Another problem with many forms of interactive fiction cinema is that their interaction model operates on the presentation layer rather than on the diegesis. The most common type, which relies on hyperlinking, is not much more interactive than a book. This can make an interactor a very frustrated and largely marginalized co-author, unable to affect anything much but still required to bother to interact because the narration depends on her choices just to keep going.

In the InterFace Portrait storyteller system, interaction occurs at the diegetic level, and the story is influenced by it, but not entirely dependent on it. Since the interaction model affords communicative-expressive interaction, the interactor should be able to drive the story forward by behaving rather than by selecting an option. This is achieved by relegating the conventional story information to a hypodiegesis. The story is represented as the character's memory. Influence over the hypodiegesis has to be filtered through the diegetic interactive process. Rather than interacting with the character's story as a controlling author, the interactor enters an exchange with the storyteller-character. Different interaction styles will draw different stories from the hypodiegetic level, and instead of explicit conscious choice having consequences on the story, it is the interactor's own style and mode of interaction that has meaningful consequences, both at the diegetic and the hypodiegetic layer.

This potentially satisfies one of the main aesthetic criteria of good interactive art – to make the interactive layer of the work itself a signifying layer.

But through the different strategies of representation of the hypodiegesis, more can be experienced.

The multiplicity of representation strategies makes it possible to reconfigure the presentation of story information during the interactive experience according to the interactor's mode and style of interaction. The granularity of the hypodiegesis ensures that the rhythm of the story's malleability corresponds with the rhythm of the interactor's behaviour. This solves a problem that occurred in the previous version of the system, in which granularity was too low to enable the interactor to perceive the relationship.

Given enough time (and a large enough amount of memory materials in the database), an interactor may develop enough skill to notice how her style of interaction alters not only the content of the hypodiegesis but also the way it is presented. If that becomes the case, then the work has also satisfied the highest aesthetic goal of sensitizing the interactor not only to the consequences but also to the sensuous forms of her interaction, as well as to the different forms of presenting stories and memories, and to the relationship of these to the emotional charge of the interaction between interactor and simulated character.

CHAPTER V: CONCLUSION

In this thesis, we set out to develop an aesthetics of interactive fiction cinema. We started from a simple question, which was most important for me as a beginning artist: how do I evaluate my own work? How do I know when it's good?

To answer this question we first defined general terms in the introduction, and developed a definition of the field in which I am active as a *medium*, with art being one of its applications. We saw how close art and games were, not only in this medium but also historically, and how nonetheless a distinction between the two can be made.

In the second chapter, we examined the various forms and structures of the medium. We expanded the notion of fiction as narrative to include non-narrative strategies to the representation of the fictional, so that we can now choose between at least five different representational strategies. We defined and described the structural aspects of the medium, identifying its building blocks, as well as the material constraints inherent in various interface options. We were introduced to the notions of diegetic and non-diegetic interaction and qualified the concept of agency by adding to it the notions of person, interaction mode and style.

In chapter III, we formulated some general ideas about the role and function of art and aesthetic perception and judgement, discovering that the judgement of what good art is depends on a gradual process of educated aesthetic perception, which is itself the point of artistic experience. From this we drew conclusions about more and more specific forms, until we reached some criteria about what good interactive fiction cinema could be about.

In chapter IV, we began by examining a specific project. Then we used the terms developed in chapter II to make a formal description of the work, and from that we were able – so I hope - to reach a better understanding of the special aesthetic problems of the medium, and the solutions suggested in the project.

BIBLIOGRAPHY

Alben, L., Quality of experience: defining the criteria for effective interaction design, in Interactions, Vol. 3, issue 3 (May/June 1996), p.11-15, New York, ACM Press, 1996, Available online: <http://spirit1.unitedhosting.co.uk/albendesign.com/albenfaris/downloads/pdf/quality.pdf>, accessed: 08-07-2004

Baudrillard, J., The Virtual Illusion: Or the Automatic Writing of the World, in Theory, Culture & Society (November 1995), 12(4), London: Sage Publications, pp. 97-107.

Ben Shaul, N., *Split Attention Problems in Interactive Moving Audiovisual Texts*, in Proceedings of the Fifth International Digital Arts and Culture Conference (DAC '03) Melbourne: RMIT, 2003 hypertext.rmit.edu.au/dac/papers/BenShaul.pdf accessed: 14-06-2004

Berlyne, D., (Ed.), *Studies in the New Experimental Aesthetics: Steps Toward an Objective Psychology of Aesthetic Appreciation*, Washington D.C., Hemisphere Publishing, 1974

Bordwell, D., & Thompson, K., Film Art: An Introduction, Fifth Edition, New York: McGraw-Hill, 1997

Bordwell, D., Narration in The Fiction Film, London: Routledge, 1988

Bourdieu, P., Distinction – A Social Critique of the Judgement of Taste, London, Routledge, 1984 (1979).

Brooks, K. M., Do story agents use rocking chairs? The theory and implementation of one model for computational narrative. In Proceedings of the fourth ACM international conference on Multimedia (Boston, MA, USA, November 18-22, 1996). ACM Press, New York, NY, 1997, 317-328

Brooks, K. M., *Metalinear Cinematic Narrative: Theory, Process, and Tool* (1999 MIT Media Lab PhD dissertation) <http://xenia.media.mit.edu/~brooks/dissertation.html> accessed: 15-04-2004

Brown, C., Barbican Art Gallery and Graham, B., (Eds.) Serious Games, London: Barbican Art Gallery in association with Tyne and Wear Museums, 1997

Cameron, A., (with Richard Barbrook), *Dissimulations*, 1998, <http://www.daimi.au.dk/~sbrand/mmp2/Dissimulations.html>, accessed :18-03-2004

Cameron, A., and Barbrook, R., The Californian Ideology, August 1995, <http://www.hrc.wmin.ac.uk/theory-californianideology-main.html>, accessed 20.7.2004

- Cassirer, E., An Essay on Man, New haven and London: Yale University Press, 1945
- Cassirer, E., The Philosophy of Symbolic Forms, Volumes 1-3, New haven and London: Yale University Press, 1955 (1922-9)
- Copier, M. and Raessens, J., (Eds.), Level Up Digital Games Research Conference, 2003, Universiteit Utrecht
- Cubit, S., Spreadsheets, Sitemaps, and Search Engines, Why Narrative is Marginal to Multimedia and Network Communication, and Why Marginality is More Vital than Universality. In Rieser, M., and Zapp, A., (Eds.) New Screen Media - Cinema / Art / Narrative, BFI, London, UK, 2002, 3-13.
- Daniels, D., Strategies of Interactivity, available online:
<http://www.medienkunstnetz.de/source-text/65/>, accessed: 08-07-2004
- Dekel, A., Knoller, N., Ben Arie, U., Lotan, M. and Tal, M., *One Measure of Happiness - A dynamically updated interactive video narrative using gestures*, in M.Rauterberg et al.(Eds.)Human-Computer Interaction –INTERACT’03, Amsterdam: IOS Press, IFIP,2003 (p. 1011-1012) http://student-kmt.hku.nl/~noam/ip/One_Measure_of_Happiness.pdf, accessed: 14-06-2004
- Downie, M., Tomlinson, B., Blumberg, B., *Developing an Aesthetic: Character-Based Interactive Installations*, Computer Graphics Vol. 26, No. 2. May 2002. <http://characters.media.mit.edu/Papers/p33-downie.pdf> accessed: 15-02-2004
- Frasca, G., Rethinking Immersion and Agency: Videogames as a Means of Consciousness Raising, [SIGGRAPH 2001] www.siggraph.org/artdesign/gallery/S01/essays/0378.rtf, 15-02-2004
- Gaylean, T., Narrative Guidance of Interactivity, 1995 [MIT Media Lab, PhD thesis], <http://ic.www.media.mit.edu/Publications/Thesis/tagPHD/PDF/tagPHD.pdf> accessed 08-08-2004
- Gibson, J.J., The Senses Considered as Perceptual System, London, Allen & Unwin, 1968
- Honderich, T., (Ed.), The Oxford Companion to Philosophy, Oxford, Oxford University Press, 1995
- Johan Huizinga, Homo Ludens, Boston: Beacon Press, 1955 (1938)
- Juul, J., A Clash between Game and Narrative [Master’s thesis, University of Copenhagen, Feb. 1999], <http://www.jesperjuul.dk/thesis/AClashBetweenGameAndNarrative.pdf>, accessed: 28-04-2004

Kelly, M. (Ed.) Encyclopaedia of Aesthetics, Vol 1., New York: Oxford University Press, 1998, p. ix

Kerne, A., Cultural representation in interface ecosystems: amendments to the ACM/interactions design awards criteria, in Interactions, Vol. 5, issue 1 (Jan./Feb. 1998), p.37-43, New York, ACM Press, 1998 Available online:
<http://mrl.nyu.edu/~andruid/papers/kerneInteractions98.PDF> ,accessed:08-07- 2004

Kinder, M., *Hot Spots, Avatars, and Narrative Fields Forever: Buñuel's Legacy for New Digital Media and Interactive Database Narrative*, Film Quarterly 55:4 (summer 2002), Berkley: University of California Press, 2002, pp 2-15.

Manovich, L., *Database as a Symbolic Form*, <http://www.manovich.net/docs/database.rtf> accessed: 28-04-2004

Mateas, M., *A Neo-Aristotelian Theory of Interactive Drama* In Proceedings of ACM SIGGRAPH 2001, Art Gallery, Art and Culture Papers (LA, CA, USA, August 12-17), 2001) New York, ACM Press, 2001, pp. 51-58.
<http://www.siggraph.org/artdesign/gallery/S01/essays/0382.pdf> accessed: 23-04-2004

Mayfield, K., Once It Was Atari, Now It's Art, Wired News (July 19, 2001),
<http://www.wired.com/news/print/0,1294,45146,00.html>, accessed 21-07-2001.

Miles, A., *Softvideography: Digital Video as Postliterate Practice*, [draft]:
<http://hypertext.rmit.edu.au/essays/CybercultureSoftvideography.pdf>, accessed: 02-06-2004

Montfort, N., 2003. "Toward a Theory of Interactive Fiction." December 19. First published 8 January 2002. <http://nickm.com/if/toward.html>, accessed 29,9,2004, To appear in IF Theory, ed. Emily Short. St. Charles, Illinois: The Interactive Fiction Library. 2004.

Murray, J., Combining Elements: How Many Variants?, [1999 course website]
<http://web.mit.edu/21w765j/www/IN99/combo.htm>, accessed 08-08-2004

Nasar, J., L., (Ed.), Environmental Aesthetics: Theory, Research and Application, Cambridge: Cambridge University Press, 1992 (1988).

Packer, R. & Jordan, K., (Eds.), Multimedia from Wagner to virtual Reality, London: Norton, 2001

Picard, R., Affective Computing, Cambridge: MIT Press, 1997

Rossetto, L., Rebuttal of the Californian Ideology, October 1998,
http://www.alamut.com/subj/ideologies/pessimism/califIdeo_II.html, accessed: 20.7.2004

Rush, M., New Media in late 20th century art, London: Thames & Hudson, 1999

Sims, R., *Interactivity: A Forgotten Art?* <http://intro.base.org/docs/interact/>, January 27, 1997 <http://www.gsu.edu/~wwwitr/research/sims1996.htm>, accessed: 26-05-2004

Strawson, G., *Tales of the unexpected*, The Guardian January 10, 2004, <http://books.guardian.co.uk/review/story/0,12084,1118942,00.html> accessed: 11-01-2004

MULTIMEDIA SOURCES

Dove, T., Artificial Changelings (1998) <http://www.tonidove.com/interface.html>

Dove, T., Sally or The Bubble Burst, <http://www.synthesisters.com/download/sally.pdf>

Hales, C., Len's Story, interactive documentary portrait, 1999

Sawhney, N., Balcom, D. and Smith, I., *HyperCafe: Narrative and Aesthetic Properties of Hypervideo*, Proceedings of Hypertext '96, 1996

http://www.lcc.gatech.edu/gallery/hypercafe/HT96_HTML/HyperCafe_HT96.html

Zuckerman, O., The Interactive Dancer (2002)

web.media.mit.edu/~orenz/research_projects.html

Susanne and Joes, Optionaltime2, Interactive video installation at the Nemo museum in Amsterdam, 14-04-2004